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XX CBOSM2023

Congresso Brasileiro de Obesidade
e Síndrome Metabólica

8 a 10 JUN

XX CBOSM2023

SBEM
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Endocrinologia e Metabologia

Archives of Endocrinology and Metabolism

OFFICIAL JOURNAL OF THE BRAZILIAN SOCIETY OF ENDOCRINOLOGY AND METABOLISM

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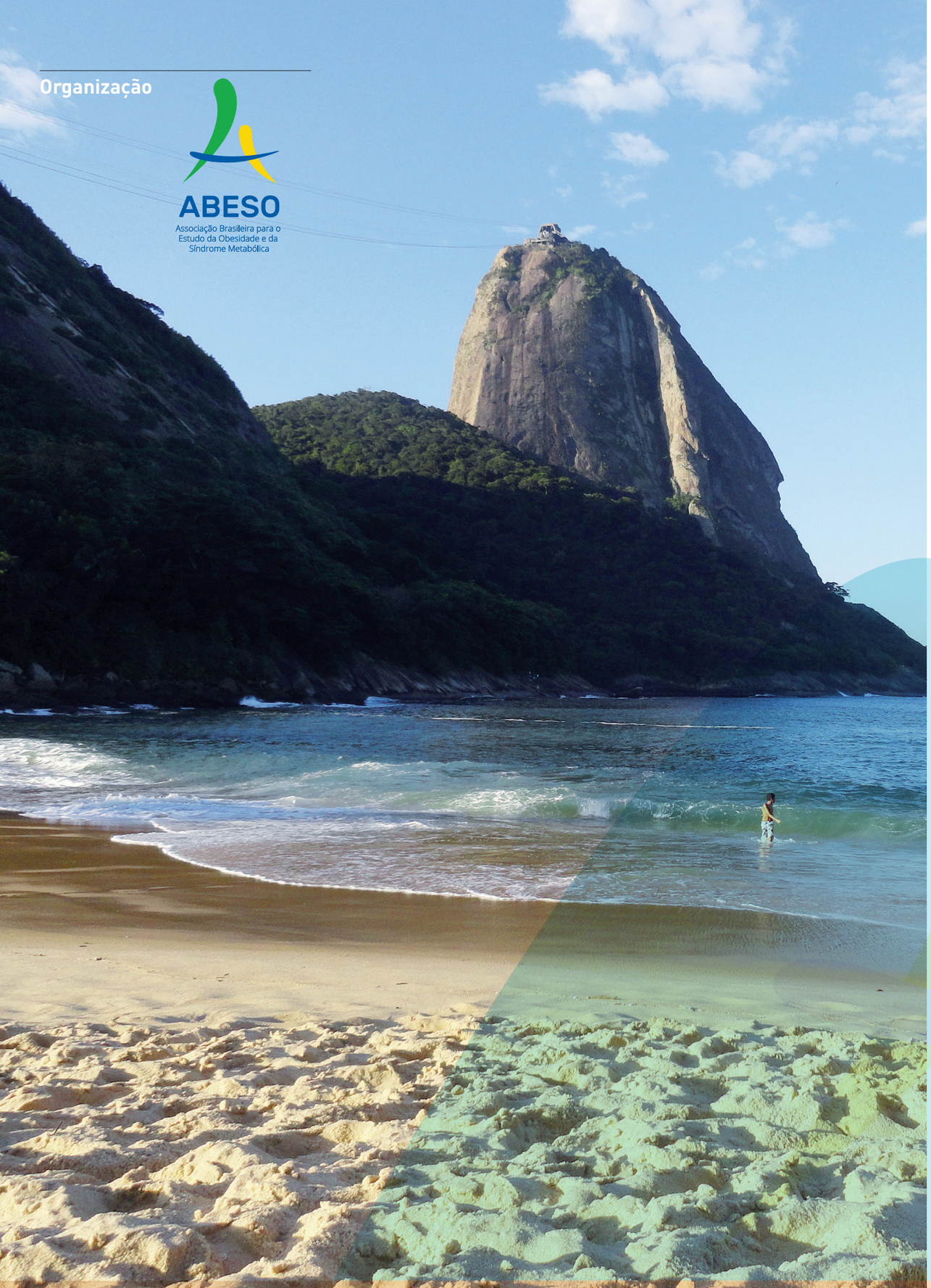

Organização

ABESO
Associação Brasileira para o Estudo da Obesidade e da Síndrome Metabólica

Caros congressistas,
Sejam todos bem-vindos!

A Comissão Organizadora do **XX CBOSM** tem o enorme prazer e alegria em dar-lhes as boas vindas ao nosso congresso e à cidade de São Sebastião do Rio de Janeiro. Cidade histórica, mundialmente conhecida como a "cidade maravilhosa", rica em belezas naturais, na qual as montanhas abraçam e se banham nas suas famosas praias. Terra de Tom e Vinicius, de Cartola e Ataulfo, de samba e bossa nova, carnaval e Maracanã. São tantas as tradições culturais que de Norte a Sul, Leste a Oeste, todos os brasileiros se sentem um pouco "cariocas" e aqui acolhidos. Esperamos que desfrutem das maravilhas da nossa cidade.

O **XX CBOSM** já é recordista em participantes. São mais de 2.000 inscritos, tanto que, lamentando, tivemos que encerrar precocemente as inscrições, que superaram as expectativas.

A grade científica foi cuidadosamente elaborada, com conferências, simpósios, colóquio e tribunais de debates. A comissão científica se esmerou em temas atuais, inovadores e futuristas.

Junto com a comissão organizadora, optamos por fazer o congresso com a "prata da casa", tornando o dialogo técnico mais compreensível e palatável - aqui teremos os mais brilhantes palestrantes, pesquisadores e cientistas brasileiros. Como único convidado e membro da comissão científica estrangeiro, teremos o Prof. Eric Ravussin. Bem, mas ele já é quase brasileiro...

Esperamos que aproveitem, participando ativamente, levantando questões e interagindo com os palestrantes.

E, claro, nas horas de lazer divirtam-se e deliciem-se com a noite carioca, as praias e o famoso chopp "bem tirado" dos botecos cariocas.

Forte abraço,

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8 JUNHO • QUI • 08h30 às 19h30

Sala 1 (Excl. Médicos) • térreo

08h30 - 10h00
SIMPÓSIO CONJUNTO
ABESO/SBEM/SBH
Presidente: Giovanni Faria Silva, SP
Secretária: Cynthia M. Valerio, RJ

08h30 - 08h50
What in a name: A DGHM define melhor o risco cardiometabólico
Palestrante: Amélio F. de Godoy-Matos, RJ
08h50 - 09h10
Qual a sequência correta de exames a serem solicitados?
Palestrante: Cristiane Villela, RJ
09h10 - 09h30
Como escolher o tratamento farmacológico adequado?
Palestrante: Cláudia Oliveira, SP
09h30 - 10h00
Discussão

10h00 - 10h30 Intervalo

13h30 -15h00
MESA REDONDA
Obesidade e Saúde Feminina
Presidente: Ricardo Meirelles, RJ
Secretária: Rita Weiss, RJ

13h30 - 13h50
Como abordar a contracepção e a terapia hormonal da menopausa na mulher com obesidade
Palestrante: Poli Mara Spritzer, RS
13h50 - 14h10
Obesidade e Câncer na Mulher: porque devemos nos preocupar?
Palestrante: Karen de Marca Seidel, RJ
14h10 - 14h30
Implantes Hormonais como estratégia para emagrecer: loucuras ou realidade?
Palestrante: Alexandre Hohl, SC
14h30 - 14h40
CO.01
POSITIVE IMPACT IN MALE SEXUAL HORMONES AND GUT MICROBIOTA RELATED TO REPRODUCTIVE HEALTH AFTER SIGNIFICANT WEIGHT LOSS
Alessandra Covallero Renck e col.
14h40 - 15h00
Discussão

15h00 - 15h30 Intervalo

18h00 - 19h00
SESSÃO DE PÔSTERES
PT.001 – PT 114

COQUETEL DE CONFRATERNIZAÇÃO
Térreo / Expo Abeso

Sala 2 + 3 • 2º andar

08h30 - 10h00
TRIBUNAL DA OBESIDADE E SÍNDROME METABÓLICA I
A dosagem da Insulina e Cálculo do HOMA deve ser realizada na Prática Clínica?
Presidente: Rodrigo de Oliveira Moreira, RJ
Secretária: Maria Caroline Alves, RJ

08h30 - 09h00
Sim
Debatedor: Rodrigo Lamounier, MG
09h00 - 09h30
Não
Debatedor: Bruno Geloneze, SP
09h30 - 10h00
Discussão

10h00 - 10h30 Intervalo

10h30 - 12h00
ABERTURA

10h30 - 11h00
Presidente Congresso:
Amélio F. de Godoy-Matos, RJ
Presidente ABESO:
Bruno Halpern, SP
Presidente Comissão Científica:
Rodrigo Moreira, RJ
Presidente Comissão Executiva:
Cynthia M. Valerio, RJ

CONFERÊNCIAS DE ABERTURA

11h00 - 11h30
Medicina e Inteligência Artificial: questões éticas
Palestrante: Pe. Omar Raposo de Souza, RJ
11h30 - 12h00
Nutrition for Healthy Aging: From Caloric Restriction, Intermittent Fasting to Precision Nutrition
Conferencista: Eric Ravussin, USA

12h30 - 13h30
SIMPÓSIO SATÉLITE Novo Nordisk
Deu Match? O que o médico e o paciente esperam do tratamento de obesidade
Palestrantes: Daniel Martinez, SP
Cynthia M. Valerio, RJ

13h30 -15h00
TRIBUNAL DA OBESIDADE E SÍNDROME METABÓLICA II
Phenotypes & Genotypes Clusters in Obesity
Presidente: Amélio F. de Godoy-Matos, RJ
Secretário: Rodrigo de Oliveira Moreira, RJ

13h30 - 14h00
May genotype knowledge change therapeutic approach?
Debatedor: Eric Ravussin, USA
14h00 - 14h30
Recognizing Phenotypes may be good enough
Palestrante: Bruno Geloneze, SP
14h30 - 15h00
Discussão

15h00 - 15h30 Intervalo

15h30 - 16h30
CONFERÊNCIA 2
Prêmio Alfredo Halpern: Professor Homenageado
Presidente: Amélio F. de Godoy-Matos, RJ
Presidente: Bruno Halpern, SP

Tratamento da Obesidade ao longo do Tempo
Conferencista Premiado:
Henrique Suplicy, PR

16h30 - 17h30
SIMPÓSIO SATÉLITE Myralis
Hipovitaminose D na obesidade e cirurgia bariátrica, existe opção de suplementação mais efetiva?
Palestrantes: Sergio Maeda, SP
Miguel Madeira, RJ

18h00 - 19h00
COQUETEL DE CONFRATERNIZAÇÃO
Térreo / Expo Abeso

Sala 4 • 2º andar

08h30 - 10h00
MESA REDONDA
Causas da Obesidade I: muito além da Dieta e do Sedentarismo
Presidente: Melanie Rodacki, RJ
Secretário: Fernando Gerchman, RS

08h30 - 08h50
O Relógio Circadiano e seu papel na obesidade
Palestrante: Bruno Halpern, SP
08h50 - 09h10
Causas Virais da Obesidade e da Adiposopatia
Palestrante: Humberto Batista, MG
09h10 - 09h30
A microbiota intestinal e obesidade
Palestrante: Mário Saad, SP
09h30 - 09h40
CO.02
Changes in the duodenal epithelium and gut microbiota according to different degrees of adiposity and glucose tolerance
Luiz Guilherme Kraemer de Aguiar e col.
09h40 - 10h00
Discussão

10h00 - 10h30 Intervalo

13h30 -15h00
CONTROVÉRSIAS EM OBESIDADE E SÍNDROME METABÓLICA
Grandes controvérsias envolvendo o exercício físico no Tratamento da Obesidade
Presidente: Clayton Luiz Dornelles Macedo, RS
Secretário: Mario Kehdi Carra, SP

13h30 - 13h50
Existe um melhor horário para potencializar a perda de peso?
Palestrante: Roberto Zagury, RJ
13h50 - 14h10
Suplementos alimentares podem ajudar na perda de peso?
Palestrante: Ricardo Oliveira, RJ
14h10 - 14h30
Qual a melhor dieta para o ex atleta de alta performance que vem ganhando peso?
Palestrante: Clarissa Tamie Hiwatashi Fujiwara, SP
14h30 - 15h00
Discussão

15h00 - 15h30 Intervalo

16h30 - 18h00
MESA REDONDA
Um outro jeito de olhar a obesidade
Presidente: Maria Edna de Melo, SP
Secretário: Fábio Trujilho, BA

16h30 - 16h50
Obesidade no ensino médico do Brasil: um tema negligenciado
Palestrante: Denise Pires de Carvalho, RJ
16h50 - 17h10
Obesidade e Midias Sociais: qual o limite?
Palestrante: Bruno Halpern, SP
17h10 - 17h30
A voz do Paciente - o que ele espera de todos nós
Palestrante: Erick Cuzziol Lima Luiz, SP
17h30 - 18h00
Discussão

18h00 - 19h00
COQUETEL DE CONFRATERNIZAÇÃO
Térreo / Expo Abeso

Sala 1 (Excl. Médicos) • térreo

07h30 - 08h30
ASSEMBLEIA GERAL ORDINÁRIA

08h30 - 10h00
MESA REDONDA
Abordagem psiquiátrica e o Estigma no Tratamento da Obesidade
Presidente: Rodrigo Lamounier, MG
Secretária: Priscila Gil, RJ

08h30 - 08h50
Ganho de peso induzido pelos antipsicóticos: o que o clínico deveria saber?
Palestrante: Daniel Martinez, SP
08h50 - 09h10
A visão da obesidade na cultura atual: uma análise reflexiva do filme de "A Baleia"
Palestrante: Marco Antônio C. Brant Saldanha, RJ
09h10 - 09h40
Discussão

10h00 - 10h30 Intervalo

10h30 - 12h00
MESA REDONDA
Obesidade com IMC acima de 50 kg/M2: um problema cada vez mais frequente
Presidente: Lívia Lugarinho Corrêa de Mello, RJ
Secretária: Latife Salomao Tyszler, RJ

10h30 - 10h50
Quando investigar as causas monogênicas?
Palestrante: Maria Edna de Melo, SP
10h50 – 11h10
Particularidades na avaliação clinica no ambulatório e emergência
Palestrante: Ana Carolina Nader, RJ
11h10 - 11h30
Como conduzir o tratamento? Abordagem clínica e cirúrgica
Palestrante: Marcio Mancini, SP
11h30 - 11h40
CO.03
Endothelial and microvascular function, inflammation, and oxidative stress in patients submitted to Roux-en-Y gastric bypass with weight regain
Karynne Grutter Lopes e col.
11h40 - 12h00
Discussão

12h00 - 13h00
SIMPÓSIO SATÉLITE **Merck**
Tratamento da obesidade baseado em fenótipo. Uma nova abordagem que nasce com uma nova medicação
Palestrantes:
Andres Acosta, USA
Alexander Benchimol, RJ
Erika Paniago, GO

Sala 2 • 2º andar

08h30 - 10h00
MESA REDONDA
O Indivíduo com Obesidade e seu Intestino: uma relação conturbada
Presidente: Juliana Saldanha, RJ
Secretária: Renata Bressan Pepe, SP

08h30 - 08h50
Qual o papel dos pré e probióticos?
Palestrante: Lucianne Tannus, RJ
08h50 - 09h10
Qual o papel dos adoçantes?
Palestrante: Débora Lopes Souto, RJ
09h10 - 09h30
Qual o papel das gorduras?
Palestrante: Ana Maria Pita Lottenberg, SP
09h30 - 09h40
CO.04
Relationship Between Intestinal Permeability and Metabolic Phenotype in Women with Obesity: Preliminary Data (Brazilian Nuts Study)
Ana Claudia Pelissari Kravchychyn e col.
09h40 - 10h00
Discussão

10h00 - 10h30 Intervalo

10h30 - 12h00
MESA REDONDA
Um outro jeito de olhar: A medicina culinária no manejo da obesidade
Presidente: Thaisa Trujilho, BA
Secretária: Mariana Farage Martins, RJ

10h30 - 10h50
Educação Nutricional na Era da Pandemia de Obesidade e Diabetes
Palestrante: Ana Carolina Vasques, SP
10h50 - 11h10
O Ensino de Habilidades Culinárias aos Médicos e sua Repercussão
Palestrante: Caroline Capitani, SP
11h10 - 11h30
Alimentação do futuro: o que temos no horizonte?
Palestrante: Aline Martins de Carvalho, SP
11h30 - 12h00
Discussão

9 JUNHO • SEX • 07h30 às 13h00

Sala 3 • 2º andar

08h30 - 10h00
MESA REDONDA
Gasto Energético, Obesidade e Emagrecimento: Fronteiras do Conhecimento
Presidente: Paulo Miranda, MG
Secretária: Roberta Arnoldi Cobas, RJ

08h30 - 08h50
Regulação do gasto energético pelas miocinas
Palestrante: Clayton Luiz Dornelles Macedo, RS
08h50 - 09h10
Métodos de avaliação do gasto energético: da pesquisa à prática clínica
Palestrante: Simone van de Sande Lee, SC
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Cintia Cercato e col.
09h40 - 10h00
Discussão

10h00 - 10h30 Intervalo

10h30 - 12h00
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Presidente: Luciana Bahia, RJ
Secretário: Roberto Zagury, RJ

10h30 - 10h50
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Palestrante: Maria Laura da Costa Louzada, SP
11h10 - 11h30
Desreguladores Endócrinos e Obesidade
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11h30 - 12h00
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ABESO/SBD
Presidente: Antonio Roberto Chacra, SP
Secretária: Rosane Kupfer, RJ

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Palestrante: Levimar Araújo, MG
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Remissão do Diabetes: Estado Atual
Palestrante: Ruy Lyra da Silva Filho, PE
09h10 - 09h30
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Palestrante: Rodrigo de Oliveira Moreira, RJ
09h30 - 10h00
Discussão

10h00 - 10h30 Intervalo

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Palestrante: Maria Eliane Magalhães, RJ
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Palestrante: Marcelo Assad, RJ
11h10 - 11h30
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Discussão

12h00 -13h00
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360º Vision: The Holistic Approach to the Patient with Obesity
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Bruno Halpern, SP

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Presidente: Amélio F. de Godoy-Matos, RJ
Secretária: Luciana Lopes, RJ

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13h20 - 13h40
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Palestrante: Fábio Trujilho, BA
13h40 - 14h00
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Palestrante: Alexander Koglin Benchimol, RJ
14h00 - 14h30
Discussão

14h30 - 15h00 Intervalo

15h00 - 16h30
MESA REDONDA
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Presidente: Renato Redorat, RJ
Secretário: Ricardo Oliveira, RJ

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Como investigar o eixo gonadotrófico no homem com obesidade?
Palestrante: Renato Castro Torrini, RJ
15h40 - 16h00
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16h00 - 16h30
Discussão

16h30 - 17h30
SIMPÓSIO SATÉLITE Lilly
Examinando o Peso das Evidências: O Impacto das Intervenções precoces na evolução do DM2
Palestrantes: Cintia Cercato, SP
Bruno Halpern, SP

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PT.115 – PT. 217

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Presidente: Latife Salomao Tyszler, RJ
Secretária: Lúcia Carraro, RJ

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Palestrante: Margaret Cristina da Silva Boguszewski, PR
13h20 - 13h40
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Palestrante: Ariana Ester Fernandes, SP
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Palestrante: Marcos de Sá Rego Fortes, RJ
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Isabela Freire Soares e col.
14h10 - 14h30
Discussão

14h30 - 15h00 Intervalo

15h00 - 16h30
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Suplementos Nutricionais e Fitoterápicos no tratamento da obesidade: riscos e benefícios
Presidente: Cintia Cercato, SP
Secretária: Luciana Bahia, RJ

15h00 - 15h20
Quais os principais suplementos nutricionais utilizados para o tratamento da obesidade? Eles funcionam?
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15h20 - 15h40
Quais os riscos da utilização de fitoterápicos?
Palestrante: Maria Silvia Ferrari Lavrador, SP
15h40 - 16h00
Termogênicos: uma ameaça à vida dos indivíduos com obesidade
Palestrante: Joana Rodrigues Dantas Vezzani, RJ
16h00 - 16h30
Discussão

16h30 - 18h00
MESA REDONDA
Obesidade 2022/2023: o que tivemos de novidade?
Presidente: Fábio Trujilho, BA
Secretária: Maria Edna de Melo, SP

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Palestrante: Marcio Mancini, SP
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Palestrante: Marcelo Alves da Silva Mori, SP
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Discussão

9 JUNHO • SEX • 13h00 às 19h00

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Secretária: Paloma Nehab Hess, RJ

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Palestrante: Lucia Cordeiro, PE
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14h00 - 14h30
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14h30 - 15h00 Intervalo

15h00 - 16h30
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Secretário: Humberto Batista, MG

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Como abordar o indivíduo com obesidade sarcopênica?
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Palestrante: Rodrigo Souza, RJ
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Ellencristina Batista e col.
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16h30 - 18h00
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Secretária: Ana Maria Pita Lottenberg, SP

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Palestrante: Mariana Farage Martins, RJ
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Palestrante: Joana Rodrigues Dantas Vezzani, RJ
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Jejum Intermitente
Palestrante: Roberta Marcondes Machado, SP
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Discussão

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Presidente: Alexandre Hohl, SC
Secretária: Rita Weiss, RJ

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Como investigar a SOP na mulher convivendo com obesidade
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14h10 - 14h30
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14h30 - 15h00 Intervalo

15h00 - 16h30
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Secretária: Ana Carolina Nader, RJ

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Palestrante: Almino C. Ramos, SP
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Discussão

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Transtorno de Compulsão Alimentar e Obesidade: Diagnóstico e Tratamento
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Priscilla Gil, RJ

10 JUNHO • SÁB • 08h30 às 13h30

Sala 1 (Excl. Médicos) • térreo

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MESA REDONDA
O Futuro do Presente no Tratamento Farmacológico da Obesidade
Presidente: Bruno Geloneze, SP
Secretário: Luiz Fellipe Carvalho Viola, MT

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Como os GIPs induzem a perda de peso
Palestrante: Erika Paniago Guedes, GO
08h50 - 09h10
Tri or more agonists?
Palestrante: Rodrigo de Oliveira Moreira, RJ
09h10 - 09h30
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Palestrante: Cintia Cercato, SP
09h30 - 09h40
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David Majerowicz e col.
09h40 - 10h00
Discussão

10h00 - 10h30 Intervalo

10h30 - 12h00
SIMPÓSIO CONJUNTO
SBEM/ABESO
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Secretária: Gisele Taboada, RJ

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Palestrante: César Luiz Boguszewski, PR
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O paciente com obesidade no Sistema Único de Saúde
Palestrante: Lívia Lugarinho Corrêa de Mello, RJ
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GH na obesidade e na Síndrome Metabólica: da evidência à iatrogenia
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11h30 - 12h00
Discussão

Sala 2 • 2º andar

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ABESO/SBMEE
Exercício Físico causa perda substancial de peso? O rigor das evidências
Presidente: Roberto Zagury, RJ
Secretária: Dhianah Santini, RJ

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Sim
Debatedor: Marcelo Leitão
09h00 - 09h30
Não
Debatedor: Clayton Luiz Dornelles Macedo, RS
09h30 - 10h00
Discussão

10h00 - 10h30 Intervalo

10h30 - 12h00
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Presidente: Daniel Barretto Kendler, RJ
Secretária: Raquel Muniz, RJ

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Palestrante: Renan Montenegro Junior, CE
11h10 - 11h30
Gordura ectópica: a volta da máfia
Palestrante: Amélio F. de Godoy-Matos, RJ
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Discussão

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Prêmio "Outstanding achievement in the Science of Obesity Research"
Obesidade e Alzheimer
Presidente: Bruno Halpern, SP
Secretária: Cynthia M. Valerio, RJ
Conferencista Premiado:
Mychael Vinicius Lourenco, RJ

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Encerramento e Premiação

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Palestrante: Luiz Alfredo Vieira D'Almeida, RJ
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Cirurgias atuais e cirurgias emergentes: o que temos de novo?
Palestrante: Fábio Viegas, RJ
09h30 - 10h00
Discussão

10h00 - 10h30 Intervalo

10h30 - 12h00
MESA REDONDA
Complicações da Cirurgia Bariátrica
Presidente: Priscila Gil, RJ
Secretária: Márcia Helena Costa, RJ

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Doença Óssea
Palestrante: Miguel Madeira, RJ
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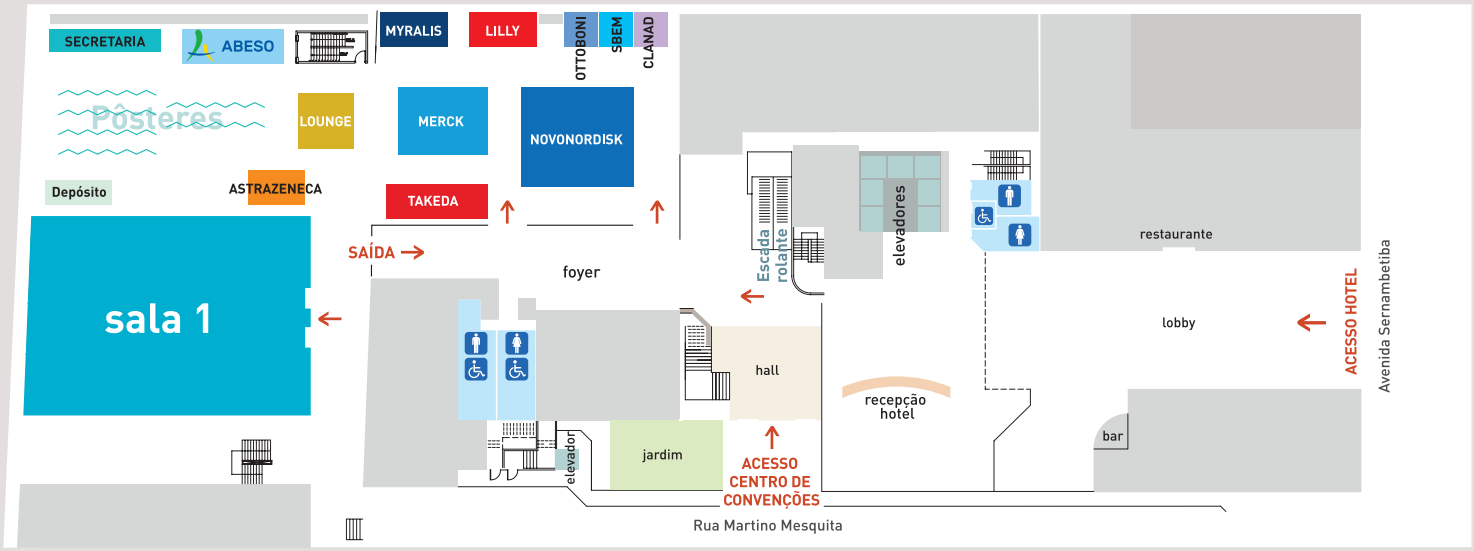
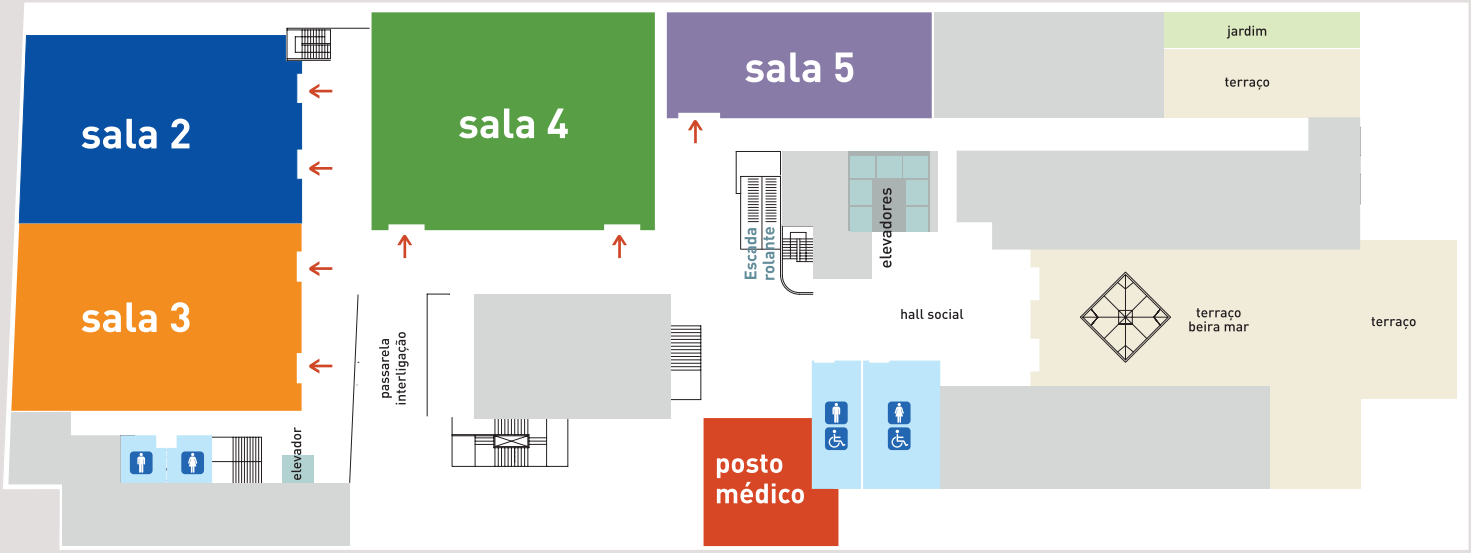
Palestrante: Thaisa Trujilho, BA
11h10 - 11h30
Má absorção de medicamentos
Palestrante: Cintia Cercato, SP
11h30 - 12h00
Discussão

Térreo



2º andar



Centro de Convenções do Windsor Barra
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ABESO

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Congresso Brasileiro de Obesidade e Síndrome Metabólica

Comunicações Orais

ABESO

CO.01 POSITIVE IMPACT IN MALE SEXUAL HORMONES AND GUT MICROBIOTA RELATED TO REPRODUCTIVE HEALTH AFTER SIGNIFICANT WEIGHT LOSS

Renck AC[1], Trarbach EB[2], Santos A[3], Guadagnini D[3], Assalin HB[3], Roberto MS[1], Barbeiro HV[4], Souza HP[5], Saad MJA[3], Costa EMF[1]

[1] Hospital das Clínicas da Faculdade de Medicina da Universidade de São Paulo (HCFMUSP), Unidade do Desenvolvimento do Departamento de Endocrinologia, de São Paulo, SP, Brasil. [2] FMUSP, Laboratório de Endocrinologia Celular e Molecular (LIM25), São Paulo, SP, Brasil. [3] Universidade Estadual de Campinas (Unicamp), Faculdade de Ciências Médicas, Laboratório de Investigação Clínica em Resistência à Insulina (LICRI), Campinas, SP, Brasil. [4] FMUSP, Laboratório de Emergências Clínicas (LIM51), São Paulo, SP, Brasil. [5] HCFMUSP, Laboratório de Emergências Clínicas (LIM51), São Paulo, SP, Brasil

Introduction: Obesity is a chronic inflammatory disease impacting male reproductive health by several mechanisms. Among them, changes in the gut microbiota have been recognized in recent years. Evidence suggests that inflammation induced by gut microbiome translocation not only leads to testicular and epididymal inflammation compromising testicular function, but can also induce insulin resistance affecting the secretion of gonadotropic hormones. We proposed to evaluate the impact of significant weight reduction on gut microbiota, and male health parameters. **Methods:** 16 obese men followed a very low-calorie ketogenic diet (VLCKD) weight loss program for a 6-month period. Anthropometric, metabolic, hormonal an inflammatory markers as *microbial communities of gut (16S rRNA gene)* were measured at baseline, after 60 and 180 days. **Results:** The mean age of the patients evaluated was 36.4 ± 6.5 years; weight: 128.6 ± 20.2 kg; BMI: 39.7 ± 5.6 kg/m^2. The total weight loss was 27.4 ± 11.7 kg (~21%). Significant changes were observed in all evaluated parameters throughout the study: [BMI, visceral fat, HOMA-IR, triglycerides, LDL, HDL, total testosterone (TT), SHBG ($p < 0.001$)] and free T ($p = 0.001$),except for TNFa, IL1, IL4, IL10. After 60 days of VLCKD, the average weight reduction was 22.7 kg (15.3%), and a significant increase in alpha diversity ($p = 0.021$) as well as redistribution of beta diversity ($p = 0.025$) were observed. The *Akkermansia muciniphila* and *Christensenellacea* genera showed a significant increase ($p = 0.034$ and 0.005, respectively). After 180 days, we observed a reduction in the abundance of *Prevotella* genus (p 0.056) and an increase in the *Sporobacter* genus ($P = 0.049$). **Discussion:** in the present study, weight loss was accompanied by an increase in *Akkermansia*, related to the stabilization of gut barrier function and inflammation control; an increased abundance of *Prevotella* and decreased abundance of *Lactobacillus* (Firmicutes phylum) previously related to infertility; and Ruminococcaceae family, which has been positively correlated with androgen production (Sporobacter genus). **Conclusion:** Through a non-invasive method, a significant weight loss achieved by VLCKD led to changes in the intestinal microbiota related to anti-inflammatory activities, and testicular function. These improvements in gut microbiota indicate the evolution for a healthier condition following weight reduction, which is already quite beneficial for patients of reproductive age. **License number of ethics committee:** 86158918.4.0000.0068.

CO.02 CHANGES IN THE DUODENAL EPITHELIUM AND GUT MICROBIOTA ACCORDING TO DIFFERENT DEGREES OF ADIPOSITY AND GLUCOSE TOLERANCE

Lopes FAM[1], Silva Júnior VL[1], Carvalho ATP[2], Rapozo DCM[3], Barbosa CML[1,4], Magalhães FM[1], Lopes KG[1,4], de Souza MGC[1,4], Bouskela E[1,4], Castiglione RC[1,4], Albano RM[5], Kraemer-Aguiar LG[1,2,4]

[1] Postgraduate Program in Clinical and Experimental Physiopathology (Fisclinex), Faculty of Medical Sciences, State University of Rio de Janeiro (UERJ), Rio de Janeiro, RJ, Brazil. [2] Department of Internal Medicine, Faculty of Medical Sciences, UERJ, Rio de Janeiro, RJ, Brazil. [3] Research Center, Brazilian National Cancer Institute (Inca), Rio de Janeiro, RJ, Brazil. [4] Laboratory for Clinical and Experimental Research on Vascular Biology (Biovasc), UERJ, Rio de Janeiro, RJ, Brazil. [5] Department of Biochemistry, Roberto Alcântara Gomes Biological Institute, UERJ, Rio de Janeiro, RJ, Brazil

Introduction: Interactions between obesity and glucose intolerance to gut microbiota and intestinal hyperpermeability remain poorly understood. We investigated the metabolic/inflammatory biomarkers, gut microbiota, and intestinal permeability in individuals with different adiposity status and glucose tolerance degrees. **Patients and methods:** We included 46 individuals allocated into three groups according to body adiposity and glucose homeostasis, as follows: normoglycemic normal-weight controls (CON, n = 16), normoglycemic with obesity (NOB, n = 15), and dysglycemic with obesity (DOB, n = 15). Participants underwent high digestive endoscopy with duodenal biopsy and blood/stool tests. The intestinal permeability was evaluated by analyzing the duodenum epithelium by histomorphometry, structural proteins expression, and enzymatic activity of intestinal epithelium, in addition to circulating levels of lipopolysaccharide (LPS). The fecal microbiota composition was analyzed by amplifying the V4 region of the 16S rRNA gene, which was sequenced with Illumina technology. **Results:** IL-6 and leptin were higher in NOB and DOB compared to CON ($p < 0.001$), while no differences were detected between groups for adiponectin, TNF-α, retinol binding protein-4 (RBP4), LPS, and LPS-binding protein (LBP) ($p > 0.06$). No differences were detected for protein expressions in the intestinal epithelium (villin, myosin, P-myosin, P-myosin/myosin, and β-actin) between groups ($p > 0.16$). In contrast, the intestinal alkaline phosphatase activity was lower in OBD *vs.* CON ($p < 0.05$). Individual variability in the taxonomic composition of the fecal microbiota was detected in all groups. In general, the predominant phyla were Firmicutes and Bacteroidetes, followed by Proteobacteria, but no significant differences were noted in the proportion of Firmicutes or Bacteroidetes between groups. LPS was positively correlated to the degree of body adiposity ($r = 0.32$, $p < 0.05$) and inversely to indexes of duodenal epithelial thickness ($r = -0.39$, $p < 0.01$). β-actin was inversely correlated to body mass index ($r = -0.32$, $p < 0.05$), fasting glucose, HOMA-IR ($r = -0.49$, $p < 0.01$ for both), and insulin ($r = -0.55$, $p < 0.01$). **Conclusion:** Our findings showed correlations of some morphofunctional parameters of the intestinal epithelium with metabolic markers of individuals with higher degrees of adiposity and glucose intolerance, and these appear to occur concomitantly with subtle alterations in the composition of intestinal microbiota. License number of ethics committee: CAAE: 22032113.9.0000.5259 – Hospital Universitário Pedro Ernesto.

CO.03 ENDOTHELIAL AND MICROVASCULAR FUNCTION, INFLAMMATION, AND OXIDATIVE STRESS IN PATIENTS SUBMITTED TO ROUX-EN-Y GASTRIC BYPASS WITH WEIGHT REGAIN

Lopes KG[1,2,3], Souza MGC[1,2,3], Bouskela E[1,2,3], Kraemer-Aguiar LG[1,2,3,4]

[1] Serviço de Atendimento Integral ao Paciente com Obesidade – SAI-Ob, Centro de Pesquisa Clínica Multiusuário (CePeM), Hospital Universitário Pedro Ernesto (HUPE), Universidade do Estado do Rio de Janeiro (UERJ), Rio de Janeiro RJ, Brasil. [2] Programa de Pós-graduação em Fisiopatologia Clínica e Experimental (Fisclinex), UERJ, Rio de Janeiro RJ, Brasil. [3] Laboratório de Pesquisas Clínicas e Experimentais em Biologia Vascular (Biovasc), UERJ, Rio de Janeiro RJ, Brasil. [4] Endocrinologia, Departamento de Medicina Interna, Faculdade de Ciências Médicas, UERJ, Rio de Janeiro RJ, Brasil

Introduction: Weight loss after bariatric surgery improves vascular function and metabolic/inflammatory profiles and reduces cardiovascular mortality. There is limited data on the effects of weight regain on vascular health. We compared metabolic/inflammatory profiles, oxidative status, and vascular function of post-bariatric patients with high ratios of weight regain (RWR) *vs.* non-surgical controls. **Patients and methods:** Thirty-two post-bariatric patients [Roux-en-Y gastric bypass; aged = 44 ± 8 years, body mass index (BMI) = 40.1 ± 7.7 kg/m², and RWR = 58.7 ± 24.3%] and 30 BMI, age-, and gender-matched controls entered the study. They had a long time since surgery (10.8 ± 4.7 years). We collected clinical data, metabolic/inflammatory/oxidative stress circulating biomarkers, and endothelial/microvascular reactivity through venous occlusion plethysmography and Laser speckle contrast imaging, respectively. **Results:** The bariatric group exhibited lower neck circumference, fasting glucose, and triglycerides than non-surgical group, while high-density lipoprotein cholesterol (HDL-c) was higher ($p < 0.001$). There were no differences between groups for endothelial/microvascular reactivities ($p \geq 0.06$). Resistin, leptin, endothelin-1 (ET-1), soluble forms of intercellular cell adhesion molecule-1 (sICAM-1) and vascular cell adhesion molecule-1 (sVCAM-1), tumor necrosis factor-α (TNF-α), and thiobarbituric acid reactive substances (TBARS) did not differ between groups ($p \geq 0.09$). Of note, adiponectin levels were higher in the bariatric than non-surgical group (D: 3.36 ± 2.56 ug/ml, a corresponding difference of ~101.56%; $p < 0.001$), while interleukin-6 (IL-6) was lower (D: -0.94 ± 0.31 pg/mL, a corresponding difference of ~-26.31%; $p < 0.001$). **Conclusion:** Despite endothelial/microvascular function not differing between groups, our findings suggest that even in those patients with a high RWR, the substantial weight loss after bariatric surgery probably can promote favorable effects on metabolic/inflammatory profiles expressed by increased adiponectin and reduced IL-6 levels. **License number of ethics committee:** Hospital Universitário Pedro Ernesto – CAAE: 16425419.8.0000.5259.

CO.04 RELATIONSHIP BETWEEN INTESTINAL PERMEABILITY AND METABOLIC PHENOTYPE IN WOMEN WITH OBESITY: PRELIMINARY DATA (BRAZILIAN NUTS STUDY)

Fonseca PF[1], Kravchychyn ACP[1], Meneguelli TS[1], Wendling AL[1], Luz MGM[1], Lima LP[1], Silva GML[1], Guerra NN[1], Bressan J[1], Hermsdorff HHM[1]

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Introduction: Recent evidence suggests that, in individuals with obesity, intestinal permeability may be altered, with consequent alteration of metabolic homeostasis. However, some individuals with obesity do not have metabolic changes, which are classified as metabolically healthy. Thus, we evaluated the intestinal permeability of women according to the metabolic phenotype of obesity. **Subjects and methods:** This is a cross-sectional analysis of 42 women participating in the "Brazilian Nuts Study" (33.0 ± 8 years; BMI ≥ 30.0 kg/m²). Anthropometric measurements, body composition and biochemical analyzes were performed to classify the metabolically healthy obesity (MHO – n = 22) or unhealthy (MUO – n = 20), considering fasting glucose (≥100 mg/dL), triglycerides (≥150 mg/dL) and blood pressure (SBP ≥ 130 mmHg and/or DBP ≥ 85 mmHg). For the permeability test, the participants ingested a drink based on lactulose (L) and mannitol (M), subsequently quantified in postprandial urine using HPLC. Permeability was altered when % lactulose excretion ≥ 0.5 and L/M ratio ≥ 0.3. Statistical analyzes were performed in SPSS v.20, with a significance level of 5%. **Results:** The frequency of altered intestinal permeability in lactulose excretion (80%, n = 16) and L/M ratio (30%, n = 6) was statistically higher in the MUO group. The L/M ratio and lactulose excretion (%) were positively correlated with weight (r = 0.448, p = 0.037; r = 0.442, p = 0.039, respectively). Also, the correlation between L/M ratio was positive with BMI (r = 0.502, p = 0.017), hip circumference (r = 0.431, p = 0.045) and body fat (kg) (r = 0.473, p = 0.026). In the MUO group, lactulose excretion correlated with triglycerides (r = -0.465, p = 0.039). **Discussion:** In the increased intestinal permeability, the uptake of endotoxins is enabled due to the reduced expression of epithelial junction proteins, contributing to the paracellular transport of LPS. In turn, metabolic endotoxemia can increase markers of inflammation in adipose tissue, as well as insulin resistance, being positively related to several cardiovascular risk factors, such as type 2 diabetes, triglycerides, cholesterol, glucose, and insulin. **Conclusion:** Women with MUO had altered intestinal permeability more frequently than those with MHO, correlating with higher values of adiposity indicators and worsening of cardiometabolic risk markers. Our results reinforce the existence of a cross-talk between the intestine and cardiometabolic risk in obesity. **Support:** Capes (code 001), Fapemig (CDS-APQ-01808-22), CNPq (404770/2021-5, and Pibic/CNPq-UFV 2021-2022). **License number of ethics committee:** nº 4.543.541/CEPH – Universidade Federal de Viçosa.

CO.05 EFFECTS OF A RECREATIONAL SOCCER PROGRAM ON ADIPOSITY INDICATORS AMONG ADOLESCENTS WITH OBESITY: A RANDOMIZED CONTROLLED TRIAL

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Introduction: Childhood obesity has been a concern and a serious public health problem worldwide, as it associated with several cardiovascular risk factors and tends to persist in adulthood. The excessive fat accumulation, especially in the abdominal region, increase the health risks when compared to general obesity, as it has a higher sensitivity for several health problems. The habits assumed in early life are able to affect health outcomes later in life and the indicators of adiposity can help for the early identification of children at nutritional risk. In recent times, youth populations are demonstrating rising levels of obesity and declining levels of physical activity, therefore, participation in group sports, in particular recreational soccer programs (RSP), has emerged as an effective strategy to improve health markers in adolescents with obesity. The aim was to assessed the effects of a 12-week RSP on adiposity indicators in adolescents with obesity. **Methods:** A randomized controlled clinical trial included twenty adolescents with obesity that were assigned to RSP [n = 10, age = 14.1 ± 1.3 years, body mass index (BMI) = 30.3 ± 4.6 kg/m^2] and control [n = 10, age = 14.8 ± 1.4 years, BMI = 32.2 ± 5.0 kg/m^2] groups. All the adiposity indicators were measured at baseline and post-intervention at the same time of the day and under similar conditions. The participants were submitted to anthropometric measurements of body mass, height and waist circumference (WC). Posteriorly, the BMI was calculated by dividing body mass (kg) by height (m^2) and waist-to-height ratio (WHR) was divided WC by height. The body fat percentage (BFP) was determined by Dual-Energy X-ray Absorptiometry. The 12-week RSP consisted of small-sided games with 60-min performed 3 times per week. **Results:** No difference between RSP and control groups were detected for the dependent variables at the baseline (WHR: t = -0.960, P = 0.350; BFP: t = -0.328, P = 0.747). After the intervention, were found significant differences pre *vs.* post in the RSP group for WHR (0.60 ± 0.06 *vs.* 0.55 ± 0.07, P = 0.003) and BFP (41.24 ± 5.78 *vs.* 39.18 ± 5.49%, P = 0.001), compared to control where no change was observed (0.63 ± 0.08 *vs.* 0.62 ± 0.09, P = 0.370; 42.06 ± 5.39 *vs.* 41.67 ± 5.11%, P = 0.473, respectively). **Conclusion:** Our findings support the hypothesis that a 12-week RSP can improve the indicators of adiposity of adolescents with obesity, since no significant differences were found in the group that did not participate in the RSP. **License number of ethics committee:** CAAE: 91950618.8.0000.5259/CEP UERJ – Hospital Universitário Pedro Ernesto – UERJ.

CO.06 THE EFFECT OF TIRZEPATIDE ON FOOD INTAKE IN HUMANS

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Introduction: Tirzepatide (TZP), a GIP/GLP-1 receptor agonist delivered robust body weight (BW) loss in people with type 2 diabetes (T2D) and obesity in Phase 3 clinical trials. **Methods:** This randomized, double-blind, parallel study compared the effects of TZP 15mg, semaglutide 1mg (SEMA) and placebo on energy intake (assessed by an ad libitum lunch), appetite (visual analog scale) and body composition at baseline and at 28 weeks of treatment. **Results:** At 28 weeks, reductions in BW from baseline were observed with TZP (-11.2 kg) and SEMA (-6.9 kg), and significantly differed between groups (-4.3 kg; p < 0.001). Reductions in fat mass from baseline were also observed with TZP (-9.7 kg) and SEMA (-5.9 kg), and significantly differed between groups (-3.8 kg; p = 0.002). Energy intake reductions from baseline observed with TZP (-348.4 kcal) and SEMA (-284.1 kcal) did not differ between groups (-64.3 kcal; p = 0.187). TZP and SEMA reduced overall appetite assessment score but did not differ between groups. **Conclusion**: TZP achieved greater weight loss than SEMA, consistent with results of the larger Phase 3 trial. BW reduction was mostly driven by fat mass loss. Significant and clinically meaningful reductions in appetite and energy intake were observed with both TZP and SEMA. However, these effects could not completely explain the additional weight loss with TZP. As appetite and energy intake reduction were not significantly different between treatments, additional mechanisms might contribute to the weight loss with TZP. Previously presented at Obesity Week 2022.

CO.07 MECHANISTIC DESCRIPTION OF THE ANTI-INFLAMMATORY ACTION OF OMEGA-3 FATTY ACIDS IN OVERWEIGHT HUMANS

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Introduction: Chronic, low-grade inflammation of the obesogenic process is responsible for the projection of multiple comorbidities associated with obesity. Omega-3 fatty acids (ω3) are widely studied due to their potent anti-inflammatory action, however, with mechanism of action evidenced only in rodents. The objective of this work is to evaluate the mechanism of anti-inflammatory action of ω3 in peripheral blood mononuclear cells (PBMC) of overweight individuals. **Patients and methods:** Randomized, triple-blind clinical trial, approved by the Ethics Committee of the Federal University of Sergipe (80476517.2.0000.5546) and ReBEC: RBR-7x8tbx. We recruited 39 individuals with excess body weight, abdominal adiposity and hepatic steatosis, who were supplemented (n = 20) with 2g of ω3 (EPA+DHA) or mineral oil as a placebo (n = 19). Peripheral blood was collected before and after 3 hours of consumption of the first capsules, and also after 30 days of supplementation. Anthropometric, food intake and biochemical parameters were analyzed. In the PBMCs, techniques such as RT-qPCR, Western blot, immunoprecipitation and mass spectrometry were used to evaluate the expression of genes and proteins (GPR120, βArr2, pro-IL1β, IL6, pro-IL18, TNFα, JNK and IL10) and profile complete metabolism of fatty acids. The SPSS program was used, reinforced by the intention to treat, two-tailed ANOVA test and Generalized Linear Model-GLM. For differences between groups, Student's t test was used. The effect size was reported using η^2. **Results:** The groups remained homogeneous for anthropometry, body composition, food intake, biochemical parameters and plasma fatty acids. Individuals treated with ω3 showed an increase in the plasmatic amount of total ω3 ($p < 0.001$; $\eta^2 = 0.32$), EPA ($p < 0.001$; $\eta^2 = 0.10$) and DHA ($P < 0.001$; $\eta^2 = 0.23$) indicating adherence to treatment, as well as a reduction in serum TG ($p = 0.009$, $\eta^2 = 0.17$) and TNFα intra-PBMC protein content ($p = 0.012$), showing the substance's immunomodulatory effect. In the mechanistic assay, after three hours of supplementation, a strong connection between the ω3 receptor, GPR120, and its intracellular effector protein, βArr2 ($p = 0.04$) was found in PBMC cells, proving the existence of the mechanism of action. **Conclusion:** Descriptions of ω3 as an anti-inflammatory agent existed only in a phenomenological way. Here, for the first time, the existence of the GPR120 receptor was demonstrated in humans and its activity in the immune cells of obese human subjects, proving its immunoregulatory potential. **License number of ethics committee:** CAE (80476517.2.0000.5546) – Universidade Federal de Sergipe.

CO.08 INSULIN RESISTANCE IN ADOLESCENTS: FROM EUTHROPHY TO METABOLIC UNHEALTHY OBESITY – BRAZILIAN METABOLIC SYNDROME STUDY (BRAMS)

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Introduction: Obesity prevalence among adolescents rapidly increased during the last decades. To better determine the obesity metabolic risk in adolescents, it is suggested to stratify the obesity diagnosis into two phenotypes: 1) Metabolic healthy obesity (absence of any alterations in blood pressure, triglycerides, fractions of cholesterol, and glycemia; MHO); and 2) Metabolic unhealthy obesity (presence of at least one alteration; MUO). **Objective:** The aim was to compare blood insulin resistance markers between eutrophic, MHO, and MUO phenotypes. **Methods:** The *Brazilian Metabolic Syndrome Study* (BRAMS) in pediatrics is convenience sample multicenter cross-sectional with adolescents aging 10 to 19 years. From the 1033 original sample, 870 adolescents, age: 15.2(2.6) years had complete information for anthropometry, plasma lipids, blood pressure, and glycemia, what enabled their classification into eutrophic, MHO and MUO phenotypes. Fasting plasma insulin levels, glycemia and glycated hemoglobin were measured following standard procedures; *Homeostasis Model Assessment-Insulin Resistance* (HOMA-IR) was calculated. The compare means between phenotypes, Kruskal-Wallis test was used with Tukey HSD post-test. **Results**: 58% of the sample were girls, and 421 (48%), 145(16%), and 304(35%) adolescents were classified in eutrophic, MHO, and MUO phenotypes, respectively. MHO group was not different from MUO in relation to their BMI-for-age (in percentiles) and waist-to-hip ratio. Fasting plasma insulin [10.4 (6.3), 15.6 (9.0), 19.6 (10.4) mU/mL, respectively], glucose [80.0(9.8), 84.3(9.3), 87.3(9.8)mg/dL, respectively], and HOMA-IR [2.1 (1.3), 3.2 (1.8), 4.2 (2.3), respectively] tend to be higher (p trend < 0.001) across phenotypes in a linear manner and after adjustment for age, sex, and puberal status. **Discussion:** The results presented here reinforce the utility of stratifying obesity diagnosis into phenotypes for a better metabolic risk assessment. **Conclusion:** The present study showed a greater insulin resistance in adolescents with the MUO phenotype, in comparison to MHO and eutrophic phenotypes, highlighted by the linear increase in fasting plasma insulin, glucose, and HOMA-IR across phenotypes with higher metabolic risk. **Acknowledgements:** To CNPq, for the grant nº 563664/2010-0. **License number of ethics committee:** Committee for Research Ethics of the School of Medical Sciences of UNICAMP (protocol n. 900/2010, CAAE: 0696.0.146.146-10).

CO.09 EFFICACY AND SAFETY OF SETMELANOTIDE IN OBESE PATIENTS: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Introduction: Setmelanotide is a novel drug that activates the melanocortin-4 receptor (MC4R), which plays a crucial role in regulating appetite and energy balance in individuals with rare genetic disorders of obesity. Despite its mechanism, several unresolved issues remain regarding the safety, effectiveness, and appropriate use of setmelanotide. This systematic review and meta-analysis assessed the efficacy and safety of setmelanotide in treating patients with obesity. **Patients and methods:** We searched PubMed, Embase and Cochrane for clinical trials published up to February 10, 2023, comparing setmelanotide vs. placebo in patients with obesity. The statistical analysis was performed with RevMan 5.4. Outcomes with a $p < 0.05$ were statistically significant. Heterogeneity was measured using I^2. We considered obese population (BMI ≥ 30 kg/m²) as the sum of the genetic disorders accompanied by obesity and healthy obese individuals. The primary endpoints were weight loss, hyperphagia and skin hyperpigmentation. **Results:** We included four randomized controlled trials (RCTs) with 103 patients, of whom 55 (53%) received setmelanotide for a follow-up that ranged from 8 to 98 days. The mean age was 31.3 years old, the mean BMI was superior or equal to 42.6 kg/m² and the prevalence of women was superior or equal to 59%. Patients taking the drug demonstrated a significant effect on weight loss (SMD -1.98; 95% CI -3.51 to -0.45), but hyperphagia did not (SMD -0.54; 95% CI -1.14 to 0.05). Although, the drug was associated with a higher incidence of skin hyperpigmentation (RR 6.79; 95% CI 1.13, 40.77). **Discussion:** Our findings suggest that setmelanotide can effectively decrease weight in patients with rare syndromes associated with obesity, as well as in non-syndromic obese individuals. Regarding the reduction of hyperphagia, there was no statistical significance; the main adverse effect found was hyperpigmentation. The weakness of this meta-analysis is the small number of disease variants covered by the studies and their short follow-up time. On the other hand, all the studies are RCTs. **Conclusion:** This meta-analysis shows that setmelanotide can effectively reduce weight in patients with rare syndromes, as well as non-syndromic obese individuals. However, further studies are needed in these populations. Finally, security, efficacy and cost-effectiveness should also be studied in severely obese patients, whose existing medications have shown therapeutic failure.

CO.10 USE OF FGF21 ANALOGS FOR THE TREATMENT OF METABOLIC DISORDERS: A SYSTEMATIC REVIEW AND META-ANALYSIS

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FGF21 is a hormone produced mainly by the liver with several metabolic functions, such as induction of heat production, control of glucose homeostasis, and regulation of blood lipid levels. Due to these actions, several laboratories have developed FGF21 analogs to treat patients with metabolic disorders such as obesity and diabetes. Here, we performed a systematic review and meta-analysis of randomized controlled trials that used FGF21 analogs and analyzed metabolic outcomes. Our search yielded 236 articles, and we included eight randomized clinical trials in the meta-analysis after the analyses. FGF21 analogs showed no effect on fasting blood glucose, glycated hemoglobin, HOMA index, blood-free fatty acids, or systolic blood pressure. However, the treatment significantly reduced fasting insulinemia, body weight, and total cholesterolemia. None of the included studies were at high risk of bias. The quality of the evidence ranged from moderate to very low, especially due to imprecision and indirection issues. These results show that using FGF21 analogs can potentially treat metabolic syndrome. However, more clinical trials are still needed to increase the quality of evidence and confirm the effects seen so far.

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Pôsteres

ABESO

PT.001 HOW TO ADAPT A NURSERY TO CARE FOR PATIENTS WITH SEVERE OBESITY

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Introduction: Vigitel data for 2022 estimate that the prevalence of obesity in Brazil is 22.3% and it is estimated that between 0.5% to 1% of the population has class 3 obesity. Before that, it is essential to have an adequate structure of health services for the care of these patients. **Patients and methods:** This study describes the nursery structure of a tertiary hospital specialized in caring for patients with class 3 obesity in the state of Rio de Janeiro. **Results:** The nursery has beds with toilets in a masonry structure, wide doors, armless chairs, beds, stretchers and hygienic chairs adapted for this group. The weight scales support up to 300 kg, the measuring tapes for the abdominal circumference are 2 meters long and the sphygmomanometers has an appropriate cuff. The multidisciplinary team is composed of endocrinologists, psychiatrists/psychologists, nutritionists and a physical education professional. The first appointment is carried out by the endocrinologist with the application of the Binge Eating Scale (BES), a questionnaire for screening Binge Eating Disorder (BED). If there is a suggestive score of BED, the patient is referred for psychiatric/psychological evaluation. The drug treatment is individualized and we prefer the ketogenic diet because it provides the greatest short-term weight loss. Hospitalized patients perform physical activity supervised by the physical educator, an average of 150 minutes per week, in an adapted gym in the hospital or in the bed itself, respecting the clinical conditions of the patients. **Discussion:** Despite the increasing prevalence, the person living with obesity suffers from the lack of structural adequacy of health services. This article details the physical structure and the multidisciplinary team necessary for the hospitalization of patients who need a rapid weight loss, among them: cancer patients above the weight limit supported by the radiotherapy stretcher, patients with severe obesity awaiting bariatric, orthopedic and cardiac surgeries. **Conclusion:** Faced with the growing obesity epidemic, the adaptation of tertiary health services is necessary to meet the broad demands of this population.

PT.002 EVALUATION OF FATPHOBIA IN PHOTOGRAPHS OF MEN AND WOMEN WITH AND WITHOUT OBESITY

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Introduction: Individuals with high weight are often stigmatized and face prejudice and discrimination in multiple spheres of life. Weight stigma is defined by negative stereotypes related to physical appearance and the use of fat-phobic adjectives. This study aimed to evaluate whether photographs of men and women with obesity are more stigmatized than photographs of men and women without obesity. **Participants and methods:** Participated in this study a total of 471 men and women, aged between 18 and 60 years, who were recruited in person in two units of Primary and Secondary Health Care level. Participants responded to the survey through the RedCap platform, using a tablet provided by the researchers. Participants chose a stimulus from four available, which corresponded to a photo of another person (man and woman with and without obesity), and made a judgment, using the Fat Phobia Scale, in relation to the person in the photo. Univariate One-Way ANOVA with Bonferroni correction was used, with the mean score of the Fat Phobia Scale being the dependent variable and the photographs as independent variables. **Results:** The results showed a stimulus effect, $F(3,13) = 56.03$; $p < .001$, indicating that stimuli with obesity were more stigmatized when compared to stimuli with normal weight. The photos of men and women with obesity were more stigmatized, with statistical difference between the stimuli, being men with obesity ($M = 3.22$; $SD = 0.053$) more stigmatized than women with obesity ($M = 3.02$; $SD = 0.044$). **Discussion:** The significant difference in judgment based on the weight of the people portrayed in the stimuli was already expected and the results corroborate data showing that people with obesity are more stigmatized. The fact that the man with obesity was more stigmatized than the woman with obesity brought an unexpected result. Although women are more socially pressured to have a body closer to the prevailing aesthetic standard, men are also increasingly being judged in relation to physical appearance. **Conclusion:** Since little research has focused on assessing fatphobia in males, the present study is necessary to fill this gap, since women are not alone in the pressure exerted on the body. **License number of ethics committee**: 56485322.0.0000.5407.

PT.003 ASSOCIATION OF NUTRITIONAL RISK AND SARCOPENIA WITH CLINICAL AND NUTRITIONAL PARAMETERS IN OVERWEIGHT INDIVIDUALS HOSPITALIZED IN A UNIVERSITY HOSPITAL

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Introduction: Excess body weight is a risk factor for several morbidities and for clinical complications during hospitalization period, which can impact the longer hospital stay. In this sense, the presence of nutritional risk (NR) and sarcopenia risk (SR) in overweight and obese individuals are factors that can amplify clinical and nutritional problems. Thus, evaluating the association of NR and SR with clinical and nutritional parameters in hospitalized overweight individuals becomes relevant. **Patients and methods:** This is a cross-sectional study, which evaluated overweight and obese individuals, ≥18 years of age, of both sexes and admitted to the Medical and Surgical Clinics of the University Hospital of the Federal University of Juiz de Fora (HU-UFJF-EBSERH). The NR was evaluated using the NRS-2002, and the SR using the SARC-F questionnaire (cutoff point: ≥4) and the handgrip strength (HGS) measurement using a dynamometer (cutoff point: < 16 kg for women and < 27 kg for men). Weight, height, BMI, calf circumference, diagnosis, comorbidities, length of hospital stay and clinical outcome were also collected. The correlation of the variables of interest was performed using the Spearman test, considering $p \leq 0.05$. Study was approved by the Ethics Committee of the HU-UFJF. **Results:** We evaluated 82 overweight patients (overweight: 48.8% and obese: 51.2%), mostly female (53.7%), with a mean age of 50.71±12.9. The most prevalent comorbidity was arterial hypertension (42.7%), with more than half having one or more comorbidities. The NR was identified in 5% of the patients and the SR evaluated by the SARC-F was 18.3%. SR (SARC-F) was positively associated with NR (ρ: 0.334; $p \leq 0.002$), and negatively associated with HGS (ρ: -0.287; $p \leq 0.009$). The NR was also positively associated with the length of hospital stay (ρ:0.317; $p \leq 0.004$) and with the number of comorbidities (ρ: 0.242; $p \leq 0.02$), and negatively with the calf perimeter (ρ: - 0.256; $p \leq 0.02$). **Discussion:** SR and NR were associated with different clinical and nutritional parameters that may have an impact on clinical outcome. Although the prevalence of NR was low, these results demonstrated that this can be an important factor to be considered in the evaluation of overweight individuals. More sensitive methods that consider particularities of this population to assess NR need to be developed. **Conclusion:** The NR was associated with the SR, a greater number of comorbidities and a longer hospital stay. **License number of ethics committee:** Número do Parecer: 5.059.967, aprovado pelo Comitê de Ética em Pesquisa com Seres Humanos do HU-UFJF.

PT.004 THE IMPACT OF AN INTERDISCIPLINARY CLINICAL PROGRAM FOR THE TREATMENT OF OBESITY CLASS 2 AND 3 IN A PUBLIC SECONDARY CARE CENTER IN FEDERAL DISTRICT, BRAZIL

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Introduction: It is essential to assess the outcomes of public health services to improve public health policies. In the face of the obesity epidemic, it is urgent to evaluate the effectiveness of the actions proposed by the Brazilian Ministry of Health (BMH) to face this disease. **Objectives:** To investigate the effects of weight and surgery indication of two years of an interdisciplinary clinical program for the treatment of individuals with class 2 obesity associated with comorbidities and class 3 obesity in a public secondary care center in Federal District, Brazil. **Methods:** We assessed the participants were referred to a clinical treatment of obesity in a secondary care center between 2018 and 2021. We only included patients who completed the two-year follow-up by an interdisciplinary team, which included an endocrinologist, nutritionist, psychologist, and physiotherapist. We evaluated weight, body mass index (BMI), the referral process post-intervention, which indicated if the patient would maintain the clinical treatment at the primary care or surgical treatment, as well as the main reasons to avoid bariatric surgery despite the clear indication. **Results:** We evaluated 76 participants (48.8 ± 10.4 years, 81.1% women, 109.6 ± 15.3 kg). The body mass index (BMI) pre was 42.1 ± 3.8 kg/m², and the BMI post was 39.6 ± 4.4 kg/m². Although 61 (81.6%) participants showed weight loss (7.8 ± 6.8%), only 17 (22.3%) participants had more than 10% weight loss, and 8 (10.5%) achieved obesity class 1 or overweight post-intervention. Thirty-nine participants (51.3%) who remained with class 2 or 3 obesity were not directly referred to a bariatric surgery center. The reasons for non-referral were: weight loss greater than 10%; uncontrolled psychiatric comorbidities; refusal to undergo the surgical procedure; and discharge from the program during the COVID-19 pandemic. **Conclusion:** The BMH indicates that individuals with class 2 obesity associated with comorbidities and class 3 obesity must be managed in primary or secondary care for at least two years before a referral to a bariatric surgery. Nonetheless, the results demonstrate that most of the participants, post the interdisciplinary clinical program, remain with a degree of obesity indicative of bariatric surgery. It is necessary to reflect on the profile of individuals with obesity who would most benefit from this care model in secondary care, as well as those who should be referred more quickly to bariatric surgery.

PT.005 TEMPORAL TRENDS OF ADULT OBESITY PREVALENCE IN BRAZIL: A COMPARTMENTAL MODEL ANALYSIS OF SISVAN DATA FROM 2008 TO 2021 AND THE IMPACT OF COVID-19 PANDEMIC

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Introduction: The COVID-19 pandemic highlighted the importance of addressing obesity as a public health issue. The study aims to analyze the prevalence of obesity among Brazilian adults, and investigate the influence of the COVID-19 pandemic on current and future trends of obesity prevalence. **Methods:** We developed a mathematical model using anthropometry data from Sisvan of Brazilian adults (20-59 years) from 2008 to 2021. Our model was adapted from the classical compartmental models to analyze populations with different body mass index classifications, and was implemented using the SciPy library in Python 3.9. **Results:** Over the years, the prevalence of adult obesity in Brazil has been on the rise, following a global trend. In 2008, Sisvan data showed that 14.5% of the Brazilian adult population had obesity. By 2021, this number had more than doubled, with 32.9% of obesity among Brazilian adults. This represents an average annual rate of 1.42% in the prevalence of obesity growth between 2008 and 2021. Additionally, during the COVID-19 pandemic period from 2019 to 2021, there was a significant increase in the prevalence of obesity, which rose from 28.5% to 32.9%, representing an annual increase rate of 2.2% in that period alone. The forecast for adult obesity prevalence in Brazil suggests an increase from 32.9% in 2021 to 43.6% in 2030. If we exclude the pandemic period, i.e., data from 2020 to 2021, the estimated obesity prevalence for 2030 would be 4.4% lower. **Discussion:** The COVID-19 pandemic contributed to the global increase in obesity rates in recent years, likely due to lockdowns and social distancing measures that resulted in reduced physical activity, increased sedentary behavior, as well as increased processed food intake. This effect has been particularly pronounced in low- and middle-income countries. In Brazil, data from SISVAN highlights the impact of the COVID-19 pandemic on the rise of obesity rates and provides an estimate of their continued increase in the coming years. **Conclusion:** Obesity rates in Brazil are increasing and this trend is expected to continue until 2030. The COVID-19 pandemic has further fueled this trend, and its effects are anticipated to persist in the coming years. Thus, it is crucial to implement effective strategies for obesity prevention and management to address this pressing public health issue. **Funding:** CNPq fellowship (308772/2017-2), CNPq/MS/SAPS/DEPROS grant (442317/2020-4), and Fapemig (CDS-APQ 03954-22).

PT.006 DIVERSIFYING THE HIGHER EDUCATION LEARNING LANDSCAPE IN HEALTHCARE: A NEW LOOK AT OBESITY

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Introduction: With obesity as a multifactorial and complex disease, it is important to understand how is the training of health professionals to deal with this issue, which requires so much care and integrality. To better understand how the institutional mechanisms of higher education work in Brazil, the objective of this study was to map and describe how a set of health courses address obesity in their curricula. **Methods:** The study was based on an exploratory, descriptive and analytical approach, through an active search for information about the curricula of health courses (Physical Education – Bachelor's degree, Nursing, Medicine, Nutrition and Psychology) in the academic websites of Brazilian universities. The cutout of universities focused on an expression of the five regions of Brazil, thus making a selection of one state per region, mixing public and private universities. **Results:** In all, ten universities (five public and five private) were selected, according to the grade of the Ministry of Education (MEC). Only one medical school in São Paulo and one nutrition school in Amazonas had subjects on obesity in their curricula. Although we found some courses that offer disciplines specifically about obesity, there is a limit between what is written in the National Curriculum Guidelines (DCN), in the curricular matrices, and what is practiced inside the classrooms. **Discussion:** There is a limitation in the curriculum of higher education courses in Brazil, both in health and other areas, due to the fact that what is written in the DCN takes time to be incorporated into the courses and especially in the curricula. In other countries, it can be observed that the insertion of obesity in the health curriculum is more consolidated. **Conclusion:** With this set of data, it was observed that obesity is scored in only two courses analyzed. As seen in the DCN of the courses analyzed, in the curricula of the courses and in some of the Pedagogical Policy Projects (PPC), it is possible to note the lack of articulation between the courses regarding training in relation to obesity. The need for changes in the training of health professionals has mobilized the professions in the area in a significant way, especially regarding obesity. And the NCDs need to translate the result of the reflection of the needs of health professionals, regarding the territorial health dynamics.

PT.007 THE IMPACT OF OBESITY IN COVID-19: A RETROSPECTIVE COHORT STUDY OF INPATIENTS IN A TERTIARY CARE HOSPITAL

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Introduction: Brazil was severely hit by the coronavirus disease (COVID-19) pandemic stated by WHO on February, 2020. Initial studies revealed that obesity and diabetes mellitus (DM) were associated with severe COVID-19 outcomes, including requirement for invasive mechanical ventilation (IMV) or death. **Objective:** To assess the relation between obesity and diabetes with severe COVID-19 in inpatients in a Brazilian tertiary care hospital. **Methods:** This is retrospective cohort study, that evaluated patients who was hospitalized at a tertiary hospital from March to December 2020. Only patients with PCR positive for COVID-19 was included. Data regarding to demographic characteristics, anthropometric, comorbidities and outcomes (death, orotracheal intubation/mechanical ventilation). **Results:** 2.547 patients were divided in categories according to the BMI (underweight, eutrophic, overweight and obesity). The presence of overweight and underweight had no significant difference when compared to the eutrophic group. The presence of obesity was a protective factor with a 40% higher survival rate compared to the eutrophic group ($p = 0,005$). Underweight patients were 3 times more likely not to need intubation compared to the normal weight group ($p < 0,001$). Patients in the obesity group were 1.3 times more likely not to need intubation than those in the normal weight group ($p = 0,039$), being a protective factor. **Conclusion:** Although some studies associate obesity with more severe COVID-19 we did not find this relationship in our cohort. **License number of ethics committee:** 35995920.2.0000.0068 HCFMUSP.

PT.008 CALIBRATION OF BIOELECTRICAL IMPEDANCE ASSESSMENT WITH DUAL-ENERGY X-RAY ABSORPTIOMETRY IN PORTUGUESE YOUNG ADULTS – DATA FROM THE EPITEEN POPULATION-BASED STUDY

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Introduction: Body composition analysis is crucial for research, and in clinical settings to guide nutritional interventions. Although bioelectric impedance analysis (BIA) is not the gold standard method for the evaluation of body composition, it is cheaper and more likely to be used in outpatient evaluations. Studies have mostly validated estimates of fat mass and less frequently estimated the validity of fat free-mass obtained from BIA, in different populations. **Objective:** We aimed to compare fat mass (FM) and fat-free mass (FFM) estimated by BIA and by dual-energy x-ray absorptiometry (DXA), in Portuguese youth, and to calibrate BIA estimates, using DXA. **Methods:** The Epidemiological Health Investigation of Teenagers in Porto (EPITeen) recruited 13-year-old adolescents who were born in 1990 and were enrolled at public and private schools in Porto, Portugal, in the 2003/2004 school year. In this study, we analysed data from the evaluation at 27 years, from 942 participants who performed single-frequency BIA (Tanita TBF-300, USA) and DXA (QDR 4500A, Hologic, Bedford, MA), according to standardized procedures. Descriptive statistics are presented as mean and standard deviation. Pearson's correlation was used to assess the correlation between FM and FFM estimated by BIA and DXA. To calibrate the BIA estimates, inverse linear regression models were estimated using two approaches: univariate (FM or FFM, separately) and multivariate (both FM and FFM in the same model). **Results:** In this sample of 27-year-old participants, women were shorter and lighter than men, with lower BMI [23.1 kg/m^2 (SD 4.2) *vs.* 24.4 kg/m^2 (SD 3.8), $p < 0.001$]. Women presented higher FM, according to both BIA [17.1 kg (SD 7.9) *vs.* 14.1 kg (SD 7.4)] and DXA [23.3 kg (SD 8.1) *vs.* 20.4 kg (SD 8.1)] methods. The correlation between the BIA and DXA was strong, above 0.9 for both FM and FFM. From the multivariate model constrained to have an absolute equal intercept, the following calibration for FFM was obtained so that the estimates are compatible with those evaluated by DXA: $FFM_{calibrated} = -6.620 + 0.984 \times FFM_{BIA}$. The calibration for FM is: $FM_{calibrated} = +6.620 + 0.973 \times FM_{BIA}$. The inclusion of sex did not change the coefficients estimated for the calibration equation. **Conclusion:** In this population-based sample of young adults, fat mass assessed by BIA was largely underestimated and FFM overestimated, in comparison to DXA, and therefore the calibration should be applied to BIA estimates.

PT.009 PREVALENCE OF OBESITY AND OVERWEIGHT IN PATIENTS UNDERGOING PROCEDURES IN GENERAL SURGERY

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Introduction: The present work observes the prevalence of obesity in patients undergoing general surgery procedures, in a medium-sized public hospital in southern Brazil. **Objective:** To observe the prevalence of obesity and overweight in patients undergoing general surgery procedures. **Patients and methods:** Retrospective, descriptive, quantitative work where the medical records of all patients who underwent cholecystectomy and herniorrhaphy during the year 2020 were analyzed. Of the 188 medical records, 169 were included, with underage patients being excluded from the study (n = 14), patients with some type of cancer (n = 1) and incomplete medical records (n = 4). **Results:** Among the patients, 39.6% (n = 67) were male and 60.4% (n = 102) female. Of the absolute total, 39.1% of patients were obese (BMI > 30 kg/m^2), with obesity being more prevalent in females, with 27.8%. As for overweight (BMI > 24.9 kg/m^2 and < 30 kg/m^2), the absolute total was 34.9%, with 18.3% being female and 16.6% being male. Eutrophic people (BMI < 25 kg/m^2) accounted for 26%, 14.2% of whom were female, and to a lesser extent, males, with 11.8% of patients. In terms of gender, 28.3% of males were obese, 41.8% were overweight and 29.9% were eutrophic. Among females, 46.1% were obese, 30.4% were overweight and 23.5% were eutrophic patients. That is, 74% (n = 125) of the patients who underwent a procedure were overweight, with the possibility that surgical patients, even obese ones, were malnourished. The surgery with the highest presence of overweight people was cholecystectomy, with 113 patients (66.8% of the total), of which 43.4% (n = 49) were obese and 33.6% (n = 38) were overweight, that is, approximately 77% of patients undergoing cholecystectomy are overweight/obese. **Discussion and Conclusion:** Obesity in females is more present in numbers and percentages, both absolute and relative, however, overweight is relatively more prevalent in males. Eutrophic individuals, on the other hand, end up having smaller and very close relative numbers. Interventions in primary care must be reinforced before patients reach the state of overweight/obesity, in order to reduce damages and needs of the unified health system. **License number of ethics committee**: 4490640 – CEP Universidade Franciscana.

PT.010 WAIST CIRCUMFERENCE ASSOCIATED WITH CARDIOVASCULAR RISK FACTORS IN SCHOOLCHILDREN IN MACAÉ, RIO DE JANEIRO

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Introduction: Cardiovascular diseases (CVDs) are one of Brazil's main causes of death worldwide. Systemic arterial hypertension (SAH) and non-HDL cholesterol are important cardiovascular risk factors with a high impact on the progression of atherosclerosis, which begins in childhood. Waist circumference (WC) is useful for identifying excess abdominal adiposity in children and may be associated with cardiovascular risk in this age group. **Objective:** To verify the association between waist circumference, systemic arterial hypertension, and non-HDL cholesterol in schoolchildren in the City of Macaé, RJ. **Methods:** A cross-sectional study with a sample of 501 children aged 6 to 9 years old, in the city of Macaé. Demographic, anthropometric (height, WC), biochemical (total cholesterol and HDL cholesterol), and blood pressure (BP) data were collected. All variables were measured in duplicate and the average value was used for classification. blood pressure was considered to be BP ≥ 95 to <95 + 12 mmHg or 130 x 80 mmHg to 139 x 89 mmHg (the lowest) according to the student's age, gender, and height percentile, as recommended by the Brazilian Society of Cardiology. The cut-off point > 145 mg/dL was used for high non-HDL cholesterol. Statistical analysis was performed using the SPSS version 21.0 program. Binary logistic regression adjusted for gender and age was used to estimate the Odds Ratio (OR) and 95% confidence interval, considering $p < 0.05$ for statistical significance. **Results:** Of the 501 children, 56.4% (n = 282) were girls, and 43.6% (n = 218) were boys. The mean age was 7.83 (SD 1.05) years. The prevalence of SAH was 29.1% (n = 146) and high non-HDL cholesterol was 4.8% (n = 24). WC is associated with both SAH OR = 1.048 (95%CI 1.026;1.071, $p < 0.001$) and non-HDL cholesterol OR = 1.070 (95%CI 1.026;1.115, $p < 0.001$). **Conclusion:** The positive association between WC, SAH, and non-HDL cholesterol reinforces the WC as a useful tool to identify schoolchildren with a greater chance of cardiovascular risk since these two factors are especially related to atherosclerosis and other CVDs. **License number of ethics committee**: 876333.

PT.011 HEALTH SELF-PERCEPTION AND ITS RELATIONSHIP WITH TRADITIONAL AND NON-TRADITIONAL ADIPOSITY MARKERS IN INDIVIDUALS AT HIGH CARDIOMETABOLIC RISK

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Introduction: Health self-perception (HSP) is an easy epidemiological measure that has been used as a predictor of morbimortality, but its relationship with adiposity is unclear. Thus, we aimed to investigate the relationship between HSP and traditional and non-traditional markers of adiposity in individuals at cardiovascular risk. **Subjects and Methods:** This is an exploratory cross-sectional study using baseline data from active medical records of a secondary healthcare unit (2015- 2020). HSP was assessed by the question: "How do you classify your health status?", as proposed by Vigitel survey (Brazilian Ministry of Health) and classified as positive ("excellent, very good or good") or negative ("regular or poor"). Body Mass Index (BMI), waist circumference (WC), waist-to-height ratio (WHtR), hypertriglyceridemic waist phenotype (HWP), visceral adiposity index (VAI), and deep abdominal adipose tissue (DAAT) were used as adiposity markers. Variables were categorized according to reference or median values. Pearson's chi-square test and Poisson regression with robust variance were adopted (SPSS v.21.0, $\alpha = 0.05$). **Results:** The study's participants ($n = 843$) were mostly elderly (70.8%) and female (56.1%), could read/write (77.4%), and used polypharmacy (70.0%). Most women, elderly, and polypharmacy individuals had a negative HSP and 85.5% of individuals that could read/write had positive HSP. The prevalence of increased values for BMI, WC, WHtR, and DAAT was significantly higher in individuals with a negative HSP, compared to those with a positive HSP. The prevalence of negative HSP was 1.21 (95%CI 1.02-1.44) and 1.19 (95%CI 1,01-1,40) times higher in individuals with high BMI (≥35.0 kg/m^2) and high DAAT (≥176.7), respectively, regardless of sex and age. However, associations lost significance after adjustments for polypharmacy and ability for read/write. **Discussion:** According to the World Health Organization, HSP is a valid and robust predictor of morbimortality of several chronic diseases. Adiposity can negatively influence HSP but this relationship remains underexplored. **Conclusion:** HSP is impaired in individuals with greater adiposity. Despite the influence of external variables, the results reinforcing the importance of HSP during the follow-up of individuals at cardiovascular risk. **Financial support:** Capes (Code 001), Pibic/CNPq-UFV 2022-2023, CNPq fellowships (151832/2022-6 and 308772/2017-2), and CNPq/MS/SAPS/DEPROS grant (442317/2020-4). **License number of ethics committee**: 5.164.152.

PT.012 MONOCYTES COUNT AS AN INDICATOR OF ADIPOSITY AND METABOLIC SYNDROME IN INDIVIDUALS AT HIGH CARDIOVASCULAR RISK

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Introduction: Perturbation in circulating monocyte have been associated to obesity inflammation and weight related diseases. Since monocyte count is a routine low-cost test which great clinical applicability, we aimed to investigate the relationships between monocytes count, adiposity markers, and metabolic syndrome in individuals at high cardiovascular risk. **Subjects and methods:** This is an exploratory cross-sectional study carried out by consulting baseline data from active medical records of a secondary healthcare unit (2015-2020). Monocytes counts were assessed by routine laboratory tests. Body mass index (BMI), waist circumference (WC), waist-to-height ratio (WHtR), hypertriglyceridemic waist phenotype (HWP), lipid accumulation product (LAP), and deep abdominal adipose tissue (DAAT) were used as adiposity markers. Variables were categorized according to reference or tertile values. Pearson's chi-square test and Poisson regression with robust variance were adopted (SPSS v.21.0, $\alpha = 0.05$). **Results:** Study subjects which valid monocyte count ($n = 622$) were mostly elderly (71.5%) and female (55.5%), and were assisted for arterial hypertension (55.5%), diabetes (37.0%), and chronic kidney disease (13.2%). Most individuals had excess body weight (70.7%), metabolic syndrome (65.1%) and 36.1% presented HWP. There was an increase in individuals with low monocyte count across tertiles of BMI, WHtR, LAP, and DAAT (P of trend < 0.05) and the prevalence of metabolic syndrome and HWP was significantly higher in individuals with low monocyte count compared to those in reference category. Regression analyses showed that those individuals with low monocytes count had higher prevalence in the third tertile of BMI (OR: 2.45, 95%CI 1.08-5.54), regardless of sex, age, and comorbidity. For the other adiposity markers, relationships with monocyte count were lost after adjustments. **Discussion:** Weight-related inflammation could lead to recruitment of circulating monocytes for macrophage activation into adipose tissue and results from the present study suggest that low monocyte count is an interesting indicator of adiposity. **Conclusion:** The monocyte count was associated with higher values of adiposity markers, but more studies are necessary to understand related-mechanisms. **Financial support:** Capes (Code 001), Pibic/CNPq-UFV 2022-2023, CNPq fellowships (151832/2022-6 and 308772/2017-2), and CNPq/MS/SAPS/DEPROS grant (442317/2020-4). **License number of ethics committee:** 5.164.152.

PT.013 COUNTERING OBESITY WITH EOSINOPHIL: INSIGHTS FROM A CROSS-SECTIONAL EXPLORATORY STUDY IN INDIVIDUALS AT HIGH CARDIOMETABOLIC RISK

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Introduction: Recently, protective role of eosinophil against obesity have been demonstrated in animal studies but human studies do not support this evidence yet. Because eosinophil count is a routine low-cost test which great clinical applicability, we aimed to investigate the relationships between eosinophil count, adiposity markers, and metabolic syndrome in individuals at high cardiovascular risk. **Subjects and methods:** This is an exploratory cross-sectional study carried out by consulting baseline data from active medical records of a specialized outpatient care unit (period between 2015 and 2020, reference number for ethical approval: 5,164,152). Eosinophil counts ware extracted from routine laboratory tests. The adiposity markers used were Body Mass Index (BMI), waist circumference (WC), waist-to-height ratio (WHtR), hypertriglyceridemic waist phenotype (HWP), lipid accumulation product (LAP), and deep abdominal adipose tissue (DAAT). Variables were categorized according to reference or tertile values. Pearson's chi-square test and Poisson regression with robust variance were adopted (SPSS v.21.0, $\alpha = 0.05$). **Results:** Study subjects which valid eosinophil count ($n = 633$) were mostly female (55.1%) and presented mean age of 66.5 (14.1) years. All study subjects presented eosinophil count at normal ranges. Mean eosinophil count decreased as the BMI tertile increased and were lower in those with HWP and elevated WHtR, DAAT, and LAP. The chance of being in third tertile decreases by 8% (95%CI 2-14%) for BMI, by 9% (95%CI 3-16%) for WHtR, and by 10% (95%CI 2 – 17%) for LAP with an increase by one unit in eosinophil count. This result was lost after adjusting for sex, age, and comorbidity. In regression analyses, eosinophil count was not associated with HWP. **Discussion:** Eosinophils have recently been implicated in providing a protective role against obesity since decreasing eosinophil numbers exacerbates weight gain and contributes to glucose intolerance in high fat diet-induced obese animals. However, this evidence remains supported by animal but not by human studies. **Conclusion:** The present study suggest the existence of relationship between eosinophil count and adiposity markers. However, more studies are need to further elucidate the influence of external variables in such relationship. **Financial support:** CAPES (Code 001), PIBIC/CNPq-UFV 2022-2023, CNPq fellowships (151832/2022-6 and 308772/2017-2), and CNPq/MS/SAPS/DEPROS grant (442317/2020-4). **License number of ethics committee:** 5.164.152.

PT.014 OBESITY AMONG INDIVIDUALS WITH MENTAL DISEASE AT A PSYCHOSOCIAL ATTENTION CENTERS IN SALVADOR, BAHIA, BRAZIL

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Introduction: The relationship between obesity and mental disease has been described and is still very much unknown in Brazil. According to data from the World Health Organization (WHO), in 2025 it is estimated that 2.3 billion adults around the world will be overweight, there is a risk factor for the development of cardiovascular diseases. In Brazil, the last survey described that overweight affects 57.2% of Brazilians and 22.4% are obese. **Objective:** To describe the prevalence of obesity and abdominal adiposity among individuals with mental illness. **Materials and methods:** This is a cross-sectional and descriptive study, carried out with 284 patients over 18 years of age followed at a Psychosocial Attention Centers in the city of Salvador, Bahia, Brazil, between August 2019 and February 2020. All participants were evaluated through the application of a structured questionnaire, clinical and anthropometric evaluation. **Results:** The total of, 284 individuals with mental illness were evaluated, 129 men and 155 women. The age ranged between 21 and 74 years (mean 44 +- 11.92). The body mass index (BMI) ranged between 18-47 kg/m^2 (mean: 29.1+- 6.12) and the waist-hip ratio (WHR) between 0.73-1.1 with a mean of 0.926 (+- 0.079); furthermore, the waist measurement was between 63-132 cm, with an average of 97.72 (+- 14.10). BMI values above 29.9 characterizing obesity were identified in 122 individuals (42.95%) and 91 individuals (32.04%) were overweight (BMI 25-29.9). **Conclusion:** The data alerted to the high prevalence of obesity among individuals with mental disease and its possibly related to metabolic disease. As it has been demonstrated, there is a need to develop strategies for the prevention and treatment of obesity in this group.

PT.015 PROFILE OF MORTALITY FROM DIABETES MELLITUS IN THE ELDERLY IN BRAZIL FROM 2017 TO 2020

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Introduction: Diabetes mellitus (DM) is a metabolic disorder caused by a deficiency in the mechanism of insulin production or its action, or even both, culminating in recurrent hyperglycemia. In Brazil, mortality from diabetes as an underlying cause increases exponentially for people aged 60 years and older. Therefore, DM has a significant impact on public health in the country. Thus, profiling the mortality of the elderly population is extremely important to establish a more efficient health approach. With this in mind, this work aims to outline the profile of DM mortality in the elderly in Brazil from 2017 to 2020. **Material and methods:** Epidemiological, cross-sectional, retrospective and descriptive study, based on the information available at the Department of Informatics of the Unified Health System. Descriptive analysis was performed based on the total number of hospitalizations due to DM mortality in the elderly in Brazil. The variables, age group, sex, race and color were analyzed in the period from 2017 to 2020. **Results:** During the period studied, a total of 220,549 DM deaths were recorded for the population over 60 years of age in Brazil, and the elderly age group with the highest number of deaths was 80 years and older (37.64%). The regions with the highest mortality rates were the Southeast, with 84,394 deaths (38.25%), and the Northeast, with 70,902 (32.14%). More than half of the deaths were recorded in women (55.64%), but there is no solid evidence on gender-associated mortality from the disease. As for white color/race, it recorded a total of 110,865 deaths (50.26%), which shows a notable difference from black color/race (8.91%). This finding differs from studies conducted in the country, which showed a greater tendency for mortality in the brown race, however, the lack of completeness for this variable may have distorted this finding. **Conclusions:** In view of this study, we conclude that, during the period studied, mortality from DM was an important public health problem for the elderly in Brazil, especially in women and individuals of color/white race. In this sense, strategies aimed especially at compensating glycemic indices are important for better adherence to pharmacotherapy and early diagnosis.

PT.016 ANALYSIS OF THE PROFILE OF DIABETES MELLITUS HOSPITALIZATIONS IN BAHIA, BRAZIL, IN THE LAST FIVE-YEAR PERIOD (2017-2021)

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Introduction: Diabetes mellitus (DM) is a multifactorial metabolic syndrome, which leads to hyperglycemia due to the inability to secrete and/or absorb insulin. The course of the disease includes vascular problems affecting different organs such as the heart, kidneys, and vascular system of the lower limbs. Considering its impact on the quality of life of individuals with this disease, determining the epidemiological profile of hospitalizations for DM can be useful to guide health strategies aimed at preventing complications associated with this disease. **Patients and methods:** Ecological, cross-sectional, retrospective and descriptive study, based on data from Unified Health System Informatics Department. Information about variables, number of internations, geographic region, self-reported color/race and gender was collected, organized and analyzed using Microsoft Office Excel. **Results and discussion:** During the period studied, a total of 62,768 cases of hospitalizations for DM were reported in Bahia. The year 2021 concentrated the highest number of records in the period (18,5%), which may be associated with the pandemic of COVID-19, which resulted in compromised therapy, difficulties in medical follow-up, and suspension of most elective care, which may have contributed to the worsening and need for hospitalization. As for the territorial portion, the East region stood out for the highest number of hospitalizations (25.09%), while the West region stood out for the lowest number in the period (5.13%). Factors such as greater population density and barriers in access to basic health services may have contributed to this finding. Of these hospitalizations, 56% were females, which may be associated with hormonal changes that compromise the proper functioning of pancreatic beta cells and/or cell receptors associated with the entry of glucose into the cell, which affects the need for hospitalization of individuals. **Conclusion:** It can be concluded that DM constitutes an important public health problem for the state of Bahia, which affects health expenditures and high morbidity and mortality in the state. The hospitalization profile was characterized by female individuals, brown and residents of the eastern region, in this sense, pharmacological and non-pharmacological strategies aimed especially at better control of glycemic indexes, in order to avoid hospitalizations for this condition, should be mitigated.

PT.017 ANOTHER WAY TO LOOK AT OBESITY: A PRACTICAL EXPERIENCE

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Introduction: Obesity is a chronic disease with high prevalence and is associated with several health conditions. The stigma surrounding weight makes patients vulnerable to discrimination by society. Thus, seeking a new way of looking at obesity with a more empathetic view, the World Obesity Day campaign aimed for a change of perspective, embracing the stories of people living with obesity, discussing destigmatization, reducing blame and the concept of personal responsibility for weight gain, as well as explaining the concept of controlled obesity, avoiding the pursuit of unrealistic weight goals. **Methods:** An introductory lecture was given by endocrinology students to the general public during the event "World Obesity Day Fair", held at a hospital leader in obesity treatment. Subsequently, a standardized questionnaire with the Likert scale was distributed, with questions about acceptance, positive change in the way obesity is viewed, and applicability of knowledge in practice. Additionally, an open-ended question was asked about the patients' feelings after participating in the event. **Results:** 48 patients were evaluated after the lecture. The average score of acceptance was 9.79 out of 10, of positive change was 9.39, and of applicability of knowledge was 9.25. Words such as "acceptance" "strength", "self-esteem," "happiness", and "love" were used to describe the experience. **Discussion:** The ACTION study showed that 50% of patients with obesity seek help and 50% of these receive treatment. This demonstrates the low demand for care by patients, as well as the lack of preparation by the healthcare team to offer adequate treatment for this population. These individuals already face a widespread social stigma based on the unproven assumption that body weight derives from lack of self-discipline and personal responsibility. The use of inappropriate language, discriminatory attitudes or policies also lead to lower adherence and interruptions in seeking appropriate treatment. Thus, educational initiatives aimed at demystifying and disseminating appropriate knowledge about the complexity of obesity help reduce prejudice against the disease and should be encouraged**. Conclusion:** The new perspective on obesity, with a multidisciplinary approach, with empathy and without stigmatization, seems to have a positive impact on patients with obesity. This change of perspective may contribute to better patient engagement and have a future impact on long-term treatment success.

PT.018 BODY DISSATISFACTION AND ASSOCIATED FACTORS ACCORDING TO THE SEXUAL MATURATION STAGE OF SCHOOLCHILDREN

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Introduction: The changes that occur during puberty influence the nutritional status and when associated with body image, they are enhanced since students suffer from aesthetic pressure. Thus, the objective was to evaluate the association between body dissatisfaction and biochemical and body composition variables, according to the stage of sexual maturation in schoolchildren. **Patients and methods:** This is a cross-sectional study, carried out in public schools in Vitória-ES. Data collection was carried out between July/2016 and February/2017, through a structured questionnaire, with information regarding age, gender, stage of sexual maturation, satisfaction and body perception. Total cholesterol, HDL, LDL, triglycerides, glucose and insulin, BMI, waist circumference, waist-to-height ratio and body fat percentage were evaluated. Body image was assessed using the Kakeshita Silhouette Scale and sexual maturation stage using Tanner's illustrations. Pearson's Chi-square Test was used to verify the association between body dissatisfaction with the other variables, considering $p < 0.05$, using the SPSS® software (version 21.0). This study was approved by the Ethics Committee for Research involving Human Beings of the Health Sciences Center at UFES (Report No. 1,565,490). **Results and discussion:** A total of 296 students with a mean age of 10.7 years (±2.0), 54.4% female and 75.3% pubescent and post-pubertal were evaluated. Regarding body image, it was observed that most are dissatisfied with their body (88.9%). As for body perception, overestimation of body image predominates (58.8%), with no difference between stages of sexual maturation. A higher prevalence of body dissatisfaction was observed among prepubertal males and those with excess weight ($p < 0.05$). Among pubescent and post-pubertal, overweight individuals, with excess body fat, changes in WHtR, triglycerides and insulin were more present among dissatisfied individuals ($p < 0.05$). It was verified, amid individuals in the pubertal and post-pubertal stages that the overestimation of body image was more present between teenagers and in those who had normal WC and WHtR. **Conclusion:** Body composition and biochemical variables were related to body dissatisfaction, with differences in relation to the stage of sexual maturation, hence the importance of this assessment as early as possible, aiming at disease prevention. **License number of ethics committee**: 1,565,490.

PT.019 HEALTH AND NUTRITION CONDITIONS OF SCHOOLCHILDREN FROM JUIZ DE FORA, MG

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Introduction: Childhood and youth are the periods where the formation and consolidation of eating habits occurs. Excess weight and associated chronic noncommunicable diseases (CNCDs) have increased worldwide, including in children and teenagers, and are considered a serious public health problem. Thus, the objective was to evaluate the nutritional status and blood pressure levels, according to gender and race/color, in schoolchildren. **Methods:** This is a cross-sectional study with students aged three to eleven years from public schools in vulnerable regions of the city of Juiz de Fora-MG. Nutritional status was evaluated using the BMI/Age index, according to the curves of the World Health Organization, classifying them as thin, eutrophic (not overweight) and overweight (overweight and obese). Blood pressure (BP) was measured, taking three measurements according to the recommendations of the V Brazilian Guidelines on Arterial Hypertension, being classified as Normal or Inadequate (Pre-hypertension, Hypertension Stage one and Stage two). For data analysis, the SPSS® software (version 20.0) was used, considering the Chi-Square or Fischer's Exact Tests, to assess the association between variables, according to gender (female; male) and race/color (black; brown; white). The study was approved by the Ethics Committee for Research with Human Beings of the Federal University of Juiz de Fora (Report: 3,349,983/2019). **Results:** 206 students with a mean age of 6.24 (±2.41) years were evaluated, where 52.7% were female and with regard to the declaration of race/color (n = 136), the majority was brown (52.9%). Among the participants, 20.7% were overweight and in relation to blood pressure (n = 149), 49% had inadequate pressure. There was no significant difference between the prevalence of overweight and inadequate blood pressure, according to sex and race/color ($p > 0.05$). **Discussion:** Food and Nutrition Education activities are important in encouraging adequate nutrition, in addition to showing the need for BP monitoring at this early stage of life, which, although it was carried out in a single day, in the school environment, not being possible the diagnosis of hypertension, is an important screening that can help prevent the disease. **Conclusion:** It is concluded that the evaluated sample showed considerable anthropometric and BP changes, regardless of sex and race/color, showing the importance of diagnosing and preventing CNCDs as early as possible. **License number of ethics committee:** 3,349,983/2019.

PT.020 OVERWEIGHT INDIGENOUS IN ADOLESCENTS OF THE XUKURU DO ORODUBÁ ETHNIC GROUP IN PERNAMBUCO STATE

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Introduction: Overweight is presented as one of the major public health problems in the world, mainly due to the increased prevalence observed in different age groups. The present study aimed to identify the prevalence of overweight in indigenous adolescents from 14 to 19 years old belonging to the Xukuru do Ororubá ethnic group. **Methods:** This is a cross-sectional analytical study conducted in the Xukuru do Ororubá territory, one of the largest indigenous populations of the Northeast, covering three geographical regions (Serra, Agreste and Ribeira), located in the mesoregion of Agreste Pernambuco. For data collection, we used questionnaires with socioeconomic, demographic, anthropometrics and lifestyle data. Overweight was assessed from the body mass index for age (BMI/I) ≥ 1 Z-score. **Results:** 225 adolescents were evaluated, 42.7% male and 57.3% female, proportionally distributed in the three sociodemographic regions. The prevalence of overweight found was 14.2%, the factors that remained associated with overweight, in Poisson regression were: maternal education ($p = 0.03$), study shift ($p = 0.02$), no presence of toilet at home ($p = 0.03$) and dissatisfaction with current weight ($p \leq 0.001$). **Discussion:** Although the prevalence of overweight varies among ethnic groups and sometimes among communities belonging to the same group, findings of significantly higher prevalence recorded for non-indigenous Brazilian population, in which overweight reaches high percentages, are not uncommon. The constant contact with urban society has caused a decline in the traditional practices of the Xukuru people, affecting their ethical and cultural identity, gradually absorbing their patterns of food and nutrition, leaving them vulnerable to diseases characteristic of non-indigenous peoples. **Conclusion:** These data can enable the expansion of programs of food and nutrition education in the Xukuru territory, as well as the rescue of healthy living habits, aiming at the reduction of nutritional diseases of greater magnitude and reduction of health care costs in the long term. It is expected with the creation of the Ministry of Indigenous Peoples, the implementation of new projects and intervention measures in the context of food and nutrition in order to positively impact the local reality of many indigenous communities in Brazil. **Keywords:** Adolescents, indigenous population, overweight. **License number of ethics committee:** 54457721.1.0000.5208.

PT.021 COMPARATIVE ANALYSIS BETWEEN 3D OPTICAL SCANNER AND ELECTRICAL BIOIMPEDANCE TO EVALUATE BODY COMPOSITION

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Introduction: Obesity is considered a global epidemic. Methodologies that allow us to accurately estimate body composition are crucial for a better approach for people with this pathology. The objective of the study was to compare two methodologies to analyze body composition: the 3D optical scanner (3DOS) and bioelectrical impedance analysis (BIA). **Patients and methods:** This is a cross-sectional observational study carried out at a clinic specialized in the treatment of overweight. A total of 439 simultaneous BIA (InBody® 370S) and 3DOS (Styku® S100 LLC) exams were performed. The sample was obtained by convenience, among the individuals who attended the clinic during this period. The following variables were compared: body weight (kg), fat mass (kg), fat percentage and fat-free mass (kg), simultaneously using both technologies. Statistical analysis was performed using SPSS software version 20.0, with normality test and simple linear correlation by Spearman test for asymmetric variables. Variables with a p value < 0.05 were considered statistically significant. **Results**: The sample consisted of 439 participants. The mean age of the patients was 45.6 years (SD ± 13.22). The average weight obtained by BIA was 87.50kg (±19.33), in 3DOS it was 87.77 kg (±19.47), with a mean BMI of 31.31 kg/m² (SD ± 6.17). A very strong and significant correlation was found between the body weight obtained by the two methodologies (r 0.999, p < 0.0001). There was a very strong correlation between fat mass obtained by the 3DO scanner and bioimpedance (r 0.949; p < 0.0001). It was verified a strong correlation between the percentage of fat obtained in both methodologies (r 0.898; p < 0.0001). Analysis of fat-free mass also showed a strong correlation between the values obtained by BIA and the 3DO scanner (r 0.937, p < 0.0001). **Discussion:** BIA is a well-known methodology used in clinical practice. The 3DOS methodology is a more recent technology that has shown a promising role in the analysis of body composition. 3DOS is a technology that captures images by digital scanning and allows obtaining a series of measurements and body circumferences. In the present study, there was a strong correlation between the variables body weight, percentage of fat, fat mass and fat-free mass obtained by the two methodologies. **Conclusion:** The bioimpedance and 3D optical scanner methodologies used showed a strong correlation with each other for the population studied in relation to body weight, percentage of fat, lean mass and fat mass. Both can be used to assess the body composition of overweight adults. **License number of ethics committee:** Comitê de Ética e Pesquisa da Universidade Federal de São Paulo – Unifesp/EPM (CAAE 51080121.9.0000.5505, protocolo número 5.117.359).

PT.022 LEPTIN AND BEHAVIORAL CHARACTERISTICS IN A SAMPLE OF WOMEN SHIFT WORKERS

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Introduction: Leptin is a hormone derived from adipocytes and assists in the homeostatic control of adipose tissue mass. Circadian misalignment can disrupt leptin rhythms, night shift workers have been linked to a higher prevalence of metabolic syndrome, increased leptin levels and higher prevalence of cardiovascular disease. The aim of this study is to assess exposure to shift work, as well as whether obesogenic features are related to a disorder of the hormone leptin. **Patients and methods:** This is a prospective observational cohort study entitled "Longitudinal Study of Occupational Health of Women (ELO Saúde)". The target population comprises 450 female shift workers in an industry in southern Brazil. For the present study, a cross section was used with preliminary data with 177 questionnaires. Information regarding demographic and behavioral variables was obtained through a pre-tested questionnaire, anthropometric variables were measured after the interview, measuring height (cm), weight (kg) and waist circumference (cm). The participants were invited to collect laboratory tests according to previous guidelines. Data were analyzed using SPSS software version 20.0. We used the description of data through absolute and relative frequency and mean and standard deviation. Spearman's linear correlation test was used, p < 0.05 was considered statistically significant. The Research Project was approved by the Research Ethics Committee under opinion nº 5,275,921. **Results:** The sample consisted of 177 participants. The mean serum leptin was 31 ng/mL (SD 25), as for the Body Mass Index (BMI), the mean was 27.8 kg/m² (SD 5.5) and the WC was 87.8 cm (DP 12.7). A positive correlation was identified between BMI, WC, systolic and diastolic blood pressure with increased leptin levels (p < 0.005). **Discussion:** The change in the hormone leptin can be due to numerous external factors, including the work shift associated with an increase in BMI and, consequently, waist circumference. Studies associate the metabolic disorder with the increase of leptin, concomitant with the result found in this research. A meta-analysis concluded based on current evidence that leptin positively affects BMI. **Conclusion:** A positive correlation was found between BMI, WC and other factors with increased serum leptin levels. Therefore, the need for further studies for better investigation, as a warning for special care in terms of diet and lifestyle. **License number of ethics committee:** Comitê de Ética e Pesquisa da Universidade do Vale do Rio dos Sinos (Unisinos) aprovado sob o parecer nº 5.275.921.

PT.023 SERUM VITAMIN D AND BEHAVIORAL CHARACTERISTICS IN A SAMPLE OF WOMEN SHIFT WORKERS

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Introduction: About 40% of women of reproductive age have inadequate vitamin D levels. In Brazil, although there is no consensus, the Brazilian Society of Endocrinology and Metabology ensured that the ideal is to maintain levels between 30 and 50 ng/mL. The object of this summary is to assess serum levels of vitamin D and association with behavioral variables in a sample of female shift workers. **Patients and methods:** This is an observational study of prospective cohort entitled "*Estudo Longitudinal de Saúde Ocupacional de Mulheres* (ELO Saúde)". The target population comprises 450 shift women. For the study a cross section was used with preliminary data with 177 questionnaires. Information regarding demographic and behavioral variables was obtained through a pre-tested questionnaire, anthropometric variables were measured after the interview. Participants were invited to collect laboratory tests according to prior guidelines. Data was double entered using SPSS Software version 20. We used the description of data through absolute and relative frequency and mean and standard deviation. It was analyzed using Test T de Student to compare means. The research project was approved by the Research Ethics Committee under Opinion nº 5,275,921. **Results:** The sample consisted of 177 participants. The average serum vitamin D was 21.5 ng/mL (DP 9,5), minimum value 1.4 and maximum 52.5. The prevalence of serum vitamin D levels below 30 ng/mL was 53.3%. Serum vitamin D did not have an association with age, ethnicity, marital status or smoking habit. There was an association between the practice of physical activity and higher levels of vitamin D (p = 0,05). **Discussion:** Vitamin D can be obtained from eating sources, but is mainly synthesized by the exposure of the skin to Ultraviolet B radiation. Outdoor physical activity, with sun exposure, would bring benefits in the synthesis and action of vitamin D in the body. A systematic review and math analysis demonstrated the tendency of the levels of 25 (OH) D being more expressive when associated with physical activity. Our hypothesis is that exposure to the sun for physical activity increases the synthesis of vitamin D. **Conclusion:** High prevalence of vitamin D deficiency was identified in shift-workers. The practice of physical activity proved to be a protective factor. We suggest educational actions for health promotion in this population, since the time discard for practical physical activity becomes different from a woman who does not work in shift, requiring specific guidelines. **License number of ethics committee:** Comitê de Ética e Pesquisa da Universidade do Vale do Rio dos Sinos (Unisinos) aprovado sob o parecer nº 5.275.921.

PT.024 DISTURBED EATING ATTITUDES AND POLYCYSTIC OVARY SYNDROME

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Introduction: Polycystic ovarian syndrome (PCOS) is a heterogeneous endocrine disease, characterized as a reproductive, hormonal and metabolic disorder. The main features of PCOS are oligoovulation or anovulation, clinical or biochemical evidence of hyperandrogenism, and polycystic ovary morphology. Common psychological comorbidities in PCOS can contribute to eating disorders and subsequent weight gain. Objective: to evaluate disturbed eating attitudes in university professors with Polycystic Ovary Syndrome. **Materials and methods:** Data collection was carried out from July to August 2020 through an epidemiological questionnaire built and typed in Google Forms that was sent by email to all the institution's professors. Sociodemographic data, lifestyle, weight and height, diagnosis for PCOS and a validated EAAT (Disordered Eating Attitudes Scale) questionnaire were evaluated. **Results and discussion:** Women with PCOS had a higher prevalence of obesity (p = 0.009) and reported use of sleeping pills (p = 0.014) when compared to women without PCOS. The mean disordered eating score of women with PCOS was higher than those without PCOS (p = 0.003). **Conclusion:** Women with PCOS were at greater risk of being obese and using more sleeping pills than those without PCOS, in addition to having higher scores on the EAAT. The results reinforce the importance of investigating the eating behavior of women with PCOS so that the negative outcomes of the syndrome are attenuated with lifestyle changes.

PT.025 SATURATED FAT CONSUMPTION FACE DIFFERENT SCENARIOS OF CARDIOVASCULAR PROBLEMS: A CROSS SECTIONAL STUDY IN BRAZIL

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Introduction: Little is known about populations values and preferences (V&P) related to fat consumption, particularly to the current evidence on association between fat intake and health outcomes. **Objective:** To investigate V&P in Brazil related to high-fat foods, and the public's willingness to change their dietary habits, face of possible cardiovascular consequences. **Methods:** Cross sectional study with adults in all Brazilian regions. Participants were classified into 4 risk groups based on demographic and health responses. They've watched an informative video about risks and consequences of cardiovascular problems to do a direct choice exercise related to fat intake based on two scenarios: first considering a chance of cardiovascular problems based on studies of LOW certainty of evidence and another considering studies with HIGH certainty of evidence. **Results:** Brazilian sample had 820 participants. Women represented 76.2% (n = 623), average age was 38.5 (13.2). 158 participants (19.3%) were at moderate to very high risk and 43.6% of them would change their diet considering studies with low certainty of evidence, while 68.4% would only change face of studies with high certainty of evidence ($p < 0.001$). No significant differences were observed in relation to the sociodemographic variables, gender, age group and marital status. **Conclusion:** The results suggest that after receiving information on evidence studies and health consequences, people would be willing to change their behavior. **License number of ethics committee:** CEP Universidade de Sorocaba CAAE: 57412522.5.0000.5500.

PT.026 OBESITY AND ASSOCIATED FACTORS IN A SAMPLE OF WORKING WOMEN: PRELIMINARY DATA

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Introduction: Obesity considered a chronic disease that receives multifactorial influences and presents cultural, genetic, psychosocial, endocrine, metabolic, economic interactions, and systemic consequences in individuals and society. Women have a higher BODY MASS INDEX (BMI) than men in several countries around the world, including Brazil. **Patients and methods:** This is a prospective observational cohort study entitled "Longitudinal Study of Occupational Health of Women (ELO Saúde)". The target population comprises 450 working women in southern Brazil. For the present study, a cross section was use with preliminary data with 272 questionnaires. The information was obtain through the application of a pre-tested and pre-coded questionnaire. Anthropometric variables were measure at the end of the interview, with obesity classified by BMI ≥ 30 kg/m². Data were analyzed using STATA software version 12.0. We used the description of data through absolute and relative frequency and mean and standard deviation. It was analyze using Pearson's Chi-square test and Linear Trend. The Research Project was approve under opinion nº 5.275.921. **Results:** The sample consisted of 272 participants, of which 78% were shift workers. The prevalence of obesity was 29% (95%CI 25.1-47.7). The outcome was associated with age, education, ethnicity, income, hours of sleep and number of meals (<0.005). The practice of leisure-time physical activity, work shift, menstrual cycle and pregnancy history were not associated with the outcome. **Discussion:** Increased BMI is also among the possible effects of insufficient sleep. However, the bidirectionality between exposure and outcome is one of the factors that make it difficult to confirm the association. The work shift can change the amount and quality of sleep and consequently impair food selectivity, as well as the frequency and time of meals. Our hypothesis is that disorders associated with sleep can cause weight gain over time, mediating behaviors associated with obesity. **Conclusion:** A high prevalence of obesity was identify. Sleeping 5 hours or less and eating 2 to 3 meals a day seem to be associated with the outcome. Its suggested health promotion actions, considering the vulnerabilities related to the socio-demographic characteristics of the sample, including in the occupational environment. **License number of ethics committee:** Parecer nº 5.275.921 emitido pela Universidade do Vale do Rio dos Sinos.

PT.027 METABOLIC SYNDROME IN FEMALE SHIFT WORKERS IN SOUTH OF BRAZIL: PRELIMINARY DATA

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Introduction: Metabolic syndrome has a multifactorial pathogenesis, being related to lifestyle, aging, stress and sex, as studies show that women are more vulnerable to this condition. Few studies have evaluated shift workers and the evidence is controversial, with occupational stress, working time and work shifts being a risk factor for metabolic syndrome. This work aims to describe the prevalence of metabolic syndrome among female shift workers. **Patients and methods:** A cross-sectional study was carried out with data collected in three companies located in the south of Brazil between August 2022 and February 2023. Preliminary sample is composed of 178 female shift workers. Metabolic syndrome was defined as the presence of three or more of the following conditions: diabetes (use of medication or fasting glucose ≥ 100 mg/dL), hypertension (use of medication or systolic BP > 130 and/or diastolic BP > 85 mmHg), HDL < 50 mg/dL, triglycerides ≥ 150 mg/dL and waist circumference ≥ 88 cm. **Results:** The prevalence of metabolic syndrome was 11.2%. In women aged below 20 years the prevalence was 2.8%; between 21 and 30 years old 29.8%; 33.7% between 31 and 40 years old; 23% between 41 and 50 years old; and 10.7% in those over 50 years old. The sample consisted mostly of white women (71.9%), married (50%), with 9 to 11 years of education (50%) and morning shift production workers (37.1%). Contributors of metabolic syndrome, 43.8% had high waist circumference, 32.6% low HDL, 23.6% hypertension, 9.6% high triglycerides and 3.9% diabetes. A significant difference ($p < 0.05$) was found only for marital status, with married women being more likely to have MS (65% *vs.* 48.1%). **Discussion:** The prevalences found are in accordance with the literature when observed in age groups – between 20% to 35%. However, a lower prevalence was observed among older women. A possible explanation for this would be the healthy worker bias. **Conclusion:** The prevalence of Metabolic Syndrome in female workers was slightly below that of the general population, which may be associated with the healthy worker bias. There was a difference between married women and lifestyle could be a possible explanation. More studies are needed with this population and a larger sample to better understand the relationship with work. **License number of ethics committee:** Parecer nº 5.275.921 emitido pela Universidade do Vale do Rio dos Sinos.

PT.028 PREVALENCE OF ABDOMINAL OBESITY IN WORKING WOMEN IN SOUTHERN BRAZIL: PRELIMINARY DATA

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Introduction: The accumulation of visceral fat can lead to abdominal obesity, a risk factor for cardiometabolic diseases. Studies have described a prevalence of abdominal obesity ranging from 31% to 73% among working women, while in Brazil, the estimated prevalence was 52% in general population of adult females. This study aims to estimate the prevalence of abdominal obesity and associated factors in a sample of working women from a large company in southern Brazil. **Methods:** This is a cross-sectional study, composed of a preliminary sample of working women from a large company in southern Brazil (n = 272). Abdominal obesity was classified according to the mean of two waist circumference measurements, with a cut-off point of 88 centimeters or greater. All participants answered a questionnaire including socioeconomic, occupational and behavioral variables. The significance of association was obtain through a chi-square test ($p < 0.05$). **Results:** The prevalence of abdominal obesity was 44.5%. The median age was 37 years (with an interquartile range of 16 years). The age group of 41-50 years, having a partner, education level of less than 11 years, night shift work, and leisure-time physical activity were factors that showed association with the outcome of abdominal obesity in the sample. **Discussion:** The prevalence of abdominal obesity found in this sample is consistent when compared to findings in the population of working women, but lower than values found in the general population of adult females. Aging is a well-known risk factor for the development of abdominal obesity, while the practice of leisure-time physical activity is a protective factor against the accumulation of visceral fat. The mechanisms of circadian rhythm disruption caused by night shift work may stimulate abdominal fat deposition. The lower level of education associated with abdominal obesity is consistent with the findings of other studies that correlate this outcome with an unfavorable socioeconomic situation. **Conclusion:** This study identified a 44.5% prevalence of abdominal obesity in a sample of working women. Age range of 41-50 years, having a partner, educational attainment of less than 11 years, night shift work, and lack of engagement in leisure-time physical activity were find to be associated with an increased prevalence of abdominal obesity in the sample. **License number of ethics committee:** Parecer nº 5.275.921 emitido pela Universidade do Vale do Rio dos Sinos.

PT.029 CLINICAL, EPIDEMIOLOGIC AND PHARMACOTHERAPEUTIC PROFILE OF PATIENTS SERVED AT AN OUTPATIENT OBESITY CLINIC OF AN ENDOCRINOLOGY SERVICE AT A UNIVERSITY HOSPITAL

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Introduction: Obesity, defined by a body mass index (BMI) ≥ 30 kg/m², is a chronic disease with excessive body fat accumulation and may impair health. It is multifactorial and associated with several comorbidities. Its treatment is often based on calorie restriction and may be associated, in some cases, with pharmacological treatment. This study aims to identify the clinical-epidemiological profile of patients in an outpatient clinic at a university hospital, in addition to outlining the pharmacotherapeutic profile of their prescriptions. It is expected to adapt the clinical management of these patients according to the epidemiological trends found. **Patients and methods:** We revised medical records from Jun/22 to Jan/23, from patients with BMI≥25 kg/m², aged between 18 and 70, excluding pregnant women. The data collected were: gender, anthropometric measurements, diagnosis of systemic arterial hypertension (HTN), diabetes mellitus (DM), hypertriglyceridemia and prescribed therapies. **Results:** The study selected 418 medical records. 80,1% (335) of the patients were female and 59,8% (250) were in the age group from 38 to 57 years. There was an association with Hypertension in 56.8% (236), DM or prediabetes in 44% (184) and hypertriglyceridemia in 21,5% (90) of the cases. In the first consultation, 52,6% (220) of the patients presented class III obesity. Finally, in the analysis of the prescriptions, 33,9% (142) were off-label drugs associations. **Discussion:** There was a higher prevalence of female patients. We observed correlations between associated comorbidities in obesity with higher risks, as described in the literature. In regard to BMI, comparing data of successive appointments, we have noted an improvement of the class of obesity in the patients, pointing out the effectiveness of the prescribed treatment. Hence, the pharmacotherapeutic prescription patterns reaffirm the possible benefits in the use of these off-label medicines. **Conclusion:** The study was consistent with the literature regarding the incidence of comorbidities related to obesity and with the most affected age group. This outpatient clinic have to be aware of the specific health risks related to gender, since the risks are different in each gender and the majority of their patients are female. Regarding on the BMI of the patients, there was a positive change in their class of obesity, denoting the effectiveness of the conducts adopted. In addition, the pharmacotherapeutic profile used demonstrated the complexity of obesity management. **License number of ethics committee:** Comitê de Ética e Pesquisa do Hospital Universitário Gaffrée e Guinle pelo CAAE 53142921.3.0000.5258.

PT.030 ASSOCIATION BETWEEN HYPERTRIGLYCERIDEMIC WAIST PHENOTYPE AND METABOLIC PARAMETERS IN ELDERLY PEOPLE

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Introduction: The hypertriglyceridemic waist phenotype (CHTG) is characterized by elevated waist circumference (WC) and hypertriglyceridemia simultaneously. This phenotype can identify individuals with cardiometabolic risk. Cardiovascular diseases (CVD) represent significant prevalence rates in the elderly. **Objective**: To identify the prevalence of the CHTG phenotype and evaluate its association with metabolic parameters in the elderly. **Methods:** This is a cross-sectional study. 159 individuals aged ≥ 60 years, of both sexes, participated. Anthropometric and health data were obtained using a specific form and biochemical tests were collected from medical records. Participants were classified according to the presence of the CHTG phenotype when waist circumference ≥ 88 cm and ≥ 102 cm in women and men, respectively, and hypertriglyceridemia ≥ 150 mg/dL. **Results:** Regarding the components of the CHTG phenotype, it was found that 46.5% of the elderly had high WC and 42.8% had hypertriglyceridemia. The CHTG phenotype was present in 25.8% of the individuals. It was found that 97.6% of the elderly classified with the CHTG phenotype had ≥ 4 cardiovascular risk factors. **Conclusion:** The prevalence of the CHTG phenotype was significantly associated with biochemical parameters. It is an accessible parameter that can be used in clinical practice for triage in situations of cardiometabolic risk. **License number of ethics committee:** Foi submetido e aprovado pelo Comitê de Ética em Pesquisa da Universidade Federal de Sergipe, estando em acordo com a Resolução nº 466/2013, sob parecer nº 559.936.

PT.031 WEIGHT GAIN AND LIFESTYLE DURING THE COVID-19 PANDEMIC IN SOUTHERN BRAZIL

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Introduction: During the COVID-19 pandemic, the whole world experienced social distancing that resulted in changes in habits and lifestyle. Such changes can compromise healthy eating habits and the practice of physical activities, known risk factors for the development of weight gain and obesity. The main objective of this study was to describe the change in eating habits and lifestyle of the population of Rio Grande do Sul, a state in southern Brazil, during social distancing due to COVID-19. **Methods:** Volunteers over 18 years of age, of both genders, participated in the study. The study was carried out from July 21 to August 10, 2020, through a structured online questionnaire that asked for sociodemographic information (age, gender and education); anthropometric (reported weight and height); change in eating habits and life habits (sleep quality and physical activity). Chi-square, McNeman, univariate and multivariate analysis were used to evaluate the variables. Confidence intervals were calculated with a significance level of 5%. **Results:** Of a total of 1,072 participants, 57.3% of respondents reported weight gain and an increase in the percentage of people classified as obese. Nearly half of the participants (46%) reported changes in their eating habits for the worse. The body mass index (BMI) showed a significant association with all consumption variables studied. We did not identify significant changes in sleep quality. Our results identified a high percentage of physical inactivity (46.9%) and obesity (19%) during social distancing, in addition to increased body weight and BMI. **Discussion:** Negative changes in eating habits and lifestyle evidenced during social distancing due to the COVID-19 pandemic in Rio Grande do Sul resulted in weight gain and an increase in the percentage of people with obesity. **Conclusions:** These findings highlight that eating habits and lifestyle should be considered and prioritized in Public Health programs, especially in atypical conditions such as the COVID-19 pandemic. **Keywords:** Obesity; social distancing; food consumption; physical activity. **License number of ethics committee:** Approval number 4,166,026.

PT.032 PREVALENCE OF OBESITY TREATMENT IN PATIENTS WITH T2DM IN A DIABETES OUTPATIENT CLINIC

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Introduction: Obesity is an important risk factor for the development of type 2 diabetes mellitus (T2DM). Weight loss can improve insulin resistance and prevent or delay complications of DM. However, obesity treatment has been neglected in patients with both comorbidities, a clinical inertia resulting from an glucocentric approach. Thus, this study aims to evaluate the prevalence of obesity treatment in patients with DM in a diabetes outpatient clinic. **Methods:** A cross-sectional study was carried out including 218 patients with T2DM from January to December 2022. Data were obtained through systematic analysis of medical records. We evaluated anthropometric measurements such as body mass index (BMI) and waist circumference (WC). We also analyzed the prevalence rate of anti-obesity medication, indication for bariatric surgery and concomitant use of obesogenic drugs. Data were expressed as proportions, means, and standard deviations. **Results:** From the total of 218 patients with T2DM, 66 (30.27%) have a diagnosis of obesity (BMI ≥ 30), with a higher prevalence in women (53%). The mean age, BMI and WC were, respectively, 62.1 years ± 13.35; 35.4 kg/m^2 ± 5.31; and 112 cm ± 10.7. In relation to obesity treatment, only 13.6% of patients were being treated with an anti-obesity medication: 7.6% use orlistat, while 6.1% use liraglutide. We also evaluated the use of obesogenic drugs. We found that 56.1% used sulfonylureas, 31.82% insulin, 21.2% beta-blockers and 3% pioglitazone. We noted that 77.3% use at least one of these medications. Only 1 patient underwent bariatric surgery, although 40.9% had indication (BMI ≥ 35 and T2DM). **Discussion:** From these data, we can note that obesity treatment is not routinely indicated in patients with T2DM, even among specialists. The use of GLP-1 analogues and orlistat are good drug alternatives for obesity care in these cases, but they were not the drugs of choice. In contrast, we found a high prevalence of drugs with an obesogenic effect, which can further aggravate the condition. In addition, a low priority for bariatric surgery indication was observed. **Conclusion:** Although obesity contributes to the onset of T2DM, the use of anti-obesity drugs has not been routinely adopted in patients with clinical indication. The education of physicians and patients regarding the importance of drug and surgical treatment for obesity is essential, due to the influence that its treatment has on the outcome of T2DM.

PT.033 ANALYSIS OF THE NUMBER OF DEATHS DUE TO OBESITY AND ITS PREVALENCE IN MEN AND WOMEN BY REGION IN BRAZIL

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Introduction: Obesity is a chronic and systemic inflammatory disease with high prevalence in the world. It exerts adverse health effects on multiple body organ systems and reduces life expectancy. Currently, this disease is gaining prominence as a preventable cause of death. However, the number of overweight and obese individuals is constantly increasing. In this sense, the World Health Organization (WHO) estimates that, by 2025, 2.3 billion adults around the world will be overweight, with 700 million individuals with obesity. Thus, the objective of this study was to analyze the number of deaths by Brazilian regions between the years 2010 and 2021, as well as their prevalence among females and males. **Patients and methods:** Descriptive observational study regarding the number of deaths of obese individuals in Brazil between January 2010 and December 2021, based on data from the Mortality Information System (SIM) on the website of the Information Technology Department of the Public Health Care System (Datasus). The selected variables were: Deaths from preventable causes - 5 to 74 years old; ICD-10 Category: E66 Obesity. **Results:** In the analyzed period, 29,034 deaths associated with obesity were recorded, with the majority concentrated in the Southeast region (48.03%) and a minority in the North region (3.9%). Between 2010 and 2021, there was a progressive increase in the number of deaths, accounting for 115.83% of the percentage increase rate. The year 2021 was responsible for 13.05% of the number of deaths, the highest in the period. There is also a higher prevalence in females, who represent 57.96% of all deaths. **Discussion:** The significant increase in deaths associated with obesity is directly linked to the lifestyle adopted by contemporary society and the deficiency of public policies to control the disease. It is observed that the Southeast region concentrates the majority of deaths and this may be due to its higher demographic density and the intense routine of metropolises with less healthy habits. Still, the higher prevalence in female individuals may be linked to genetic and physiological factors. **Conclusion:** Given the advance of obesity in Brazil, it is important to invest in programs aimed at preventing and controlling the disease, in order to improve the health and quality of life of these patients, in addition to reducing the number of deaths.

PT.034 EVALUATION OF ANTIFAT ATTITUDES IN PROFESSIONAL MEN AND WOMEN FROM DIFFERENT AREAS

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Introduction: People with obesity suffer from discrimination and prejudice. Antifat attitudes have negative social, psychological and physical consequences for individuals who suffer from it. Prejudiced attitudes are often related to health professionals and there is a hypothesis about the influence of gender on prejudice towards individuals with obesity. Therefore, the objective of this study was to evaluate antifat attitudes in professional men and women from different areas. **Participants and methods:** Participated in this study a total of 373 men and women, aged between 18 and 70 years, who were recruited online through the RedCap plataform. Participants a sociodemographic questionnaire and the Antifat Attitudes Scale (AFAT). Two one-way analyses of variance were performed using gender (male and female) and professional area (health professionals and professionals from other areas) as the independent variable in each test and the AFAT used as the dependent variable in both tests. Data normality was tested using Kilmogorov-Smirnov and Shapiro-Wilk test. The variance homogeneity assumption was evaluated using the Levene test. A bootstrapping procedure was carried out (1,000 re-samplings; 95% ICBCa) to correct deviations from normality of the sample distribution. **Results:** The results showed no significant effect of professional category, $F(1, 357) = 2.483$, $p = 0.116$, or gender, $F(3, 363) = 1.878$, $p = 0.133$, indicating that there was no difference in antifat attitudes between men ($M = 1.93$; $SD = 0.41$) and women ($M = 1.91$; $SD = 0.31$) and between health professionals ($M = 1.91$; $SD = 0.27$) and professionals from other areas ($M = 1.92$; $SD = 0.32$). **Discussion:** The results showed that discrimination is a component of weight stigma that interacts bidirectionally with structural, interpersonal and intrapersonal components, being reinforced by stereotypes and common beliefs disseminated about obesity. In the literature, there is still no consensus on which specific characteristics most incisively affect prejudice against people with obesity. **Conclusion:** More studies like this are needed to understand the factors interferes and interacts with prejudice against people with obesity and perform a detailing of the occupation by professional category. **License number of ethics committee:** CAAE: 43226821.6.0000.5440 – HC-FMRP/USP.

PT.035 PERCEIVED IMPORTANCE OF DIFFERENT FACTORS IN FOOD CHOICE BETWEEN ADULTS WITH NORMAL WEIGHT AND EXCESS OF WEIGHT

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Introduction: Some studies have shown that body mass index (BMI) plays an important role in food choices. The aim of this study was to assess the perceived importance of different factors in food choice between adults with normal weight and excess of weight. **Participants and methods:** Participated of the study 213 individuals (166 women; 77.9% and 47 men; 22.1%), who were divided into two groups according to their BMI classification: normal weight (n = 141; 66.2%) (BMI ≤ 18.5 and < 25.0 kg/m²) and excess of weight (n = 72; 33.8%) (BMI ≤ 25.0 kg/m²). Participants were recruited online and answered a sociodemographic questionnaire and the Food Choice Questionnaire, which has nine factors: health, mood, convenience, sensory appeal, natural content, price, weight control, familiarity, and ethical concern. Data normality was tested using Shapiro-Wilk test (p < .001) and the scores on each factor were ranked and compared between the two groups using the Mann-Whitney U test. **Results:** Among the group of normal weight participants, the score on each factor was, in descend order (M; SD): sensory appeal (3.51; 0.59); price (3.32; 0.61); health (3.29; 0.51); convenience (3.16; 0.72); mood (3.01; 0.73); natural content (2.83; 0.81); weight control (2.63; 0.77); familiarity (2.57; 0.70); and ethical concern (1.95; 0.79). Among overweight individuals, factors were ranked as follows: sensory appeal (3.62; 0.45); price (3.41; 0.61); convenience (3.34; 0.75); health (3.08; 0.72); mood (3.07; 0.81); weight control (2.83; 0.93); natural content (2.75; 0.91); familiarity (2.67; 0.83); and ethical concern (2.23; 0.96). Convenience was the only factor in which the mean score was significantly different between the groups, W = 3696.5; p < .05. **Discussion:** Food choices are determined by several factors, including those of economic, sociocultural, ideological, psychological, and biological origin. In the present study, food choice determinants did not differ between overweight and normal weight participants, except for the factor related to convenience, which was more important to individuals with excess of weight. Nonetheless, the most important factors for both groups were similar. **Conclusion:** Sensory appeal, health, convenience and price are the most important factors reported showing that food choices are governed by multidimensional motives, regardless individual's BMI. So, identifying these motives is important to guide efforts related to food and nutrition education programs. **License number of ethics committee:** CAAE: 52615421.3.0000.5498 – Unaerp.

PT.036 EPIDEMIOLOGICAL ANALYSIS OF HOSPITALIZATIONS DUE TO OBESITY IN BRAZILIAN REGIONS FROM JAN/20 TO JAN/23

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Introduction: Obesity is seen as a worldwide epidemic and, therefore, is highlighted in global health. With regard to prevalence, this is the comorbidity with the highest value in the United States, reaching more than 33.3% of the population. While in Brazil, it is responsible for 20,3%. **Patients and methods:** This is an analytical study, with observation of records of hospitalizations for obesity in the SUS hospital network by geographic regions. In March 2023, the Datasus portal was accessed, with parameters of gender, age group and race/color, for the period from January 2020 to January 2023. The data were organized in an electronic spreadsheet. **Results:** In the analyzed period, the total number of hospitalizations in the country for obesity was 18,867. Regarding the regions, the Southeast was the largest, with 47.4%, followed by the South, 34.0%. Regarding gender, females were predominant in all regions, with 87.4%. Regarding age groups, adults (20-59 years) were more representative with 93.6%, accompanied by 5.7% in the elderly. With regard to race/color, the highest total was white (50.8%), followed by brown (29.7%) and without information (13.6%). **Discussion:** The southeast region had the highest total number of hospitalizations, followed by the south, which partially demonstrates that the more economically developed suffer more from this comorbidity, caused by a metropolitan lifestyle. Regarding sex, women obtained values much higher than men, which leads us to infer that this is possibly due to the double shift of work and the greater deposit of fat, due to hormonal influence. With respect to age, the high value in adults may be related to changes in eating patterns and the reduction in physical activity, established by the routine of the economically active population, and the insertion of technologies in daily life. Regarding race/color, whites account for more than half of hospitalizations for obesity, however, what most draws attention is the percentage of patients without information of 13.6%, which may change the result of the study. **Conclusion:** It is extremely important to know the profile of the population affected by this comorbidity, which aggravates and influences the outcome of so many diseases. Thus, it will be possible to subsidize decision-making by competent authorities, aiming at reducing obesity and improving existing prevention programs.

PT.037 PURPOSE OF LIFE OF ELDERLY BRAZILIANS BEFORE AND DURING THE COVID-19 PANDEMIC

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Introduction: The increase in longevity among the Brazilian elderly imposes challenges for society. People with higher levels of purpose in life tend to be more resilient, more optimistic, and to adopt good preventive behaviors such as healthy eating and regular physical activity. After the incision of the COVID-19 pandemic nowadays, a large part of the population felt the psychological influences and change in lifestyle, denoting health consequences. **Objective:** To compare the purpose of life of elderly Brazilians before and during the period of social isolation due to the COVID-19 pandemic. **Patients and methods:** This is a cross-sectional study with 108 older adults (60 years or older) of both sexes. The Purpose of Life Scale was used. Data were analyzed using the Kolmogorov-Smirnov test, independent t test and Pearson coefficient ($p < 0.05$). Additionally, the project was approved by the Local Ethics and Research Committee, number 5,391,064. **Results:** The elderly showed a reduction in the perception of purpose in life ($p < 0.001$) in both sexes, during the period of social isolation. **Conclusion:** There was a reduction in the purpose of life among the elderly after the beginning of the isolation period due to the COVID-19 pandemic. **License number of ethics committee:** 5,391,064.

PT.038 THE GLOBAL DIET QUALITY SCORE AND THE ODDS FOR OBESITY IN THE NATIONAL DIETARY SURVEY OF BRAZIL

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Introduction: The double burden of malnutrition is a global problem, especially in low- and middle-income countries. The Global Diet Quality Score (GDQS) was developed as a simple, timely, and cost-effective tool to track nutritional deficiencies and non-communicable disease risks from diet. The aim of the present study was to investigate the odds of obesity in different risk categories of the GDQS in Brazilian adults and elderly individuals. **Methods:** Secondary data from the National Dietary Survey of Brazil, conducted in 2017-2018, excluding adolescents, lactating women, and pregnant women, were used. All 37,753 individuals answered socioeconomic questionnaires and a 24-hour recall, which information was used to score diet according to the GDQS and then categorize individuals as having low-risk (GDQS > 22), moderate-risk (GDQS 15-22), and high-risk (GDQS < 15) diets. Body mass index was calculated from self-reported height and weight and individuals were categorized as having obesity if BMI ≥ 30 kg/m². The odds for obesity in each risk category of the GDQS were estimated using a multiple logistic model adjusted for urban/rural household locality, income categories, supplement use, and recent diet modifications and stratified by sex and age ranges. **Results:** The Mean GDQS was 14.7, and most participants were classified as having a high- or moderate-risk diet (49% and 48%, respectively). The odds for obesity was lower when individuals had low-risk diets [OR (95%CI) = 0.77 (0.60-0.98)] for the total sample, but this was not seen when stratifying the analysis for sex or in elderly individuals. In adults, a low-risk diet lowered the odds of obesity by an average of 32% [OR (95%CI) = 0.68 (0.49-0.94)]. **Discussion:** The GDQS is a promising tool for tracking diet quality and monitoring the double burden of malnutrition nationally and across countries. Tools to surveillance dietary quality in a cost-effective manner are essential for identifying vulnerable communities and delineating strategies to prevent the consequences of malnutrition globally. **Conclusion:** The GDQS cut-off point for a low-risk diet may be protective against obesity onset, especially in the Brazilian adult population (processo Fapesp nº 2022/08172-4).

PT.039 ADOLESCENTS' OBESITY-RELATED EATING PATTERN IS ASSOCIATED WITH THE DIETARY INFLAMMATORY POTENTIAL: RESULTS FROM THE 2017-2018 NATIONAL DIETARY SURVEY

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Introduction: Obesity is a chronic multifactorial condition characterized by a low-grade inflammation that may arise from the interaction of multiple factors, including diet. **Objective:** This study aims to identify obesity-related eating patterns of Brazilian adolescents and to assess their association with the dietary inflammatory potential. **Methods:** Data from 7.611 Brazilian adolescents (10-19 years old) investigated in the 2017-2018 National Dietary Survey were analyzed. Food items reported in a 24-hour dietary recall were classified into 34 groups. Reduced Rank Regression (RRR) was applied to identify an obesity-related eating pattern. Dietary energy density (ED), contribution (%) of added sugar to daily energy intake (%AS), and fiber density (FD), dietary characteristics associated with excessive weight gain, were used as response variables and food groups with factor loadings ≥|0.15| were retained in the extracted dietary patterns. The Dietary Inflammatory Index (DII) was estimated using 37 parameters. Crude and adjusted regression linear models were applied to estimate the association between factor scores and the DII. Complex sample design and weights were considered in the analysis. **Results:** Three dietary patterns were extracted and explained 9.3% of food consumption variation and ≈67% of response variables variation. The first pattern, which was "high energy-dense (HED), high in added sugar (%AS), and low fiber-dense (LFD)", was the most interpretable one and was characterized by the intake of sugar, added-sugar beverages, fast foods, cookies and crackers, fruit juices, candies, milk-based beverages, and by negative factor loads for rice, beans, vegetables, and fruits. Crude linear regression coefficient between the factor scores and DII was 0.572 (95% confidence interval [95%CI]: 0.533; 0.611); this association persisted after adjusting by sex, age, and BMI: β = 0.569; 95%CI = 0.531; 0.608. **Discussion:** Dietary pattern related to obesity was characterized by the intake of sugar sources and low consumption of healthy eating markers and traditional Brazilian staple foods. This pattern showed pro-inflammatory potential and may contribute to excessive weight gain in Brazilian adolescents. **Conclusion:** An obesity-related eating pattern marked by the intake of energy-dense, added-sugar rich and low-dense fiber foods was directly associated with the dietary inflammatory potential. Adolescents should be a priority in initiatives aiming to promote healthy eating.

PT.040 BELIEFS AND THE WEIGHT STIGMA IN HEALTH PROFESSIONALS

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Introduction: Negative stereotypes and moral judgments characterize the weight stigma. This study aimed to present the beliefs about obesity in Brazilian health professionals. **Participants and methods:** Participants (N = 309), aged 18 years old or above, were recruited online and subdivided into three groups: physicians – PH (11%; n = 34), dietitians - DI (40.8%; n = 126) and other health professionals – OT (48.2%; n = 149). Participants answered a questionnaire through the RedCap platform and the responses were analyzed for concordance rate. **Results:** The PH mean age was 46.7 years old (SD = 14.4), 50% had normal weight and 67.6% were men. Mean age of DI was 34.3 (SD = 10.2), 54.2% had normal weight and 92.9% were women. And the OT mean age was 36.4 (SD = 11.7), 42.4% had obesity and 85.2% were women. For the question "*What makes it difficult for people to lose weight?",* the most prevalent answer was *"Lack of motivation, self-discipline, sedentary lifestyle and poor diet*" (PH = 59.3%, n = 16; DI = 37.5%, n = 36; OT = 49.1%, n = 55). For "*A patient does not lose significant weight while participating in a lifestyle intervention program. This is most likely due to...*" most participants answered, "*Poor compliance due to factors beyond patient's control*" (PH = 67.9%, n = 19; DI = 48.4%, n = 45; OT = 52.2%, n = 59). For "*After losing a significant amount of weight from a lifestyle program a patient regains all/most of their weight. This is most likely due to...*" the most frequent responses were "*An individual's diet and or lifestyle choices*" among PH (33.3%, n = 9), "*Factors beyond patient's control*" for DI (43%, n = 40) and "*Inadequate follow up treatment/advice/support by care providers*" for OT (29.5%, n = 33). Finally, for "*In your opinion, what is the main cause of obesity stigma? A belief that...*" most participants answered "*Obesity is associated with lack of moral strength*" (PH = 35.7%, n = 10; DI = 41.1%, n = 39; OT = 37.6%, n = 41). **Discussion:** Most believe that weight gain is the result of modifiable factors (willpower, diet and sedentarism). This belief demonstrates the weight stigma and ignores that obesity is multifactorial, as well as that Brazil faces socioeconomic problems that affect the quality of life and food. **Conclusion:** Although most participants answered that the cause of obesity stigma is the belief that people lack moral strength, most of them attribute individual choices as reasons to explain difficulties in losing or maintaining weight. **License number of ethics committee:** CAAE: 51927421.1.0000.5498 - Universidade de Ribeirão Preto (Unaerp).

PT.041 VIDEOLAPAROSCOPIC BARIATRIC SURGERY IN THE DIFFERENT BRAZILIAN REGIONS: HISTORICAL SERIES SINCE 2018

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Introduction: Bariatric surgery is advised for BMI ≥ 40 kg/m², ≥ 35 kg/m² and comorbidities or diabetics irresponsive to treatment and with BMI > 30 kg/m². This essay appraises the number of videolaparoscopic bariatric surgeries (VL) between 2018-2022 done through the Brazilian national healthcare system (SUS) in the 5 regions of the country and its costs. **Methods:** Descriptive cross-sectional study. Data was collected from the national Hospital Informations System (SIH) and the national system for monitoring risk factors and protection for chronic diseases through phone polling (Vigitel). **Results:** The reporting of bariatric surgeries increased by 217,9% between 2018-2022. Between 2018-2019, the increase was of 48%; between 2019-2020, it decreased by 33,6%; between 2020-2021, it picked up again by 61,6% and in the period between 2021-2022, there was an uptick of 100%. A comparison among the regions shows that there is prevalence in the Northeast during 2018-2021 and the North maintained the lowest rates. The costs were tallied parallel to the number of surgeries. The Northeast region spent the most. During the period of the appraisal, the prevalence of obesity increases 12,8%. **Discussion:** The hike in the number of surgeries during the period, in spite of the drop between 2019-2020, can be related to the suspension of elective surgeries amid the pandemic. Besides that, it is known that the number of procedures done through SUS would still be inferior to the demand for them even before the pandemic. The Brazilian Society of Bariatric and Metabolic Surgery estimates that 12.568 surgeries were done through SUS in 2019, but such figure can't be precisely determined. SIH provides the number regarding VL bariatric surgeries carried out with Strategic actions and compensation fund subsidies. The disparity in the number of procedures can reflect the prominent position of the Northeast region. It houses reference centers and the first officially recognized medical residency in bariatric surgery in the country. Amazonas, Rondônia, Roraima and Amapá lack specialized services, which could explain the low rates. **Conclusion:** Despite the increase in obesity cases, it isn't possible to ascertain that the number of VL bariatric surgeries done through SUS between 2018-2022 had an expressive spike. There is a great discrepancy in the statistics of different regions. Furthermore, the data displays a lack of precision, suggesting the importance of better coordinating of statistics.

PT.042 ANALYSIS OF THE PREVALENCE OF BINGE EATING DISORDER IN AN OBESITY GROUP IN PRIMARY HEALTH CARE

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Introduction: Binge eating disorder (BED) is characterized by the consume of large amounts of food in a limited time, accompanied by inability to stop eating. Its diagnosis is made using the criteria proposed by the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), but questionnaires assess in the selection of people at greater risk of manifesting the disorder are validated and can be used in clinical practice. The study aimed to estimate the prevalence of possible BED in adult individuals who receive primary public health care and are overweight. **Patients and methods:** This is an analytical cross-sectional study of 49 adults of both sexes that are being followed up in an obesity group in the west zone of São Paulo, Brazil, throughout the year of 2022. Data were collected through the application of a pre-tested self-completion questionnaire, the collection of anthropometric measurements and data on treatment of obesity and/or mental disorders. The abbreviated Brazilian version of the Questionnaire on Eating and Weight Patterns-5 (QEWP-5) is adapted for clinical practice as an aid in the identification of individuals with a possible diagnosis of binge eating disorder and was applied during the monthly meetings of the participants. **Discussion:** In the analyzed group, 40 of them (85.69%) are female. When separated by BMI, only 2 (4.08%) are eutrophic, 9 (18.3%) overweight, 21 (42.85%) grade 1 obese, 12 (24.49%) grade 2 obese and only 5 (10.2%) grade 3 obesity. Seven (14.28%) positive cases were obtained for possible binge eating disorder, in which are all women, aged between 26 and 46 years old, with BMI variation from 32.3 to 45.8 kg/m². In individuals with a possible diagnosis of BED, not all are treated with drugs that are specific for the disorder on the package insert, 4 (57%) use topiramate and bupropion. **Conclusion:** Binge eating is a common disorder in obesity, more predominant in the most severe degrees, young people and women, it seems not to receive adequate or off-label care.

PT.043 DEPRESSIVE DISORDER IN PATIENTS WITH OVERWEIGHT AND OBESITY IN SPECIALISED CARE

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Obesity is defined as the accumulation of fat in adipose tissue that causes damage to health due to the amount of excess fat that is stored and its distribution in the body, generated by weight gain. Obesity is an endocrinological disease, and its treatment can be influenced by the presence of comorbidities, such as psychiatric disorders (depression, anxiety) and eating disorders (binge eating). Among the cognitive and behavioural factors related to obesity, the scientific literature points out that depression and overweight are comorbidities that are linked, since being overweight increases the probability of developing depression, in the same way that being depressed can influence on going overweight, and it is important that these associations are examined. Obesity is a public health problem in Canoas, Rio Grande do Sul, and, to treat obesity and other related conditions, the Adult Obesity Outpatient Clinic was implemented in 2017, and targets the adult population over 20 years old and with BMI exceeding 29.9 kg/m^2. In this context, this work is the result of a specialisation monograph on care for people with overweight and obesity, whose objective was to identify and carry out psychological monitoring of overweight and obese users with depressive disorder. For this, a mapping of the characteristics of the users assisted by the clinic's psychologist was carried out to identify the presence of anxiety and depression symptoms through the SRQ-20 questionnaire and the use of psychiatric medications. Thus, it was observed that, during 2021, 195 patients were examined by Psychology, 165 women (84.61%) and 30 men (15.38%). 89 patients (45.64%) used psychiatric medication, which reveals a demand in mental health in addition to chronic diseases. Moreover, the necessary patient cases were referred for care in the Network of Psychosocial Care (RAPS, in Portuguese), and the psychologist requested an active search for the Primary Health Care, which are responsible for the longitudinal follow-up of the critical cases identified. It is expected that the Network of Psychosocial Care will increase its resources for the treatment of depressive and anxiety disorders, offering other alternatives apart from pharmacological intervention and renewal of prescriptions in the Primary Health Care.

PT.044 METFORMIN AND RISK OF CANCER IN SUBJECTS WITH EXCESSIVE WEIGHT AND/OR HYPERGLYCEMIA: A SYSTEMATIC REVIEW AND META-ANALYSIS OF RANDOMIZED CONTROLLED TRIALS WITH TRIAL SEQUENTIAL ANALYSIS

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Aims/hypothesis: To evaluate the effect of metformin on cancer incidence in subjects with excessive weight and/or hyperglycemia in randomized controlled trials. **Methods:** We searched MEDLINE (PubMed), Embase and CENTRAL from inception up to January 16, 2021. We included randomized controlled trials in non-pregnant adults with excessive weight and/or prediabetes/diabetes comparing metformin to a non-metformin intervention (duration of at least 24 weeks), and excluded trials including pregnant women or subjects with previous use of metformin and cross-over trials. Extracted data included population characteristics at baseline, type, dosage and duration of interventions, and new diagnoses of cancer in each group. We synthesized data using a random-effects model meta-analysis. We used RoB 2.0 and GRADE framework to assess risk of bias and certainty of evidence. **Results:** From 12,700 records after removal of duplicates, a total of 26 distinct trials were included, totalizing 10657 subjects in the metformin group and 9,943 in the control group. 154 cases of cancer were identified in individuals randomized to metformin and 190 in subjects allocated to control interventions. In the random-effects model, the relative risk was 1.08 (95% CI 0.87-1.34). Similar results were found in subgroup analysis by study duration or effect of the control intervention on weight. Trial sequential analysis provided evidence that the cumulative sample size is not enough to exclude a small effect of metformin on cancer incidence. Risk of bias in most studies was low and the certainty of evidence for the main outcome, as assessed by the GRADE framework was also low. **Conclusions:** Metformin did not reduce cancer incidence in randomized trials involving subjects with overweight/obesity and/or prediabetes/diabetes. **Registration:** PROSPERO CRD42021236204.

PT.045 ANALYSIS OF THE NUMBER OF HOSPITALIZATIONS AND COSTS FOR BARIATRIC SURGERY IN BRAZIL

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Introduction: Obesity is a chronic disease of epidemic proportions around the world, which is associated with increased morbidity and mortality. There are cases in which conventional treatment, with changes in lifestyle, regular physical activity and dietary restrictions is ineffective. In these cases, surgical treatment represents a good complement to the management of the disease and its comorbidities. The objective of this study was to analyze the number of hospitalizations for bariatric surgery by Brazilian regions between the years 2017 to 2022, as well as the impact of these hospitalizations on hospital costs. **Patients and methods:** Descriptive observational study referring to bariatric surgeries performed in Brazil between January 2017 and November 2022, based on data from the Hospital Information System extracted from the Information Technology Department of the Public Health Care System (Datasus). The selected variables were: 0407010122; 0407010173; 0407010181; 0407010360; 0407010386; approved hospital admissions and total value. **Results:** In the analyzed period, 46.360 bariatric surgeries were performed, mostly concentrated in the South region (58.2%) and a minority in the North region (0.48%). There was a progressive increase of 21.93% between the years 2017 to 2019, with 2019 responsible for the highest number of procedures (27.1%). There is a reduction rate of 77.18% in the performance of bariatric procedures from 2019 to 2021 and an increase of 90.02% between 2021 and 2022. The total amount for carrying out the procedures was R$ 295,046,876.53, considering the total expenses in 2017 (22.31%), 2018 (24.73%), 2019 (27.22%), 2020 (8.1%), 2021 (6.03%) and 2022 (11 .59%). **Discussion:** The improvement and development of new techniques related to bariatric surgery, as well as the return of elective surgeries after the SARS-CoV-2 pandemic, may be related to the increase in procedures reported between 2021 and 2022. Moreover, the decrease in bariatric surgeries between 2019 and 2021 coincides with the most serious period of the pandemic. **Conclusion:** Faced with the advance of obesity in Brazil, it is important to develop and expand programs aimed at lifestyle changes to minimize risks and costs. Finally, due to the evident disparity between the different regions of the country, public policies are necessary to guarantee equal access to health, in order to implement the principles and guidelines of the SUS.

PT.046 ANALYSIS OF THE NUMBER OF POLYSONOGRAPHY EXAMS PERFORMED IN BRAZIL BY REGION AND GENDER

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Introduction: Obstructive sleep apnea and hypopnea syndrome (OSAHS) is closely correlated with obesity. About 60% to 90% of individuals with OSAHS have a body mass index (BMI) greater than 29 kg/m². OSAHS is characterized by partial or total obstruction of the upper airways during sleep and can lead to sleep fragmentation, functional, neurocognitive and psychosocial changes. Polysomnography is the test indicated for diagnosing and stratifying the severity of OSAHS. The objective of this study was to analyze the number of polysomnography exams by Brazilian regions between the years 2015 to 2022, as well as their prevalence among females and males. **Patients and methods:** Descriptive observational study referring to polysomnography exams performed in Brazil between January 2015 and November 2022, based on data from the Ambulatory Information System (SIA) on the website of the Information Technology Department of the Public Health Care System (Datasus). The selected variable was: 0211050105 Polysomnography. **Results:** In the analyzed period, 34,287 polysomnography exams were recorded, with the majority concentrated in the Southeast region (45.17%) and a minority in the North region (0.33%). Between the years 2015 to 2022 there was a progressive increase of 1,326%. However, it was possible to observe in the year 2020 a one-off reduction of 27.42% compared to 2019, with a return to the growth pattern in the following year. It is also observed that this test is more performed by females, who represent 54.47% of the total. **Discussion:** The greater availability of the device for performing polysomnography, as well as the improvement of the method, may be related to the increase in procedures reported between 2015 and 2022. The sharp drop observed occasionally in 2020 can be explained by the peak of the SARS-CoV-2 pandemic, when the Unified Health System (SUS) needed to be restructured to care for patients affected by the virus. **Conclusion:** Faced with the advance of obesity in Brazil and its relationship with OSAHS, it is essential that access to polysomnography is widespread, in order to mitigate neurophysiological changes resulting from sleep deprivation and improve the quality of life of these patients. Finally, due to the evident disparity between the different regions of the country, public policies are necessary to guarantee equal access to health, to implement the principles and guidelines of the SUS.

PT.047 HIGHER BODY MASS INDEX IS RELATED TO GREATER BODY DISSATISFACTION IN BRAZILIAN PREGNANT WOMEN

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Introduction: During pregnancy, women go through physical, psychological, and metabolic changes. In the non-pregnant population, a higher body mass index is related to important concerns about body image and satisfaction. In addition, body image has been linked with breastfeeding time, delivery route, postpartum weight retention, and childhood obesity. However, in Brazil, body image is under-explored in pregnant women. The main objective of this research was to investigate if pregestational BMI is a risk factor to dissatisfaction body during pregnancy. **Patients and methods:** A total of 169 Brazilian pregnant women with a pregnancy duration between 4 to 40 weeks, completed a survey comprised of anthropometric, sociodemographic, and the Body Shape Questionnaire. Descriptive analyzes were calculated. Spearman correlations coefficients were used to test the association between numeric variables. Linear regression was realized to evaluate how much numeric variable moderate body image. **Results:** Total sample consisted of 174 women with a mean age of 27.76 years (SD = 6.11), pre-gestational Body Mass Index of 25.53 kg/m² (SD = 6.10 kg/m²), and mean gestational age of 23.66 weeks (SD = 9.96 weeks). As for the gestational period, 19.5% were in the first trimester, 40.8% in the second, and 39.7% in the third. In the pre-gestational period, overweight was observed in 30.1% of pregnant women, and 18.7% were classified as obese. In the gestational period, women with obesity pre-pregnancy had greater body dissatisfaction than eutrophic or underweight women ($p < 0.01$). BMI was associated with BSQ values, indicating that women with higher BMI before pregnancy were more concerned with body image ($r = 0.451$; $p < 0.01$). It was observed that 16.7% of the variation in the total BSQ score was explained by the body mass index. **Discussion:** BMI is a significant predictor of body dissatisfaction during pregnancy due to likely weight stigma, standards of beauty, and fear of bodily changes. At Brazil, body image is a theme under-discussed in antenatal appointments, so, this study shows a topic that should be addressed by women, mainly obese women. **Conclusion:** The women from this study had a considerable rate of body dissatisfaction, mainly women with Obesity, possibly due to beauty standarts, wish to return to prepregnancy body, and weight stigma. This study introduce important points to considerate on prenatal appointments. **License number of ethics committee**: CAAE: 110989519.5.0000.5148, número 3.362.629 – Universidade Federal de Lavras.

PT.048 SIMULTANEITY OF CARDIOVASCULAR RISK FACTORS IN COLLEGE STUDENTS

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Introduction: Noncommunicable diseases are considered a public health problem, causing high social and economic damage. Exposure to risk factors is responsible for most cardiovascular diseases. Despite the importance of studying the prevalence of risk factors in isolation, knowing the behavior simultaneous is essential. The objective of this study was to analyze the prevalence of simultaneity modifiable cardiovascular risk factors in college students and associate them with sociodemographic, behavioral, perceptive characteristics and family history of diseases. **Patients and methods:** Cross-sectional study with 1,080 university students (18 to 39 years old). The cardiovascular risk factors simultaneity score was created based on the sum of the following factors: physical inactivity, overweight, smoking and inadequate diet. Associations were verified using Multinomial Logistic Regression with adjustment for robust variance, presenting prevalence ratios and respective confidence intervals (95%). **Results:** As for the simultaneity of cardiovascular risk factors, the highest proportion was observed when two risk factors were simultaneous in both male (46.6%) and female (38.5%) university students. After adjustments, the female students showed lower prevalence of risk factors, those who defined their health as good/very good and those who adopted measures to reduce salt consumption, while consumption of sugary drinks, sweets, high salt intake, and those who reported having one diabetic parent increased the prevalences of risk factors. **Discussion:** This study aimed to identify cardiovascular risk factor simultaneity based on an adaptation of metrics proposed by the American Heart Association. College students in private institutions, such as those analyzed in this study, may have difficulty maintaining a healthy lifestyle due to their extensive work and study schedule. There is evidence that strategies aimed at modifying simultaneous behaviors are effective in health promotion programs. **Conclusion:** This study demonstrated associations between cardiovascular risk factor simultaneity and behavioral and health variables, contributing to a better understanding of health-related behaviors in college students. **License number of ethics committee**: CAAE 58964616.4.0000.5153 – Universidade Federal de Viçosa.

PT.049 FREQUENCY OF THE METABOLIC SYNDROME AND ITS DIAGNOSTIC CRITERIA IN ELDERLY PEOPLE FOLLOWED AT A NUTRITION OUTPATIENT CLINIC SPECIALIZED IN ELDERLY CARE

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Objective: To verify the frequency of metabolic syndrome (MS) and its diagnostic criteria in elderly people followed up in a nutrition outpatient clinic specialized in elderly care. **Methods:** This is a quantitative, descriptive, observational, cross-sectional and retrospective study with elderly people of both sexes, from the municipality of Macaé-RJ. Data collection was performed from medical records of consultations that occurred in the period 2021-2023, verifying the criteria defined by the International Diabetes Federation (2005) for the diagnosis of MS, according to ABESO (2016). Data such as gender, age, biochemical data, measured blood pressure and previous diagnosis of dyslipidemia, diabetes mellitus (DM) and systemic arterial hypertension (SAH) were collected. To classify visceral obesity, waist circumference was measured. Nutritional status was determined using the body mass index (BMI) calculated by dividing weight in kg by height in meters squared (kg/m²) and classified according to the criteria defined by PAHO (2002). To analyze the data obtained, frequency measures and Student's t test and Pearson's chi-square were used. For the analyses, a confidence interval of 95% and a significance level of 0.05 were adopted. **Results:** 77 individuals aged ≥60 years (mean=70.9±7.6) were evaluated. The prevalence of MS was 59.8%, of which 65.3% were women. It was found that 93.3% had the obligatory criterion of visceral obesity, 70% had SAH or pre-SAH, 41.5% diabetes or insulin resistance, 41.9% low HDL-C and 38.6% high triglycerides. In the assessment of nutritional status, 57.2% were pre-obese and obese, with no statistical difference being observed between genders (p = 0.46). **Conclusion:** The data showed that the frequency of MS and its criteria were high, requiring adequate assistance from health professionals to elderly patients, in order to improve their lifestyle, healthy eating habits and the practice of physical activity, which are strategies to reduce the prevalence of MS and its risk factors. **Keywords:** Cardiometabolic syndrome, elderly, chronic disease, central obesity, hypertension. **License number of ethics committee**: Comitê de Ética em Pesquisa da ENSP/Fiocruz (CAAE nº 58786616.1.0000.5240).

PT.050 BISPHENOL S EXPOSURE INDUCES CARDIAC REMODELING AND AGGRAVATES DIET-INDUCED CARDIAC HYPERTROPHY

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Introduction: Cardiovascular diseases (CVD) are the main cause of death worldwide. Cardiac remodeling (CR) is a hallmark of many CVD, and is affected by several factors, including obesity and bisphenol A (BPA) exposure. Bisphenol S (BPS) is the main substitute for BPA, but there is no evidence of its effect on CR. This study aimed to evaluate the impact of low-dose BPS exposure on CR, either alone or associated with high-fat diet intake. **Methods:** The experimental protocol was approved by the Ethics Committee on Animal Use (n. 1929240521). Adult C57BL/6 male mice were divided in control diet (SC), control diet + BPS (SCB), high-fat diet (HF) and high-fat diet + BPS (HFB). BPS exposure occurred through drinking water (dose: 25 µg/kg/day). The interventions lasted 12 weeks. Body mass (BM), adiposity index, systolic blood pressure (SBP), left ventricle (LV) mass, wall thickness, and chamber area, cardiomyocyte area, collagen deposition, and cardiac remodeling mediators were assessed. **Results:** BPS exposure and high-fat diet intake, either alone or in combination, promoted higher final BM, adiposity index, and SBP increase, led to augmented LV mass, wall thickness, and interstitial collagen area, and increased protein expression of ANP, TGFβ, IL-6, TNFα, CD36 in relation to SC group. High-fat diet intake (HF and HFB) exacerbated BM gain, adiposity index, and SBP increase in comparison to the SCB group, and also reduced LV chamber area, and increased LV thickness/chamber ratio, perivascular collagen area, and protein expression of perilipin 5 compared to control diet. Only the HFB group had thicker LV wall, and higher thickness/chamber ratio also in relation to SCB and HF groups, and increased cardiomyocyte area when compared with SC and SCB groups. **Discussion and conclusion:** BPS exposure alone had obesogenic effects and promoted cardiac remodeling characterized by pathological concentric hypertrophy, fibrosis, and inflammation. In diet-induced remodeling, these features were also observed, along with cardiac steatosis. Diet-induced cardiac hypertrophy was aggravated when associated with BPS, with marked concentricity. **License number of ethics committee:** CEUA/Universidade Federal Fluminense – 1929240521.

PT.051 DATA MINING USING THE J48 ALGORITHM TO SUPPORT THE DIAGNOSIS OF INSULIN RESISTANCE. REVISITING THE BRAZILIAN METABOLIC SYNDROME STUDY (BRAMS)

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Introduction: Insulin resistance (IR) is present in obesity and considered one of the main risk factors for the development of type 2 diabetes and cardiometabolic complications. There are different methods for assessing IR, with distinct cost and complexity. To understand the influence of the attributes involved in its diagnosis, experimental models can be used, based on data obtained from patients considered healthy and with insulin resistance. In recent years, data collection has increased significantly in many areas, including the health sciences. At the same time, data mining and machine learning techniques have been used to treat the data obtained, aiming at generating knowledge and improving techniques. **Aims and methods:** This work aimed to analyse the database of the Brazilian Metabolic Syndrome Study (BRAMS) using the WEKA software, with the use of the J48 algorithm (decision trees), to obtain models with important attributes and cut-off points for the diagnosis of IR, enabling its use by health professionals. Insulin resistance was considered as HOMA-IR ≥ 2.71, reference for our population validated against clamp techniques in the BRAMS. **Results:** It was concluded that the attributes of insulin and glucose had a great influence on the IR result. Insulin values greater than 13 and glucose values greater than 121 indicated insulin resistance. On the other hand, insulin less than or equal to 9 and glucose less than or equal to 79 indicated absence of insulin resistance. Anthropometric measurements (among them, the measurement of neck circumference) were also useful to aid in the diagnosis of insulin resistance. In the case of neck circumference measurement, for men, the cut-off point found was 42 cm (where resistance was more common in values greater than this). For women, the cut-off point found for IR was 39 cm, with greater accuracy for values smaller than or equal to 36 cm in the absence of insulin resistance. **Discussion and conclusions:** The diagnosis of insulin resistance could be performed by different techniques. In the BRAMS, using decision trees, data mining and machine learning techniques, IR could be assessed by simple measurements of glucose, and even better for practical and economic reason, assessed by the neck circumference.

PT.052 EVALUATION OF MUSCLE STRENGTH OF PATIENTS UNDERGOING ROUX-EN-Y GASTRIC BYPASS SURGERY

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Introduction: Bariatric surgery promotes several benefits to patients with obesity, such as expressive and prolonged weight loss, improvement of obesity-related comorbidities and cancers, and reduction of mortality rates. However, evidence about the effects of bariatric surgery on muscle health is limited. We compared the clinical history, physical exam, anthropometric measures, metabolic profile, and muscle strength of post-bariatric patients *vs.* non-surgical controls. Additionally, we tested associations between handgrip strength *vs.* time since the surgery, body mass index (BMI), excess weight loss (EWL), and the ratio of weight regain (RWR). **Patients and methods:** A prospective cohort of 14 post-bariatric (Roux-en-Y gastric bypass [RYGB], 78.6% female, aged = 40 ± 3 years, BMI = 36.1 ± 5.9 kg/m^2, EWL = 90.3 ± 16.8%, and RWR = 44.6 ± 24.8%) and 13 controls BMI-, age-, and gender-matched participated in the study. They had 8.3 ± 4.2 years since surgery. We evaluated clinical data, biochemical profiles, and muscle strength through TSD121C Hand Dynamometer (Biopac Systems, Inc., CA, USA). **Results:** Type 2 diabetes mellitus was more prevalent in the non-surgical than in the bariatric group (69.2 *vs.* 7.1%; $p < 0.001$), while hypertension and dyslipidemia did not differ between groups ($p \geq 0.18$). Those submitted to RYGB exhibited lower neck, waist, and hip circumferences, systolic blood pressure, glycated hemoglobin type A1c (HbA1c), and triglycerides than non-surgical ones ($p \leq 0.001$). Fasting plasma glucose, total cholesterol, low-density lipoprotein cholesterol (LDL-c), high-density lipoprotein cholesterol (HDL-c), uric acid, creatinine, alanine aminotransferase (ALT), and aspartate aminotransferase (AST) were not different between groups ($p \geq 0.08$). Hand grip strength (HGS) was similar between the bariatric *vs.* non-surgical groups (34.5 ± 13.6 *vs.* 32.6 ± 8.6 kg, respectively; $p = 0.34$). In the bariatric group, HGS was inversely correlated to EWL (r = -0.64; $p = 0.03$) and positively to BMI (r = 0.60; $p = 0.05$) but not to time since surgery (r = 0.40; $p = 0.21$) or RWR (r = 0.48; $p = 0.13$). **Conclusion:** Patients submitted to bariatric surgery had better clinical indicators linked to adiposity distribution and cardiovascular/metabolic health. Additionally, muscular strength was preserved after a long time since surgery. An association between muscle strength and EWL and BMI was noted. These variables should be involved in muscle health maintenance. Further research is required to confirm our findings. **License number of ethics committee:** Hospital Universitário Pedro Ernesto – CAAE: 16425419.8.0000.5259.

PT.053 HEALTH EDUCATION AS A RESOURCE FOR THE DEVELOPMENT AND MAINTENANCE OF HEALTHY BEHAVIORS IN THE TREATMENT OF OBESITY: CASE REPORT

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Introduction: Obesity is a chronic and multifactorial disease, and for its treatment, the development of behaviors aimed at a healthy lifestyle is essential. Ahealth education aims to promote space for the transformation of lifestyles in order to achieve, in addition to healthy habits, strategies to deal with socio-emotional issues that influence treatment. The article presents the concept of health education and how this strategy connects with the scope of multidisciplinary support in a Hospital specialized in the treatment of obesity, in the city of Camaçari, Bahia. **Case report:** Adult woman, divorced, social worker, 76 years old, with a history of weight gain after menopause and aggravated after the children left home. She has grade 3 obesity associated with high blood pressure and anxiety. She mentions having already gone on several diets and never being able to maintain adequate weight and healthy eating behavior. After retiring and living alone, she decides to undergo inpatient treatment for a period of 6 months – from August 2022 to January 2023. The data used were obtained from the patient's medical record review. **Discussion:** During the hospitalization period, the patient actively participated in all hospital activities, including individual consultations and educational and therapeutic groups, as well as yoga classes. In the groups, she received guidance, information from several professionals from different areas and experienced simulated practices of functional behaviors to install in her new routine after discharge. The patient was assiduous, engaged, with treatment adherence in all its aspects and, mainly, in the groups. She reduced 23 kg, without regaining almost 1 year after her discharge. She continues to come to the hospital for occasional appointments once a month and actively participates in the maintenance group, where work is focused on preventing relapses. **Conclusion:** The result of maintaining functional behaviors and achieving a healthy weight reveal the importance of health education as an essential factor in the treatment of obesity, given the need to reformulate habits that were often learned automatically, without awareness of the damage they brought to health. disease maintenance. **License number of ethics committee:** 65578822.10000.0057/ Comitê de Ética da Universidade do Estado da Bahia.

PT.054 HEPATIC LEVELS OF MIR-122 AND MIR-148 ARE REESTABLISHED AFTER SPHINGOLIPID SYNTHESIS MODULATION IN DIET-INDUCED OBESITY MODEL IN MICE

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Despite many studies linking the consumption of a high-fat diet (HFD) with the development of non-alcoholic fatty liver disease (NAFLD) and sphingolipids pathway, there are gaps regarding the knowledge about the initial insult for NAFLD development and its relationship to sphingolipids and microRNAs (miRNAs) modulation. Sphingolipids are a class of lipids responsible for lipotoxicity induction and triggering metabolic disturbances. This study aimed to investigate the modulation of miRNAs involved in sphingolipid pathways as an underlying mechanism in the pathogenesis of NAFLD induced by HFD and/or metabolic programming by maternal obesity. Male C57BL/6 mice were fed either a control diet or a HFD for 56 days. Fetuses of female C57BL/6 mice fed a control diet or HFD were evaluated within 20 days of gestation (e20.5). *In silico* evaluation of data sets from patients with non-alcoholic steatohepatitis (NASH) and hepatocellular carcinoma (HCC) showed a significant decrease in hepatic *miR-148*, compared to healthy controls, and enrichment pathway analysis using DAVID platform showed sphingolipid pathway and S1pr1 as a possible target of miR-148. miR-122, the main hepatic miRNA, and miR-148 levels were downregulated in obese mice with NAFLD compared to the control group; simultaneously, miR-122 targets, Agpat1 and Pparg, and the possible target of miR-148, S1pr1 were upregulated. *Ex vivo* analyses in the fetus's liver demonstrated that miR-122 and miR-148 downregulation in NAFLD could be re-established after treatment with myriocin, an inhibitor of the sphingolipid biosynthesis pathway. Our preliminary conclusion is that the modulation of hepatic miRNAs involved in lipid metabolism is an early event in NAFLD development that could be triggered by the activation of the sphingolipids pathway. More studies are needed to prove the cause-and-effect relationship between these events. **License number of ethics committee:** 5454-1/2019 e 5639-1/2020 – Cemib/Unicamp.

PT.055 MIR-122 LEVELS IN THE ADIPOSE TISSUE SEEM TO BE MODULATED IN RESPONSE TO OBESITY, BY VLDL-DEPENDENT TRANSPORT

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Obesity and NAFLD are coexisting conditions since NAFLD is 4 times more prevalent in obese patients. Adipogenesis is a result of hypertrophy and hyperplasia of adipocytes in response to excessive availability of nutrients that are stored as triglycerides (TG) which can also be ectopically deposited in liver tissue. In obesity condition, a higher concentration of circulating TG is related to the very low-density lipoproteins (VLDL) content in the bloodstream, which is responsible for transporting mostly TG to extrahepatic tissues. Recently, it was assumed that VLDL is also capable of transporting microRNAs. miR-122 is the most abundant microRNA in hepatocytes, involved in the silencing of essential mRNAs for lipid synthesis. In NAFLD models, miR-122 is downregulated in liver tissue. At the same time, studies have shown an increase in circulating miR-122 associated with extracellular vesicles or free in the serum. The present study aimed to evaluate whether there is a crosstalk between the liver and adipose tissue mediated by VLDL through the transport of miR-122 in a diet-induced obesity model. Adult male C57BL/6 with obesity and NAFLD induced by 8 weeks of high-fat diet consumption, presented a decrease in miR-122 levels in the liver (4-fold) and a concomitant increase in adipose tissue (3-fold), compared to control mice, demonstrating a negative correlation between liver and adipose tissue ($p < 0.01$). In VLDL receptor knockout mice ($VLDLR^{-/-}$) fed only a control diet, a decrease in miR-122 was identified in adipose tissue compared to WT animals. The conditioned medium of WT liver (CM; ex vivo) treated with palmitic acid (PA- 750 uM for 18 h) showed higher levels of miR-122 compared to the control. A trend towards an increase in miR-122 levels in WT adipose tissue (ex vivo) treated with CM was observed, but no differences were seen in $VLDL^{-/-}$ CM-treated adipose tissue. Furthermore, the presence of miRNAs was detected in VLDL particles isolated from WT mice, reinforcing the role of this lipoprotein in miRNA transport. Thus, it is concluded that miR-122 levels are increased in adipose tissue in NAFLD models, influenced by VLDLR expression. Our partial conclusion is that the study of miR-122 in VLDL particles is promising and may be one of the mechanisms of communication between the liver and adipose tissue, especially considering the essential function of this microRNA in modulating lipid metabolism. **License number of ethics committee:** 5454-1/2019 – Cemib/Unicamp/A21-146 – Wake Forest University School of Medicine.

PT.056 VITAMIN D SUPPLEMENTATION IS EFFECTIVE TO REDUCE CARDIOVASCULAR RISK AND OXIDATIVE STRESS IN METABOLIC SYNDROME PATIENTS: A RANDOMIZED, PLACEBO-CONTROLLED TRIAL

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Introduction: Metabolic syndrome (MS) is a cluster of risk factors of cardiovascular disease (CVD) and type 2 diabetes. Additionally, the potential role of vitamin D in management of obesity-induced oxidative stress has been suggested before as indicated that low-serum vitamin D status is associated with higher concentrations of oxidative stress markers. Objective: to evaluate the possible therapeutic roles of vitamin D supplementation in improve oxidative stress and metabolic disorders in MS patients. **Patients and methods:** this randomized placebo-controlled clinical trial involved 79 Caucasian individuals (≥18 years), of both sexes with MS (according to NCEP ATP III criteria). The patients received capsules containing 50.000 U of vitamin D (cholecalciferol) (n = 41) or placebo capsules (n = 38) and all of participants were instructed to consume 1 capsule per week for 12 weeks. The analysis were performed at baseline and 12 weeks of supplementation (vitamin D or placebo). Vitamin D, serum levels of lipids (total cholesterol [TC], LDL-cholesterol, HDL-cholesterol and triglycerides), uric acid, plasma glucose, fasting insulin levels and parathyroid hormone (PTH) were evaluated. The homeostasis model assessment (HOMA-IR) was used as a surrogate measurement of insulin sensitivity. C-reactive protein serum levels (CRP) and IL-6 were performed. Oxidative stress biomarkers (plasma hydroperoxide, sulfhydryl group (SH), total radical-trapping antioxidant parameter and advanced oxidation protein products) were performed. Baseline variables in the two groups were compared using independent sample t test and chi-square test for quantitative and qualitative variables, respectively. **Results:** After 12 weeks of intervention, in the vitamin D group, there was a significant decrease in fasting glucose ($p = 0.026$), HOMA-IR ($p = 0.01$), TC ($p = 0.020$), LDL-C ($p = 0.036$), PTH ($p = 0.006$), TC/HDL-C ($p = 0.021$), LDL-C/HDL-C ($p = 0.045$), non-HDL-C ($p = 0.018$) and a significant increase in uric acid ($p < 0.001$) and vitamin D levels ($p < 0.001$) when compared to baseline values. Placebo group presented a significant decrease in TRAP/uric acid ($p = 0.021$). The vitamin D group there was a significant decrease in AOPP ($p = 0.01$), SH ($p < 0.001$), TRAP/uric acid ($p = 0.002$) and hidroperoxides levels ($p = 0.005$). **Conclusion:** vitamin D supplementation was effective in improve the cardiovascular risk and oxidative stress status after 12 weeks of intervention in MS patients. **License number of ethics committee:** 41718014.9.0000.5231.

PT.057 EVALUATION OF THE RELATIONSHIP BETWEEN TIME AND INTERNET AND SMARTPHONE ADDICTION WITH PHYSICAL ACTIVITY LEVEL AND OVERWEIGHT IN ADULTS

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Introduction: Obesity is a chronic and multifactorial disease with increasing prevalence over the years and which is a risk factor for several diseases. The fact that the new technologies have grown as concomitant as weight gain in population caught the attention for the abusive use of the internet as a new risk factor for obesity. Therefore, this study aims to correlate the online time per day, the level of internet and smartphone addictions and the level of physical activity between them and also with sociodemographic variables, anthropometric data, and abdominal circumference. **Patients and methods:** This is a observational and cross-sectional study which has included individuals with age between 18 and 60 years, who have internet access and personal use smartphone. Volunteers should report how many hours they were, on average, connected per day and following questionnaires were used: sociodemographic; Internet Addiction Test (IAT); Smartphone Addiction Scale-Short Version (SAS-SV) and International Physical Activity Questionnaire (IPAQ). Finally, physical examination was performed for body weight and height for calculation of body mass index (BMI) and waist circumference (WC). **Results:** In this study, 291 people were evaluated. Of these people, 35 was excluded, totalizing 256 individuals. The median of online time was 5 hours per day. After regression, only level of education ($p = 0,01$) and age ($p < 0,001$), but not the BMI or WC, were independently related to online time per day. In relation to internet addiction, variables which correlate independently with IAT were age ($p < 0,001$), level of education ($p = 0,01$) and online time ($p < 0,001$). A correlation was not found between IAT and gender or BMI. In respect of smartphone addiction, the values of SAS-SV correlated with online time ($p < 0,001$) and IAT ($p < 0,001$). Finally, the level of physical activity (mensurated by IPAQ), after regression, correlated with SAS-SV ($p = 0,0032$) and BMI ($p = 0,0005$). **Conclusion:** Weight excess doesn't seem to be correlated with hours a day online and internet and smartphone addiction. On the other side, younger age and higher educational levels seem to be independently associated with more time online and more internet addiction. It also seems to exist a relationship between a higher level of physical activity and a lower BMI and lower smartphone addiction. **License number of ethics committee:** 5.140.112 – Universidade Presidente Antônio Carlos.

PT.058 BARIATRIC SURGERY IN PATIENTS WITH BARDET BIEDL SYNDROME: CHALLENGES IN OBESITY CONTROL

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Introduction: Bardet Biedl syndrome is a complex autosomal recessive genetic disease caused by ciliopathy and consequent alteration in intraflagellar transport, giving the syndrome a phenotypic variability as it affects different organs and systems. Findings of obesity, polydactyly, polycystic kidneys, hypogonadism, intellectual deficit and retinopathy are common. Obesity is prevalent in the syndrome, with findings of an incidence up to 86% in carriers. Weight gain, often accelerated early in childhood, brings the consequences of obesity, making treatment necessary for this chronic disease. Case report: Female, 36 years old, with Bardet Biedl syndrome, presenting obesity, polydactyly already operated, visual and cognitive dysfunction, mood disorder, hypertensive and pre-diabetic, reaching a maximum weight of 169 kg. Refractory to behavioral and medication measures, in addition to decompensation of comorbidities associated with obesity, it was decided to perform mixed bariatric surgery in 2006, Roux-en-Y gastric by-pass. After, she had a weight loss of 54kg, better control of associated comorbidities. With low adherence to the measures instituted in the postoperative period, hampered by cognition and family issues, she began to regain weight, now at 154.6 kg, but which has remained stable. **Discussion:** obesity in the syndrome is a complex challenge that requires a multidisciplinary and integrated approach. The mechanisms of obesity are related to increased caloric intake and reduced locomotor activity, triggered by alterations in the pro-opiomelanocortin (POMC) pathway and leptin, related to ciliary losses in the referring neurons. Treatment must address the manifestations of the syndrome, such as obesity. The surgical approach offers the possibility of an effective and lasting treatment, but it is not without drawbacks. Weight regain is one of the greatest challenges, and it are related to other aspects that play a fundamental role in this process, such as psychological disorders, genetic predisposition, adherence to treatment and the action of incretins. **Conclusion:** Bardet Biedl genetic syndrome is complex and multisystemic, which requires an individualized approach. Bariatric surgery can be a treatment option to control obesity, but it is important to remember that success involves multidisciplinary and regular follow-up, and the engagement of patients and their families is key to prevent weight regain, improving the quality of life of these individuals.

PT.059 CLINICAL AND EPIDEMIOLOGICAL PROFILE OF PATIENTS WITH TYPE 2 DIABETES MELLITUS (T2DM) AND NON-ALCOHOLIC FATTY LIVER DISEASE (NAFLD) IN THE T2DM/FLD OUTPATIENT OF THE UNIVERSITY HOSPITAL OF THE FEDERAL UNIVERSITY OF MARANHÃO

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Introduction: About 25% of the world's population and more than 60% of patients with T2DM have NAFLD. The association between DM2 and NAFLD is an important cause of morbidity and mortality in Brazil and worldwide. Patients with obesity and diabetes who develop NAFLD have a higher frequency of advanced fibrosis and cirrhosis. **Objectives:** To describe the prevalence of type 2 diabetes mellitus and non-alcoholic fatty liver disease in the DM2/NAFLD outpatient clinic of the HU-UFMA from June 2022 to December 2022, determining the sociodemographic and epidemiological profile of these patients, in addition to their characteristics clinical and laboratory tests, such as the degree of hepatic fibrosis by Elastography, correlating it with the clinical scores (FIB 4 and NAFLD). To analyze the association between anthropometric measurements (BMI, waist and neck circumference) and HBA1C levels with liver complications. **Methods:** A cross-sectional and prospective study was carried out in a specialty outpatient clinic with the participation of 43 patients evaluated through a questionnaire, physical examination, laboratory tests and liver elastography using Fibroscan. **Results, discution and conclusion:** In the studied population, no statistically significant association was observed between the degree of liver fibrosis and duration of DM, antidiabetic agents used or chronic complications of diabetes. As for cardiovascular and metabolic comorbidities, an association was observed between HAS and NAFLD, highlighting the importance of correct screening and stratification of cardiovascular risk in these patients. There was no relationship between dyslipidemia diagnoses and the degree of liver fibrosis, which differs from what is commonly seen in the literature. Glycemic control, indicated by HbA1c values, was not directly associated with NAFLD in the present study. There was a relationship between anthropometric parameters and the frequency of NAFLD, with a statistically significant association between high liver fibrosis and higher mean BMI and WC. (tables will be included if approved, with statistical analysis). **License number of ethics committee:** CAAE: 51633521.2.0000.5086 – Hospital Universitário – UFMA.

PT.060 ANALYSIS OF EATING DISORDERS PREVALENCE IN PATIENTS SERVED AT AN OUTPATIENT OBESITY CLINIC OF AN ENDOCRINOLOGY SERVICE AT A UNIVERSITY HOSPITAL

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Introduction: Obesity is a chronic non-communicable disease of complex and multifactorial etiology, defined by a body mass index ≥ 30 kg/m². The eating behavior patterns are one of the factors involved in the genesis of obesity, and they interfere with diet quality, BMI, body image and may be associated with binge eating. The objective of this study is to track the prevalence of eating disorders (EDs), such as binge-eating disorder (BED) and bulimia nervosa (BN), in patients treated at an outpatient obesity clinic of the endocrinology service in a University hospital. We aim to understand the diagnostic challenges and ensure the correct therapeutic direction for patients. **Patients and methods:** From May/2022 to December/2022 we revised medical records from patients aged ≥ 18 and ≤ 70 and with BMI ≥ 25 kg/m². Initially, information regarding the profile of the patients and the prescribed therapy were collected, then, for the screening of EDs, the Questionnaire on Eating and Weight Patterns-5 (QEWP-5) was applied electronically. We excluded pregnant women and the patients who we couldn't contact to send the questionnaire. **Results:** After the collection period, the QEWP-5 questionnaire was sent to 371 patients, obtaining 136 responses. It was observed that 4,4% (6) of the patients fulfilled the criteria, according to the QEWP-5, for the diagnosis of BED, while 6,6% (9) for the diagnosis of BN. Compulsive behaviors, loss of control or compensatory behaviors were present in 31,6% (43) of the individuals. **Discussion:** Comparing the data obtained with other studies carried out in the literature, a lower prevalence of EDs is observed in this population, although habits and symptoms of binge eating have been detected in a considerable number of these individuals. Therefore, it is essential to monitor this population, given their predisposition to progress to BED or BN. **Conclusion:** Although a minority of the population met the criteria for a possible diagnosis for BED and BN, a considerable percentage had binge eating habits and symptoms. For that reason, it's important to monitor and screen the eating disorders, since their correct treatment is essential for improving their prognosis. New studies need to be conducted with other tools, in order to compare and investigate the existence of a possible underdiagnosis in the studied population. **License number of ethics committee:** Comitê de Ética e Pesquisa, Hospital Universitário Gaffrée e Guinle – CAAE 53142921.3.0000.5258.

PT.061 FREQUENCY OF COVID-19 INFECTION IN PATIENTS WITH DYSGLYCEMIA AND OBESITY FOLLOWED BY A MULTIPROFESSIONAL TEAM FOR THE STUDY OF OVERWEIGHT PEOPLE IN SALVADOR-BAHIA

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Introduction: Obesity causes several metabolic disorders, which lead to other pathologies, such as respiratory disorders, cardiovascular diseases, kidney diseases, systemic arterial hypertension, type 2 diabetes mellitus, hepatic steatosis and some types of cancer, considered as risk factors for the development of cases severe cases of COVID-19. The objective was to describe the frequency of cases of infection by the virus, in obese and dysglycemic patients, the degree of severity, clinical characteristics, and compare the clinical profile between patients who did or did not develop COVID-19, followed up at the multidisciplinary care outpatient clinic. **Patients and methods:** The population served is 450 patients, a structured questionnaire being applied over the telephone or during consultations with 156. Inclusion criteria were BMI ≥ 30 kg/m² and age > 18 years, with HbA1c ≥ 5.7%. Cases without data on COVID-19 in the medical records or who did not answer the phone call were excluded, thus leaving 86 patients. Data analysis was performed using the SPSS statistical program, version 25. **Results:** Of the 86 patients, 32 were infected with the coronavirus (37.2%). Age was 55.7 ± 10.6 years; 93.7% female; BMI of 38.7 (6.2) kg/m²; weight 97 (17.9) kg, fasting blood glucose 102 [94-131.5] mg/dL and HbA1C 6.5 [5.9-6.9]%. The degree of severity was mild in 68.8%, moderate in 21.9%, severe in 9.4% and there was no death. There was no statistically significant difference (ES) between the clinical variables of infected and non-infected cases, BMI of non-infected patients was 37.5 (6.3) kg/m² and age was 58.5 (11.1) years. **Discussion:** In this study, the frequency of infected patients was high when compared to some studies carried out in 2020. The BMI found was higher, and the age measurement was lower, when compared to literature data. The severity of the COVID-19 infection was mild in 68.8%, and severe in 9.4% without deaths; values contrary to those described in other studies, this may be associated with the fact that the patients surveyed were under outpatient follow-up with a multidisciplinary team. **Conclusion:** The frequency of COVID-19 infection described in the literature was lower than in the patients studied. Although they got sick more often, the degree of severity that prevailed was mild, and there were no deaths among them. In the subgroup analysis, BMI and age were higher in those infected, however, without statistical significance. **License number of ethics committee:** 5.649.364.

PT.062 FREQUENCY OF SEVERE CASES AND POST-COVID-19 SYNDROME IN OVERWEIGHT AND OBESE PATIENTS FOLLOWED BY A MULTIDISCIPLINARY TEAM: A CROSS-SECTIONAL STUDY

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Introduction: The correlation between severe cases of COVID-19, its sequelae and obesity are still little studied in Brazil, although international studies have pointed out its important connection. **Patients and methods:** The objectives are to describe the frequency of COVID-19, the degrees of severity and post-COVID syndrome in obese and overweight patients; and compare clinical and metabolic profile of those who had mild cases from those with severe cases. Performed in a multiprofessional clinic for the study of people with excess weight, with 431 patients, in Salvador-BA. A questionnaire was applied to collect data regarding age, sex, ethnicity, weight, height, BMI, waist circumference, comorbidities, history of COVID-19, symptoms in the acute phase, care received and symptoms of post-COVID syndrome. Those who stopped attending the clinic, were questioned in a telephone call. **Results:** 156 patients were interviewed. 52 had COVID-19, with 37 mild cases. 39 patients have symptoms of post-COVID syndrome, the main ones being memory loss (15,9%) and hair loss (13,6%). The main comorbidities were systemic arterial hypertension (27,8%) and dysglycemia (22,6%), both present in all patients with severe cases (2,6%). **Discussion:** there is a low prevalence of COVID-19. Most of them had mild cases and there was no significant difference between the severity and degrees of obesity. This may be due to the small sample, absence of testing and the "Obesity Paradox", theory that consider the chronic inflammation in the obesity as a protection mechanism. The 4 patients with severe cases have systemic arterial hypertension and dysglycemia. This may be a real correlation or because of the small sample. Most patients had COVID-19 during 2020 and 2021, followed by a drop after December of 2021, possibly due to the vaccination. 39 patients related symptoms compatible with post-COVID syndrome. The absence of test for this syndrome and the nonspecific symptoms can result in false positives been considered. **Conclusion:** Few patients had COVID-19, and most reported mild cases. This can be attributed to the obesity paradox, absence of mass testing of the population and the small sample. Symptoms of post-COVID syndrome were significant, requiring a more careful look. **License number of ethics committee:** 5.649.364.

PT.063 STUDY OF RISK AND PROTECTIVE FACTORS OF OVERWEIGHT AND OBESE INDIVIDUALS WITH COVID-19

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The COVID-19 is an infectious acute respiratory syndrome, with a high transmissibility rate and potentially serious, since its complications led to thousands of deaths in Brazil and in the world between 2020 and 2022. With this, it is necessary to know the profile of individuals who were more likely to be positive for COVID-19, in order to mitigate its severity and lethality. As examples of these factors, there is overweight and obesity, comorbidities that required intensive care with those positive for COVID-19, in addition to increasing the mortality rate among these individuals. In this sense, the importance of studies on obesity and its influence on the diseases related to COVID-19 is evident. This work aims to evaluate risk and protective factors for COVID-19 in overweight and obese individuals. This is a quantitative, prospective, case-control study, which collected data between the months of March and December 2022 in a reference center for the treatment of obesity. A total of 252 individuals were recruited, 150 males and 102 females. Of these, 139 positive for COVID-19 and 113 controls, with a mean age of 25 ± 2.5 years. The variables considered for the assessment of risk and protective factors were: body mass index (BMI), waist circumference (WC), birth type, blood type and Rh factor and anti-COVID-19 vaccination evaluated by the Odds Ratio test with X2 with 95% confidence interval (CI) and $p < 0.05$. Thus, as results, BMI ≥ 25 OR 1.8 (1.04-3.0), $p = 0.035$, increased AC OR 1.2 (0.7-2.0), $p = 0.042$, were observed as risk factors, cesarean section OR 1.9 (1.1-3.6), $p = 0.030$, blood type A+ OR 0.6 (0.4-0.9), $p=0.043$, and anti-COVID-19 vaccination OR 0.3 (0.1-1.0), $p = 0.040$. In this sense, patients with a BMI ≥ 25 had an 80% greater chance of infection when compared to those with a BMI < 25. As for waist circumference, individuals with alterations have a 20% greater chance of infection compared to those with normal WC. Another factor obtained was birth by cesarean section, which represents a 90% higher risk of being infected by COVID-19. Furthermore, blood type A+ and anti-COVID-19 vaccination for at least three months were found to be protective factors. In view of the above, it is concluded that overweight and obese individuals who were born by cesarean section had a higher risk of testing positive for COVID-19 to the detriment of protective factors blood type A+ and anti-COVID-19 vaccination.

PT.064 LABORATORY PROFILE IN A GROUP OF OBESE INDIVIDUALS POSITIVE FOR COVID-19

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The COVID-19 is an infectious acute respiratory syndrome, with a high degree of transmissibility and severity, as the complication of its condition led to thousands of deaths between 2020 and 2022. Therefore, it is necessary to know the laboratory profile of obese individuals positive for COVID-19, besides the liver, lipid, glycemic and inflammatory profiles in these individuals may be predisposing factors for a positive COVID-19 result. The present work consists of a cross-sectional, case-control and prospective study, carried out in a reference center for the treatment of obesity, which aims to evaluate the laboratory profile of a group of individuals with obesity positive for COVID-19. As for the materials and methods, 252 individuals were studied, 150 male and 102 female. Of these, 139 tested positive for COVID-19 and 113 controls, with a mean age of 25 ± 2.5 years. Of the results, $p < 0.005$ and the mean were considered statistically significant. As a result, it was observed that individuals positive for COVID-19 showed alteration of the liver profile, with elevation of glutamic-pyruvic transaminase (GPT), gamma glutamyl transferase (GGT) and glutamic-oxaloacetic transaminase (GOT), obtaining a mean of 50, 89 and 51.5 U/L respectively ($p < 0.001$). These findings demonstrate the presence of metabolic fatty liver disease in these individuals. In addition, alterations in the lipid profile were found, with an increase in total cholesterol (mean 195 mg/dL), triglycerides (mean 177 mg/dL), HDL-c (mean 45 mg/dL) and LDL-c (mean 165.5), with $p < 0.001$ in all lipid profile means. Regarding the glycemic profile, no laboratory alterations were observed, obtaining a mean fasting glucose of 87 mg/dL ($p = 0.066$) and glycated hemoglobin with a mean of 5% ($p = 0.07$). As for the inflammatory profile, there was an increase in C-reactive protein (CRP) with a mean of 12.75 mg/L ($p < 0.001$) and a reduction in vitamin D with a mean of 19 ng/mL ($p < 0.001$). In view of the above, it is concluded that individuals with obesity, metabolic fatty liver disease, mixed dyslipidemia, hypovitaminosis D and elevated CRP are at greater risk of being positive for COVID-19.

PT.065 CORRELATION BETWEEN OBESITY AND MULTINODULAR GOITER IN PATIENTS IN NORTHERN BRAZIL

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Introduction: Obesity is a chronic disease occasioned by the accumulation of an excess of body fat. The thyroid nodules are frequently found in medical practice and represent the main clinical manifestation of a plenty of thyroid diseases. Is estimated that 1 obese in 3 presents inflammation or nodules in the thyroid. The insulin resistance associated with obesity promotes an increase on TSH levels, wich stimulates the proliferation of the thyroid cells, wich is associated with the inflammation and the development of the thyroid nodules. **Patients and methods:** It was performed a transversal, retrospective and descriptive study, based on the data obtained by the analysis of medical records of patients that attended on appointments in the period of 2021-2023 in a reference hospital of endocrinology and metabology. It was included 121 patients with benign thyroid nodules, with or without gland disfunction. It was collected epidemiological and anthropometrical data and ultrasound characters of the nodules. **Results:** The obesity was observated in 26 patients (21,48%), of wich 76,92% presents grade 1 obesity, 23,08% presents grade 2 obesity and none of them presents grade 3 obesity. Among the patients with body mass index (BMI) below 30, 19,2% presented only one thyroid nodule, and 80% presented multinodule goiter. However, when it was analyzed the group of obese patients, it was found multiple nodules in 85% of this population. The echogenicity of the patients' nodules with BMI > 30 kg/m^2 was mostly hypoechogenic. **Discussion:** There was no association between obesity and the presence of multiple thyroid nodules. The data from this study contradict the literature. Obesity was not a prevalence factor for multinodularity, because patients with a BMI < 30 kg/m^2 had a higher frequency of multiple nodules. **Conclusion:** Among the patients in treatment on the service with thyroid nodules, the presence of obesity was not associated with multiple nodules in thyroid gland.

PT.066 UPPER GASTROINTESTINAL BLEEDING TRIGGERED BY ALCOHOLIC LIVER CIRRHOSIS IN A BARIATRIC PATIENT THROUGH GASTRECTOMY IN ROUX-EN-Y: A CASE REPORT

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Introduction: Bariatric Surgery (BS) is an effective treatment for weight loss in patients with obesity. However, patients who undergo this procedure have a susceptibility to alcoholism, which can lead to long-term complications such as portal hypertension in liver cirrhosis, which can cause Upper Gastrointestinal Bleeding (UGIB). Case report: A 45-year-old patient with a history of BS using the Roux-en-Y technique 15 years ago, hypertensive, diabetic, and chronic alcoholic went to the emergency department in July 2022 with complaints of periodic melena in the past year and dizziness. The patient was admitted suspecting of UGIB and initially presented with lucidity, hypochromia, dehydration, anemia, and a glycemic index of 480 mg/dL. The patient was taken to the Intensive Care Unit to stabilize the altered indices with blood transfusions and insulin pump. To investigate the cause, Upper Gastrointestinal Endoscopy and Colonoscopy were performed, and no bleeding was identified. Angiotomography was also performed, but no abnormalities were found. After stabilization, Laparoscopic-Guided Transoperative Endoscopy was proposed to investigate UGIB, which revealed the presence of varices in the excluded gastric fundus associated with "RED SPOTS" (signs of recent bleeding), leading in an excluded stomach gastrectomy. The patient had a good response in the postoperative period with no bleeding until March 2023. **Discussion:** Post-bariatric patients have a higher risk of alcohol abuse, and there are changes in alcohol metabolism, especially in the Roux-en-Y technique, including an increase in blood alcohol concentration, longer elimination time, and consequently, greater intoxication. These changes may play a role in predisposing to the development of liver cirrhosis after the procedure. In addition, alcohol in diabetic patients can cause hyperglycemia, affecting not only glucose levels but also insulin levels. This case shows a bariatric patient with chronic alcoholism and diabetes who developed a probable complication of portal hypertension caused by cirrhosis, presenting with UGIB due to gastric varices in the excluded stomach by BS, requiring the intervention described in the report. **Conclusion:** Alcoholism is a concern when it comes to bariatric patients, and guidelines recommend preoperative psychosocial screening and strong recommendations to cease use in the postoperative period to avoid complications such as those presented in this case.

PT.067 INSULIN RESISTANCE IN TYPE 1 DIABETICS: CORRELATION WITH CENTRAL OBESITY AND INFLAMMATION

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Aim: The present study aims to evaluate the relationship between antropometric characteristics, insulin dose, and c-reactive protein (CRP) and their impact on insulin resistance. **Methods:** The sample was composed of 71 type 1 diabetic patients over 18 years old (33 ± 12), with a mean time of 15 (±10) years of diagnosis. All participants were volunteers and signed an Informed Consent Form, agreeing with the terms of the research, according to Resolution 466/12 of the National Health Council of Brazil. It was explained to the participants that the identity of the participants is kept in strict confidentiality, with disclosure only of the results obtained. **Results:** Based on the collected data, and with them performing the significance analysis it was possible to observe, according to table 1 the significance between CRP (C-reactive protein) and waist circumference ($p = 0.0348$), as well as CRP and VAI ($p = 0.0433$). The data showing significance are conicity index X EDC ($p < 0.0001$), VAI x EDC ($p = 0.0008$), waist-to-height ratio X EDC ($p = 0.0003$), WHR x EDC ($p < 0.0001$), NC x EDC ($P = 0.0007$), WC x EDC ($P < 0.0001$). Significance between BMI x CACTI ($p < 0.0001$), VAI x CACTI ($p < 0.0001$), Waist to height ratio X CACTI ($p < 0.0001$), WHR x CACTI ($p < 0.0001$), NC x CACTI ($p < 0.0001$), WC x CACTI ($p < 0.0001$), CACTI x EDC ($p = 0.0001$). **Conclusion:** Through this study it is possible to observe the importance of evaluating the patient in a complete way, demonstrating that people living with type 1 diabetes can manifest characteristics of T2DM, such as insulin resistance if they present indicators of obesity. **Keywords:** Type 1 diabets; insulin resistance, obesity.

PT.068 INSULINOMA AND OBESITY: A CASE REPORT

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Introduction: Obesity is a chronic, multifactorial disease that represents a burden for the public health system because of its association with significant morbidity and mortality. Insulinoma is a rare condition that can lead to weight gain and consequently obesity. **Case report:** NNS, woman, 70 years old, morbidly obese, who started episodes characterized as lipothymia, palpitations, mental confusion, dysarthria, sweating and irritability two years ago. The symptoms were initially weekly and improved after drinking "sugar water to calm down". There was a weight gain of 20 kg in this period. Due to the recurrence of these episodes, the patient sought medical attention, presenting hypoglycemia with glucose levels around 30 mg/dL. An abdominal CT scan was requested, which showed an expansive formation of lobulated contours with accentuated contrast enhancement, measuring approximately 3.5 x 3.4 cm in the uncinate process of the pancreas. A surgeon evaluated and forwarded to the endocrinologist aiming 10% weight loose before performing the surgery to excise the tumor. At the first appointment, the patient weighed 125 kg, body mass index (BMI) 52.7 kg/m^2, fasting blood glucose 40 mg/dL, postprandial blood glucose 38 mg/dL, C-peptide 8.74 (RV 1.1-4.4), HbA1c 3.3% and serum insulin 54.71 (RV 2.9-24.9). Due to increasingly severe hypoglycemia, the endocrinology team decided to hospitalize the patient, initiating the use of octreotide for glycemic control. During this period, the patient was unable to reach the weight goal and reached 135 kg. Finally, surgery was performed with enucleation of the pancreatic tumor with anatomopathological result confirming pancreatic neuroendocrine neoplasia (NET G1). The patient evolved in the postoperative period with weight loss of 29,5 kg in 7 months, even with inadequate diet and physical activity. **Discussion:** Insulinoma is a neuroendocrine tumor of the pancreas that produces autologous insulin secretion. Sustained secretion of this anabolic hormone causes lipogenesis and inhibits lipolysis in adipose tissue. Such conditions can trigger high caloric intake, an increase in abdominal circumference, excess visceral fat and increased BMI. **Conclusion:** definitive treatment of insulinoma with consequent decrease in exposure to high insulin levels probably contributed to this patient's weight loss.

PT.069 ADULT WITH ATYPICAL ABETALIPOPROTEINEMIA

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Introduction: Abetalipoproteinemia (ABL) is a rare autosomal recessive disease caused by biallelic mutations in the MTTP genes encoding the microsomal triglyceride transfer protein large subunit. It is characterized by persistently absent or extremely low levels (below 5%) of low-density lipoproteins (LDL) and very-low-density lipoproteins. Usually presents in infancy with diarrhea and growth retardation due to mal-absorption of fat and fat-soluble vitamins. Envolves multisystem, specially neurological complications. **Case report:** A 50 year old male presents with elevated transaminases in a blood donation test 20 years ago. Past medical history includes pre-diabetes and arterial hypertension. Further investigation showed nonalcoholic steatohepatitis in liver biopsy, slight hypercholesterolemia and undetectable LDL levels. Therefore, ABL was suspected, and confirmed after apolipoprotein B (apoB) dosage. Ever since, abdominal ultrasounds have revealed hepatic steatosis and modest splenomegaly. The patient denies steatorrhea, weight change or neurological symptoms. Fundoscopy and acanthocyte screening test were negative. Serum concentrations of testosterone and other steroidal hormones and vitamins were normal. **Discussion:** ABL was first discovered in 1960 with the complete absence of apoB. Only in the 90's ABL's genetic studies reveals mutations in the MTTP genes. Chronic cholestatic liver disease, neuropathies and secondary neoplasms must be ruled out. Furthermore, heterozygous lipoprotein lipase deficiency manages to remain asymptomatic and with no change in cholesterol levels. It is important to establishment the extent of disease and treatment must be individualized, to address symptoms and prevent complications. Due to the gravity of symptoms, ABL is more likely to develop in early childhood, but this case is an atypical presentation in an adult, who only suffered from metabolic syndrome. **Conclusion:** ABL can lead to lethal conditions due to vitamin deficiencies. Even with an atypical presentation like in this report, it is very important to develop early diagnosis and adequate supplementation of vitamins in order to prevent or alleviate the complications and improve the prognosis, enabling some patients to live to the eighth decade of life.

PT.070 A RARE CASE OF HYPOALPHALIPOPROTEINEMIA

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Introduction: Apolipoprotein A1 (ApoA1) deficiency is a rare type of primary hypoalphalipoproteinemia (HA) defined as extremely low HDL (<5 mg/dL) and virtually undetectable levels of ApoA1 in plasma. It's an autosomal dominant disease with biallelic mutation in the ApoA1 gene, on chromosome 11q23.3. In general, individuals with this syndrome exhibit increased prevalence of early-onset cardiovascular disease (CVD). **Case report:** M.G.R., 55 years old, female, referred to endocrinology because of multiple dosage of very low HDL (<5 mg/dL), without another dyslipidemia. She also had vitamin B12 deficiency, thalassemia minor, corneal dystrophy and neurosensorial hearing loss. She does not have diabetes, hypertension, hypothyroidism, previous cardiovascular event (CVE) or obesity. Denies alcoholism or smoking. There is no family history of CVD or low HDL. Laboratory evaluation excluded secondary causes but showed ApoA1 of 32,6 mg/dL (Range 108-226 mg/dL). Carotid Doppler was normal. Echo: EF 60%, mitral valve with subvalvular calcification. **Discussion:** The definitive diagnosis of HA is confirmed by gene sequencing. Secondary causes as smoking, obesity, chronic kidney disease, systemic inflammatory diseases, autoimmune diseases, hematologic neoplasms, liver failure, exogenous testosterone replacement therapy must be ruled out. Mutation of ApoA1 gene is estimated to be present in 0,3% of the population. Clinical manifestations depend on mutation type. Neurosensorial symptoms such as cerebellar ataxia, hearing loss and corneal opacity can be present. Mutations that severely impair ApoA1 expression can result in premature CVD. Lifestyle changes, use of niacin, fibrates, and cholesteryl ester transfer protein inhibitors increases HDL levels but does not reduce CVE. Preview studies showed that the reduction of myocardial infarction observed with the use of fibrates was due to the LDL reduction. Randomized clinical trials did not show that increase HDL could be favorable to prevent CVE, that brought hesitation and insecurity as to its real cardioprotective role. **Conclusion:** Although primary HA is a rare condition, physicians must suspect whenever there are very low levels of HDL. Clinical treatment and regular cardiovascular monitoring should be offered to all patients.

PT.071 ODDS OF STROKE IN PATIENTS WITH DIABETES AND HYPERTENSION IN PARAÍBA, BRAZIL

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Introduction: Although diabetes complications have been studied extensively over the years, there is limited data on the relationship between systemic arterial hypertension (SHA) and diabetes and the odds of stroke. **Methods:** Cross-sectional study based on administrative database (Datasus/Hiperdia) records. The inclusion criteria were adult patients from Paraíba with SHA and Diabetes between Dec/2002 and Dec/2012. Odds ratios (OR) with 95% confidence intervals and the random-effects model. **Results:** Data from 74,825 patients were analyzed, with 69.7% females and a mean age of 50.9 (SD 16.8). 8,388 (11.21%) strokes were reported in the diabetes population with SHA, a 367% increase in incidence compared to the diabetes population without SHA. The odds of stroke were significantly higher in patients with SHA and diabetes who had a sedentary lifestyle (OR 1.30; 95% CI 1.24-1.36; $p < 0.001$), were overweight (OR 1.11; 95% CI 1.06-1.16; $p < 0.001$), and smoked (OR 2.21; 95% CI 2.11-2.31; $p < 0.001$). However, there was no significant difference in stroke odds between genders (OR 1.00; 95% CI 0.95-1.05; $p = 0.96$). Therefore, having diabetes significantly increases the odds of having a stroke (OR 2.45; 95% CI 2.19-2.73; $p < 0.001$). **Conclusion:** In patients from Paraíba with SHA and Diabetes, being sedentary, smoking, and overweight significantly increased the outcome of stroke. In addition, patients with diabetes and SHA compared to SHA without diabetes have higher odds of stroke.

PT.072 CROSS-SECTIONAL STUDY ON CASES OF OBESITY IN A HEALTH UNIT OF PORTO ALEGRE

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Obesity is associated with several complications, such as type II diabetes mellitus (DM II), cardiovascular diseases, dyslipidemias, and can also cause respiratory and locomotor difficulties, reducing the quality of life of patients. The diagnosis of obesity uses tools such as the body mass index (BMI), being classified as obese individuals with values equal to or greater than 30 kg/m², according to the classification of the World Health Organization. The objective of this study was to analyze obesity as a risk factor for the development of other comorbidities. In this way, a cross-sectional study was carried out by searching for data from patients linked to the Morro dos Sargentos Health Unit, in the municipality of Porto Alegre, Rio Grande do Sul, until February 2023 in the E-sus system. The medical records of all patients registered in the system with ICD 10 E66.Through the system, it was possible to find 182 patients considered obese. Of these, 75% of women and 67% of men have associated comorbidities. The most prevalent diseases are DM II (17%), SAH (46%), Asthma or bronchitis (9%), Anxiety and/or depression (23%) and Hypothyroidism (10%). Other comorbidities were found too, such as heart disease, dyslipidemia, other types of diabetes (such as DMG and DM-Lody), hepatic steatosis, chronic pain and SAHOS. It is important to emphasize that not all obese patients have the ICD 10 E66 registered or active in the system, which makes it difficult to obtain an exact result of the total number of patients with this diagnosis. Obesity is a disease that brings with it a multidisciplinary burden and requires special attention to the patient, because, added to the physical and psychosocial bodily changes, it also behaves as an important risk factor for triggering several other diseases if not treated properly. Thus, it is important to understand the profile of obese patients, as well as the main comorbidities and disorders related to these patients. In the analysis of the presented data, it is noticed that the majority of the obese patients, assisted, are women. The female gender is also the one with the highest percentage of comorbidities associated with obesity. In addition, the most prevalent diseases are related to SAH and psychosocial factors, which directly affect the quality of life of these patients. In this way, careful and attentive monitoring of patients with this disease is essential, which is increasingly proving to be a major challenge to public health.

PT.073 OBESITY AND MENTAL DISORDERS: PREVALENCE ANALYSIS IN A GROUP OF EMPLOYEES OF A LARGE MULTINATIONAL COMPANY IN BRAZIL

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Obesity is a 21st century pandemic that is associated with cognitive and mental health problems, non-communicable diseases and premature death. Several studies have associated obesity with the occurrence of mental disorders, including depression. Considering the high prevalence of both comorbidities and the importance of their impact on people's lives, the aim of this study is to analyze the correlation between obesity and mental disorders, including depression, in adult employees of a large multinational company set up in Brazil. Therefore, 3706 electronic medical records of occupational medicine care of employees from different regions of Brazil of a large multinational company were evaluated between the years 2020 and 2021. For the present study, we crossed the BMI profile, according to the classification of the Brazilian Association of Nutrology (ABRAN) with data from the assessment of the mental state of employees considering the results of the Self Report Questionnaire (SQR20). The results obtained showed an association between the two variables and allowed us to conclude that overweight/obese employees have a higher occurrence of mental disorders; underweight and normal weight employees are primarily under 40 years of age; overweight/obese employees are preferably aged between 40 and 60 years; men have a higher occurrence of overweight and a lower rate of mental disorder; women have a higher occurrence of normal weight and a higher rate of mental disorder; underweight employees are less likely to have a mental disorder. **Keywords:** Obesity; mental disorder; overweight; occupational medicine.

PT.074 ASSOCIATION BETWEEN INTESTINAL MICROBIOTA AND TIME OF TYPE 2 DIABETES MELLITUS IN EUTROPHIC BRAZILIAN INDIVIDUALS

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Introduction: The intestinal microbiota is linked to type 2 diabetes mellitus, with changes in the microbiota potentially contributing to the development of the disease. We study evaluated the composition of the microbiota in eutrophic Brazilians with type 2 diabetes and explored its correlation with disease duration. **Methods:** Following the approval of the local ethics committee (CAAE:01713018.0.0000.0068), fecal samples were collected from eutrophic individuals with DM2 [n = 13; Body Mass Index (BMI): 24.84 kg/m^2 ± 12.76; 20 years ± 8.29]. Microbial diversity was assessed using the 16S rRNA gene sequencing technique, while considering only high-quality and high-quantity reads [DADA2 (v1.8.0)]. Statistical analyses were performed using the JASP Team 2022 software (v0.16.0.0), and correlations between bacterial taxa and DM2 duration were tested using Spearman's test. **Results:** Bacterial taxa in individuals with DM2 exhibited strong and inverse correlations with disease duration, particularly anti-inflammatory and butyrate-producing bacteria such as *Faecalibacterium prausnitzii* (r = -0.733; P = 0.01) and the genus Alistipes (r = -0.832). These results underscore the importance of monitoring gut microbiota in the context of DM2 and highlight potential therapeutic targets for managing this disease. **Discussion:** Type 2 diabetes is a chronic disease that can worsen without lifestyle changes. Studies have shown that healthy microbiota can improve metabolic alterations related to inflammation and insulin resistance. *Faecalibacterium prausnitzii* may serve as a biomarker for glucose intolerance and help maintain intestinal barrier integrity through microbial anti-inflammatory molecules. The proposed mechanism is the assistance in maintaining intestinal barrier integrity through the microbial anti-inflammatory molecule (MAM). *F. prausnitzii* produces MAM, which acts on tight junctions, reducing intestinal permeability and inflammation. Similarly, the Alistipes genus can aid in improving T2D and suppressing diabetic inflammation. **Conclusion:** Individuals with type 2 diabetes who are in a healthy weight range in Brazil have shown strong negative correlations between butyrate-producing bacteria and disease duration. This could potentially lead to inflammation and hinder glycemic control. **License number of ethics committee:** CAAE:01713018.0.0000.0068. Número do Parecer: 3.947.745. Hospital das Clínicas da Faculdade de Medicina da USP.

PT.075 METABOLIC AND CARDIOVASCULAR PROFILE IN PREHYPERTENSION

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Introduction: Prehypertension is defined as systolic blood pressure readings taken at rest between 130-139 and/or diastolic between 85-89 mmHg. Despite being below the recommended levels for hypertension, it already implies an increased cardiovascular risk, but its clinical and metabolic profile is still poorly studied. Objective: To describe comparatively the metabolic and cardiovascular profile of pre-hypertensive and hypertensive in general. **Methods:** Observational cross-sectional study that included prehypertensive and hypertensive individuals aged 20 to 65 years in two research centers, both in the city of Rio de Janeiro The initial assessment includes sociodemographic data, anthropometric and body composition measurements (bioelectrical impedance), clinic blood pressure and home blood pressure monitoring (HBPM), metabolic profile, and renal function. **Results:** A total of 150 participants (54% female, age 47.3 ± 11.7 years) were included, 35 of whom were prehypertensive (63% female, mean age 42.0 ± 12.5 years). Prehypertensives are younger, with more white individuals (43% *vs.* 63%) and a better glycemic profile (11% *vs.* 44%). The prevalence of obesity and overweight is similar between groups, although the percentage of centripetal fat is lower among prehypertensive individuals. The prevalence of dyslipidemia (74% *vs.* 82%) and metabolic syndrome (31% *vs.* 42%) was similar between groups, while cholesterol levels are higher among prehypertensive individuals while triglycerides are higher among hypertensive individuals, with 63% of prehypertensive individuals did not know they were dyslipidemic. The two groups presented similar renal function with the highest values of albuminuria among hypertensive patients. As blood pressure levels are lower among prehypertensive patients. Regarding HBPM-defined hypertension phenotypes, 37% of prehypertensive individuals have masked hypertension. **Conclusion:** Cardiovascular risk was high among prehypertensive individuals, despite pressure levels working within normal limits, but one third of these individuals have masked hypertension. **License number of ethics committee**: 41962921.9.0000.5284 – Universidade Estácio de Sá/Unesa.

PT.076 S447X POLYMORPHISMS OF THE LIPOPROTEIN LIPASE GENE IN AFRICAN-AMERICAN PATIENTS WITH CHILDHOOD-ONSET OBESITY

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Introduction: Obesity reflects the interaction between dietetics, environment and genetics. Lipoprotein Lipase (LPL) is an important enzyme in this genesis, as it participates in the process of regulating the storage and use of triglycerides. Polymorphisms in the LPL gene showed a relationship with greater accumulation of abdominal fat. **Objective:** To investigate the relationship between polymorphisms in the LPL gene with a greater predisposition to the development of obesity since childhood in Afro-descendants. **Methods:** Whole blood was collected with EDTA and DNA extracted by saline extraction. Analyzes were performed at the Genetics Laboratory of the State University of Bahia (UNEB). The extraction began with the group of 200 obese people who were being treated through hospitalization or were going to undergo bariatric surgery, and then the DNA was extracted from the 200 controls. Polymorphisms were investigated after amplification by polymerase chain reaction. The amplified material and the genotypes determined after separating the fragments by electrophoresis in a 3% agarose gel, stained with ethidium bromide. Fragments were visualized using an ultraviolet light transilluminator. Genotype frequencies were compared between groups using Fisher's exact test, quantitative variables using ANOVA or Student's t-test. Hardy-Weinberg equilibrium was tested using the Arlequin 3.11 program. **Results:** The 447X/447X homozygous genotype frequency was increased in the obese female group ($p = 0.027$). Among men, carriers of the 447X allele were more frequent in obese than in controls ($p = 0.005$). In women, homozygotes for 447X allele showed increased BMI ($p = 0.018$), abdominal ($p = 0.006$) and hip ($p = 0.004$) circumferences. In men, no significant association was observed between the S447X polymorphism and BMI, waist circumference and hip values. There was no association between the S447X variant with triglyceride and HDL-cholesterol levels in women. In men, carriers of the 447X allele had reduced levels of HDL-cholesterol ($p = 0.022$). Hepatic steatosis, a comorbidity of obesity, was associated with 447X allele in both genders, in a pattern similar to that observed for obesity. **Conclusion:** After analyzing the DNA of obese individuals, it was found that the presence of the 447X allele is associated with obesity and non-alcoholic hepatic steatosis in both men and women. **License number of ethics committee:** Protocolo de aprovação número: 112/10 autorizado pelo Comitê de Ética do Centro de Diabetes e Endocrinologia da Bahia (Cedeba).

PT.078 NOTIFICATIONS OF SYMPTOMS OF ANXIETY, DEPRESSION, AND BIPOLAR AFFECTIVE DISORDER (BAD) IN CANDIDATES FOR BARIATRIC SURGERY IN A UNIVERSITY HOSPITAL IN RIO DE JANEIRO, BRAZIL

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Introduction: As obesity prevalence has grown, the indication of surgical treatment for this disease also increased. Since mental disorders are highly associated with obesity, there is an increased need for mental health professionals as part of the multidisciplinary staff involved in the follow-up of patients who are candidates for surgical treatment. Besides, the demand for new studies has risen, focusing on the mental health of these patients. This work aims to describe the self-notifications of symptoms related to anxiety and depression in a descriptive analysis. We also investigated symptoms of BAD. **Patients and methods:** From August 2021 to March 2023, 369 patients were followed by the psychologist at the Obesity Unit, who were all candidates for bariatric surgery. They were followed in a semi-directed interview, aiming to express their symptoms. **Results:** In the total sample, 43% of the patients reported suggestive symptoms of mental disorders, of whom 17.8% were related to anxiety while 10.2% were associated with depression. Only 1% reported symptoms suggestive of bipolar diagnosis. **Discussion:** Even with high rates of patients relating suggestive mental health symptoms. Differences among the observed rates, specifically of anxiety, depression, and BAD, suggest that a sub-diagnosis may have occurred in patients followed. Mainly considering BAD as a commonly misdiagnosed disorder. **Conclusion:** Symptoms suggestive of mental disorders were very frequent in the studied patients, especially anxiety-related ones.

PT.079 LEPTIN LEVELS IN MFN2 – ASSOCIATED LIPODYSTROPHY – A CASE REPORT

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Familial partial lipodystrophy (FPL) due to MFN2 gene is characterized by the presence of upper body lipomatous masses, often associated with metabolic and neurological disorders. MFN2 gene encodes mitofusin 2, a mitochondrial outer membrane protein. Here we report a case of this pathology with diagnostic confirmation by genetic testing.

A 41-year-old woman was admitted to our service in 1998, presenting recently grown lipomas in the upper arms, neck and dorsal region. She observed a central distribution of fat in childhood, with lipoatrophy in the legs, and was diagnosed with type 2 diabetes mellitus (T2DM) at 37 years old, presented hypertriglyceridemia, systemic arterial hypertension and hyperuricemia. Liposuctions were performed with relapse of the lipomas. She has a family history of consanguinity, a 47-year-old brother with T2DM, and history of deep vein thrombosis. During the follow-up, she maintained poor glycemic control, despite a basal-bolus insulin therapy and two oral glucose-lowering. She also had extensive deep vein thrombosis in her right leg. Laboratory tests showed very low levels of leptin (0.6 ng/mL) and adiponectin (0.3 mcg/mL). Abdominal ultrasound reveled fatty infiltration of the liver. She presented of muscle weakness in her legs and underwent electroneuromyography which revealed sensory-motor polyneuropathy with a predominance of axonal injury. Genetic testing identified a biallelic mutation in the MFN2 gene confirming FPL. Among 13 patients described in 3 cases series in the literature, we noted variable chronology of symptoms and that most patients have insulin resistance, but without severe metabolic manifestations. Almost all cases are associated with peripheral neuropathy, while no episodes of venous thrombosis were described. In our case, the severe metabolic manifestation and venous thrombosis stand out as atypical manifestations. In agreement with the literature, we highlight the low levels of leptin, despite the increased adipocytes in the upper body. Given that levels in MFN-lipodystrophy are even lower than in other forms of FPL, the influence of mitochondrial mutation is a hypothesis to explain the leptin suppression. Due to its rarity, there are no diagnostic and therapeutic protocols, being indicated management of comorbidities and metabolic control. Given the low levels of leptin in the reported case, in agreement with the literature, is reasonable to think that metreleptin could be a therapeutic option.

PT.080 DOES BARIATRIC SURGERY AFFECT RESPIRATORY MUSCLE STRENGTH IN THE SHORT-TERM FOLLOW-UP?

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Introduction: Obesity is a chronic disease defined as excessive fat accumulation able to promote many health problems in patients. Restrictive changes in respiratory function are among the pulmonary complications associated with obesity. Moreover, inspiratory muscle weakness, as evidenced by reduced maximum inspiratory pressure, can be present, leading to impaired ventilatory mechanics, reduced lung function, and significant loss of functional capacity. Although bariatric surgery results in significant weight loss, an improved cardiometabolic profile, and a lower mortality rate, research on the impact of this procedure on respiratory muscle strength is still limited. **Patients and methods:** Thirty-one patients with obesity (78.6% females, aged = 47 ± 7 years, BMI = 46.2 ± .4 kg/m²) participated in the study. Clinical history, physical examination, anthropometric measurements, and biochemical profile were assessed before and within three months after being submitted to a Roux-en-Y gastric bypass (RYGB). Respiratory muscle strength was determined from maximal inspiratory and expiratory pressures (MIP and MEP, respectively) using an analog manuvacuometer M120 (Murenas, Juiz de Fora, MG, Brasil). **Results:** Of the total, 67.7% had hypertension, 38.7% had type 2 diabetes mellitus, and 32.2% had dyslipidemia preoperatively. There was a reduction in BMI (-23.4%; $p < 0.001$), circumferences (neck -16.8%, waist -15.4%, and hip -14.4%; $p < 0.001$), and diastolic blood pressure (-7%; $p = 0.01$) after surgery without any change in systolic blood pressure or heart rate ($p = 0.29$). Total cholesterol, triglycerides, and creatinine significantly decreased three months after surgery, while the aspartate aminotransferase (AST) levels increased ($p = 0.03$). On the counterpart, any change in fasting blood glucose, glycated hemoglobin type A1c (HbA1c), low-density lipoprotein cholesterol (LDL-c), high-density lipoprotein cholesterol (HDL-c), uric acid, and alanine aminotransferase (ALT) ($p \geq 0.32$) were observed. Of note, these patients also exhibited a reduction in respiratory pressures (MIP -16.6% and MEP -15,1%; $p \leq 0.02$) after surgery. **Conclusion:** These findings suggest that three months after surgery, there is a reduction in respiratory muscle strength despite short-term benefits in anthropometry and cardiometabolic profile. Further studies are needed to define better the impact of bariatric surgery on respiratory muscle strength in the long-term follow-up. **License number of ethics committee:** Hospital Universitário Pedro Ernesto – CAAE: 42329120.9.0000.5259.

PT.081 OBESITY SECONDARY TO CUSHING'S SYNDROME ADRENOCORTICAL CARCINOMA: CASE REPORT

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Introduction: In the initial assessment of obesity, causes for weight gain should be investigated, such as medication use, and hormonal dysfunctions such as TSH elevation, hypercortisolism are causes of secondary obesity and need to be investigated. **Case report:** Woman, 53 years old, referred for investigation of secondary obesity, weight gain of 25 kg in 7 months, bruises on the lower limbs, facial erythema, hirsutism, increased blood pressure and amenorrhea. Hypercortisolism was confirmed by the serum cortisol 26.2 µg/dL, midnight salivary cortisol 1,290 µg/dL urinary free cortisol 263 µg/24h. O ACTH was < 5.0 pg/mL and total testosterone 270 ng/dL. TC of adrenaline is showed left adrenal mass measuring 8.0 x 8.3 x 9.7 cm, confirming obesity secondary to ACTH-independent Cushing's syndrome (SC). Left adrenalectomy, and AP confirmed adrenocortical carcinoma (CA). Evolved well, followed for outpatient follow-up, with prednisone 5 mg/day. It returned still cushingoid and with hepatic solid nodules, in 5.5 x 4.8 cm suggestive of metastases, in abdomen USG, 31.3 cortisol µg/dL, ACTH < 5.0 pg/mL, corticoid being with drawn and referred for investigation of metastasis. **Discussion:** Here it is rare and serious, with survival < 35% in 5 years, occurs more in women and has a bimodal age distribution, different from the patient evaluated. TC did not distinguish It is safely cortisol-secreting adenomas and carcinomas, but you > 3.0 cm suggest malignancy, as in the case studied. Here can mass effect from you primary or metastasis and steroid excess syndromes, including SC, Conn's syndrome or virilization in females. The patient studied had CS It is levels of elevated testosterone, with unilateral disease, as is more common. The only potentially curative therapy for here is the primary surgical resection, and up to 75% of patients will develop metastatic disease refractory to adjuvant mitotane, standard of care and cytotoxic chemotherapy. **Conclusion:** Secondary obesity is rare, but rapid weight gain associated with clinical features such as those presented by the patient raised the suspicion of SC, excluding use of exogenous corticosteroids, urinary and salivary cortisol > 4x of the upper limit of normality, ACTH < 1. It is imaging with adrenal mass > 9 cm, allowed the suspicion of here, confirmed by histological examination, and suspicion of liver metastases. The prognosis is poor, however with a better chance of survival, if diagnosed and treated precocious mind.

PT.082 EVALUATION OF OSTEOSARCOPENIA IN ADULTS WITH SEVERE OBESITY

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Introduction: It has recently been suggested that excess body fat can lead to muscle and bone impairment simultaneously, a condition known as osteosarcopenic obesity (OOS). This condition can result in decreased physical performance and functional disability, especially with advancing age. Therefore, the aim of this study was to assess the prevalence of osteosarcopenia in adults with severe obesity. **Patients and methods:** We selected 26 individuals with a body mass index (BMI) > 35 kg/m^2 with comorbidities or BMI ≥ 40 kg/m^2, of both sexes and aged between 20 and 59 years. Physical tests of Handgrip Strength (HGS) and standing up and sitting 5 times were performed to assess muscle strength. The amount of appendicular skeletal muscle mass (ASM) was estimated by dual emission x-ray densitometry (DEXA) and adjusted for BMI. Muscle quality was determined by HGS adjusted for ASM. These are the current criteria for identifying sarcopenia. Bone mineral density (BMD) of the femur and lumbar spine, by DEXA, was evaluated to determine osteopenia. **Results:** The mean age was 41 ± 7.5 years, with a predominance of females (92%). Low strength was not found in the evaluated group, but it was demonstrated that 42% had low muscle mass and 81% low muscle quality, by relative indexes of ASM/BMI and HGS/ASM, respectively. For osteopenia, the prevalence was 33%. Considering sarcopenia in this group, only by the relative criteria of low mass and low muscle quality it is suggested that osteosarcopenia was identified in 23% of those evaluated. **Discussion:** Excess body fat may act as a stimulus for antigravity overload in the muscles, which may explain the lack of reduction in absolute strength. The current classification of sarcopenia considers muscle strength as a determining criterion in the diagnosis. But it is important to point out that obesity is outside the evaluated scope for building consensus. The interaction between the inflammatory profile, physical inactivity and malnutrition, common in obesity, may explain the decrease in muscle mass and quality, as well as the reduction in bone mineralization, characterizing osteosarcopenia. **Conclusion:** In obesity, strength and muscle mass need to be related to body size, which would avoid masking the early presence of sarcopenia and its future deleterious effects. Osteosarcopenic obesity can already be identified even in young individuals. **License number of ethics committee:** 55243221.4.0000.5259 – CEP HOSPITAL UNIVERSITÁRIO PEDRO ERNESTO – UERJ.

PT.083 USE OF CPAP IN THE TREATMENT OF OBSTRUCTIVE SLEEP APNEA SYNDROME IN PATIENTS WITH OBESITY

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Introduction: Obesity is an existing clinical condition in worldwide proportions, being considered a public health problem for its high cost of treatment, besides being etiologically accompanied by limiting comorbidities, which compromise several functions of the body, among them the ability to sleep correctly. The conventional treatment for Obstructive Sleep Apnea Syndrome (OSAS) is continuous positive airway pressure (CPAP), which uses a machine to deliver a constant airflow to the patient's airways through a device that maintains airway permeability during sleep. **Patients and methods:** Patients with obesity hospitalized in a hospital institution who underwent polysomnography before admission used CPAP for the treatment of OSAS. **Results:** 5 patients, 3 women and 2 men, had a mean age of 50 years with a mean length of stay of 222 days. The mean weight reduction was 52.374 kg and BMI was 21.254. The abdominal and hip circumferences reduced, on average, 23.4 cm and 21.2 cm, respectively. The Apnea-Hypopnea Index (AHI), in patient admissions, had an average of 50.618 events per hour, and at the time of their discharge, the average number of events per hour was 2.66. **Discussion:** Being obese or overweight is associated with decreased amount of sleep compared to non-obese patients. Obesity is associated with poor sleep quantity and quality, and in OSAS, patients have recurrent episodes of apnea and hypopnea due to total or partial collapse of the upper airways. In obese people, narrowing of the upper respiratory muscles occurs due to the accumulation of adipose tissue. Obstruction of breathing due to narrowing of the upper airways causes a sharp increase in intrathoracic pressure and triggers apnea and hypoxia. **Conclusion:** The use of CPAP continuously, that is, for consecutive nights and in a period above 4 hours per night contributed to an extremely significant reduction in the Apnea-Hypopnea Index. As well as the reduction in AHI, patients showed improvement in other outcomes, such as body mass and anthropometric data. The use of CPAP associated with the follow-up of a multidisciplinary team proved to be fundamental for the patient to achieve an even more important reduction in AHI. **License number of ethics committee:** 5.920.843 – Universidade do Estado da Bahia (Uneb).

PT.084 SARCOPENIA AND POOR MUSCLE QUALITY ASSOCIATED WITH SEVERE OBESITY IN ADULTS

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Sarcopenia is a muscle disease that is associated with a decline in muscle strength and function. When this condition coexists with sarcopenia, it is characterized as sarcopenic obesity (OS). The aim of this study was investigate sarcopenia in obesity and its relationship with body composition in adults with obesity. **Patients and methods:** Patients of both sexes were selected, aged between 20 and 59 years old, and who had a body mass index (BMI) ≥ 35 kg/m² with comorbidities or BMI > 40 kg/m². Body composition was measured by dual-energy X ray absorptiometry (DEXA). The following parameters of sarcopenia included: handgrip strength (HGS), chair stand, appendicular skeletal muscle mass (ASM), ASM adjusted by weight and ASM adjusted by BMI, HGS adjusted by ASM. Low muscle mass and poor muscle quality are confirmatory criteria for sarcopenia. Volunteers were categorized by age into either young adults (20-39 years old) or middle-aged adults (40-59 years old) groups. **Results:** 108 patients, of both sexes, with a mean age of 43,1 ± 11.7 years, were evaluated. The prevalence of sarcopenia varied between 12 % and 13.9%, corresponding to the confirmatory criteria of low muscle quantity and low muscle quality, respectively. Person's Correlation analyzes showed that a higher % of body fat was associated with lower strength only in middle-aged individuals (p = 0.0386). We found a reduction in HGS by ASM with an increase in BMI and fat mass (kg) in both age groups, being significant among middle-aged adults (p = 0.0009). **Discussion:** Previous studies show that the greater the degree of obesity, the greater muscle mass and absolute muscle strength when compared to non-obese people. However, when adjusted for body size, obese individuals have reduced muscle performance. We observed that high BMI and fat mass are associated with reduced muscle quality. Our results show the reduction in muscle function associated with increased BMI and fat mass in the older population, which can be partially explained by the possible catabolism associated with excess fat that accumulate intra and intermuscular. **Conclusion:** Even with young adults, we observed changes in all parameters with a negative impact on strength, mass and muscle function. Muscle quality can be considered an important risk factor for functional. The results show the need to standardize criteria for the assessment of sarcopenia in adults with severe obesity, since the prevalence differed widely. **License number of ethics committee:** Parecer 3.125.777, Hospital Universitário Pedro Ernesto.

PT.085 RELATIONSHIP BETWEEN FOOD INTAKE BY NOVA, WAIST CIRCUNFERENCE AND METABOLIC SYNDROME IN ADOLESCENTS WITH OBESITY

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Introduction: The dietary pattern of pediatric children has been changing, presenting a diet with a high ultra-processed foods and insufficient intake of natural foods. The nutritional profile transition alters the metabolism and the obesity and metabolic syndrome (MetS) development are serious consequences of this process. This study aim to explore the correlation between dietary intake analyzed by NOVA, waist circumference and MetS in adolescents with obesity. **Subjects and methods:** A retrospective and cross-sectional analysis was performed of the biochemical and anthropometric measurements at 73 post-pubertal adolescents with obesity, of both gender, aged between 10-19y, who egrees from interdisciplinary program of obesity treatment. Data on total cholesterol and fractions and glucose were analysed and the Visceral Adiposity Index (VAI) was calculated. The analysis of food intake was performed by R-24 recall and the categorization of foods by the NOVA methodology. P ≤ 0.05 was adopted. **Results:** The adolescents were grouped post therapy: with MetS (n = 24) and without MetS (noMetS – n = 49); and food intake category was grouped at *in natura* + processed ingredients (InNat) and processed + ultraprocessed (Ultra). The adolescents with MetsS had higher VAI scores and higher CHO intake (MetS: 219,04 ± 194,65 g; noMetS: 158,16 ± 139,39 g; p = 0,04) when compared to noMetS. Others association were no found between the MetS and inNat or Ultra intake, and it's noteworthy that for both groups the Ultra percentage consumption are close to 50%. **Discussion:** The VAI scores has an important influence on metabolic and cardiovascular risk factors. Despite the literature pointing out that relationship between higher abdominal obesity and higher ultra-processed foods intake, in our data, in our data, we did not observe this association with MetS presence. **Conclusion:** The present study showed there is no relationship between the consumption of ultra-processed and the MetS, since the percentage of these foods intake was high to all adolescents with obesity. The MetS presence seems to be more related to VAI index. More studies are needed to evaluate the factors involved in the presence of the metabolic syndrome in this population, integrating other variables such as physical activity, for example. **Support:** Fapesp (2017/07372-1; 2015/14309-9; 2013/08522-6; 2011/50414-0; 2011/50356-0; 2008/53069-0); CNPq (301322/2017-1 and 409943/2016-9). **License number of ethics committee:** 4.158.825 – Centro Universitário de Volta Redonda.

PT.086 COMPARISON OF THE HOMA-IR INDEX AMONG ADOLESCENTS FROM DIFFERENT NUTRITIONAL STATUS GROUPS

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Adolescents with high body fat percentage (%BF) are more likely to develop cardiometabolic disorders, such as insulin resistance (IR) and type 2 diabetes mellitus. In these individuals, IR, evaluated by the HOMA-IR index (*Homeostasis Model Assessment – Insulin Resistance*), based on insulin and fasting glucose levels, has been frequent and is involved in the genesis and worsening of cardiovascular and metabolic complications, indicating the need to evaluate the %BF in this public. This study aimed to compare the HOMA-IR index with the nutritional status of adolescents of both sexes. We evaluated data from 487 adolescents aged 10 to 19 years, distributed into three groups according to nutritional status: G1: adequate Body Mass Index (BMI) and %BF; G2: high BMI and %BF; Study Group (SG): adequate BMI and high %BF. Dual-energy X-ray absorptiometry (DEXA) equipment was used to estimate the %BF. BMI was classified according to WHO (2007) and %BF according to Williams (1992), which considers values ≥ 15 and < 25% as eutrophy, and values ≥ 25% as excess body fat. The statistical analyses were performed in SPSS version 22, adopting a significance level of $p < 0.05$. The Kolmogorov-Smirnov test was performed to evaluate the distribution of the numerical variables, and Kruskal-Wallis test complemented by *Bonferroni* correction, to compare the HOMA-IR values between the nutritional status groups. The median age was 16 (min. 10; max. 19) years, and 58.7% (n = 286) were female. Of the total, 46.4% (n = 226) were from G1, and 39.2% (n = 191) from EG. The SG presented a median (1.88; min. 0.37; max. 10.60) HOMA-IR index higher ($p<0.001$) than G1 (1.39; min. 0.19. max. 4.25). There was a difference ($p < 0.001$) in the median of the same index between G1 and G2 (1.94; min. 0.47; max. 6.29). The median HOMA-IR showed no difference between SG and G2 ($p = 0.472$). The results showed that, even with adequate BMI, those adolescents with high %BF had higher medians of HOMA-IR index being similar to those classified as obese according to BMI and %BF, indicating that excess fat can lead to disorders in glucose metabolism, promoting IR, which is an important risk factor for the development of cardiometabolic complications. We reiterate the need to evaluate, besides BMI, body fat in these individuals, as a way to identify and prevent current and future health problems. **Acknowledgment:** Capes, Fapemig, CNPq, Programa de Pós-graduação em Ciência da Nutrição/UFV. **License number of ethics committee:** 2.879.661.

PT.087 CHRONONUTRITION PROFILE OF PRE-PUBERTAL CHILDREN WITH EXCESS OR NORMAL BODY WEIGHT TREATED AT A CHILDHOOD OBESITY OUTPATIENT CLINIC

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Introduction: Childhood obesity prevalence is increasing around the world. Hypercaloric diet is one of the factors involved. However, diet composition and meal time can influence metabolic diseases. To clarify how energy intake distribution over the day contributes to the weight excess may help to prevent and control obesity. **Objective:** To compare the profile of the daily meals of pre-pubertal children among those adequate weight with those with excess weight. **Patients and methods:** Ninety-three children between 5 a 12 years of age participated in the study. The average of three 24-hour food recalls for each patient was analyzed and the times, energy distribution and nutritional composition of the meals were calculated. Anthropometric data and the biochemical metabolic profile were obtained. The study population was divided in two groups: eutrophic and excess weight (overweight and obesity based on WHO definition). Data with normal distribution were evaluated by Student's t test ($p < 0.05$). For non-parametric data, the Mann-Whitney test was chosen ($p < 0.05$). **Results:** There was a statistically significant difference in BMI Z-score ($p < 0.0001$), WC/H ($p < 0.0001$), HOMA-IR ($p < 0.0001$), total cholesterol ($p = 0.0012$), LDL-c ($p = 0.005$) and triglycerides ($p < 0.0001$) between groups. When comparing the energy distribution of meals, those with excess weight had higher caloric intake of total lipids and proteins (28.9% ± 2.3 of the TEI, $p = 0.034$; 16.7% ± 2.1 of the TEI, $p = 0.013$), lower caloric intake of total carbohydrates (55.2% ± 3,5 of the TEI, $p = 0.007$) and lower number of meal consumption (4.3 ± 0.3). They also had lower caloric intake in the first afternoon snacks and evening snacks (15.38% ± 1.74 of the TEI, $p = 0.045$; 6.3% ± 2.6 of the TEI, $p = 0.04$), and higher caloric intake at dinner (27.61 ± 1.66 of the TEI, $p = 0.003$) where they showed higher caloric intake of carbohydrate and lipids (24.67% ± 3.83 of the TEI, $p = 0.017$; 28% ± 2.2 of the TEI, $p = 0.023$). In the evening snack, children with excess weight had lower caloric intake of lipids and proteins (6.9% ± 2.3 of the TEI, $p = 0.02$; 2.5 ± 3 oh the TEI, $p = 0.018$). **Conclusion:** The proportion of caloric intake between meals and its composition is different in pre-pubertal children when comparing eutrophic children with those with excess weight. It emphasizes the importance of further investigations in order to assist in the prevention and treatment of obesity in the pediatric population. **License number of ethics committee:** CAAE 51534121.3.0000.5282 – Comitê de Ética e Pesquisa do HUPE-UERJ.

PT.088 UNRAVELING THE GENETICS OF SEVERE OBESITY: WHOLE *SH2B1* DELETION STUDY SHEDS LIGHT ON NON-SYNDROMIC MONOGENIC OBESITY

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Introduction: Non-syndromic monogenic obesity (NSMO) is a rare genetic disorder caused by mutations in genes that regulate energy balance. The *SH2B1* gene, located on chromosome 16p11.2, encodes a crucial protein that controls appetite and energy expenditure. Loss of function variants in the *SH2B1* gene can disrupt this homeostasis, leading to early onset obesity, hyperphagia, and some cases, aggressive behavior and delayed speech and language development. Thus, our study aimed to investigate copy number variations (CNVs) in candidate genes for NSMO. **Patients and methods:** We analyzed 91 patients with severe obesity (BMI ≥ 35 kg/m²) and childhood-onset (before 11 years) for CNV in *LEPR*, *POMC*, *SIM1*, *LEP*, *MC4R*, *MC2R* e *MC3R* genes, and 16p11.2 region using MLPA (Multiplex Ligation-dependent Probe Amplification) or real-time PCR (*BDNF*). Potential whole deletion/duplication was validated with the second method. Exclusion criteria were pregnancy, lactation, and the presence of symptoms suggestive of syndromic obesity. **Results:** Our analysis revealed a complete *SH2B1* gene deletion, located in the 16p11.2 region, in a 19-year-old male patient with morbid obesity (BMI = 48.58 kg/m²), metabolic syndrome, and hypertension. No deletion or duplication was observed in the other genes. **Conclusion:** The identification of a whole *SH2B1* deletion in a Brazilian patient with severe obesity expands our understanding of the genetic basis of obesity. This discovery can facilitate the development of specific preventive and therapeutic strategies for NSMO associated with *SH2B1*, such as using setmelanotide. This MC4R agonist is a potential pharmacological compound in the treatment of NSMO associated with complete *SH2B1* deletion. **License number of ethics committee:** 346.634 – Fundação Oswaldo Cruz.

PT.089 PRADER-WILLI SYNDROME: CASE REPORT

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Introduction: Prader-Willi syndrome (PWS) is a rare genetic disease that affects 1:10,000-1:30,000 live births, affecting both sexes. PWS occurs by loss of expression of the paternal alleles of chromosome 15. Three genetic mechanisms are linked with PWS: paternal deletion, maternal uniparental disomy and imprinting center defect. The neonatal phase is characterized by hypotonia and weak sucking, followed by obesity and hyperphagia after 2 years of age, accompanied by endocrine changes such as: growth hormone (GHD) deficiency, hypogonadism, hypothyroidism, adrenal insufficiency and low bone mineral density (DMO). Complications of obesity are metabolic syndrome and type 2 diabetes mellitus (DM2), which are the main causes of morbidity and mortality in patients with PWS. **Case report:** Patient B.S.C.R., 14 years old, referred to the PWS outpatient clinic at the age of 5 due to obesity, body mass index (BMI): 26.4 kg/m² (percentile above p97). Neonatal history, 42 weeks of gestation, cesarean section, adequate weight, asphyxia, delay in psychomotor development, neonatal hypotonia, sucking difficulty, obesity from 3 years of age, binge eating, psychomotor delay and bilateral cryptochirdia. Initiated investigation for PWS through Karyotype (46XY) and SNURPN/SNURF gene methylation (positive methylation). At 8 years, BMI: 34 kg/m² (above p97), bone age (IO): 11 years and 6 months, Tanner stage (G1P1). Polysomnography(2017): AHI 3 (reference value: <5), sat: 96%. Recombinant growth hormone (rhGH) therapy was initiated due to the severity of obesity and expected short final height. At 13 years, (IO): 13 years and 6 months, Tanner stage (G3P5), left testicle 12 mL and right atrophic. Accompanied by a multidisciplinary team, with caloric restriction, swimming and (rhGH) therapy since 2017, with BMI: 23.88 kg/m² (p90 percentile). **Discussion:** PWS is the main genetic cause of childhood obesity. Clinical criteria are part of the initial screening for the indication of genetic testing. Its initial approach, such as early diagnosis and treatment, changes the prognosis and may provide these individuals with a better quality of life. **Conclusion:** The case report shows the improvement in the patient's life perspective after restriction of diet, physical activity, therapy with rhGH and the support of a multidisciplinary team.

PT.090 EVOLUTION OF A PRADER-WILLI CHILD DIAGNOSED AND EARLY TREATED: CASE REPORT

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Introduction: Prader-Willi syndrome (PWS) is a rare genetic disease that affects 1:10,000-1:30,000 live births, affecting both sexes. PWS occurs by loss of expression of the paternal alleles of chromosome 15. Three genetic mechanisms are linked with PWS: paternal deletion, maternal uniparental disomy and imprinting center defect. The neonatal phase is characterized by hypotonia and weak sucking, resulting in growth deficit, tube feeding or even gastrostomy (GTT), followed by obesity and hyperphagia after 2 years of age, accompanied by endocrine disorders such as: hypothyroidism, among others. others. The main causes of morbidity and mortality in patients with PWS are metabolic syndrome and type 2 diabetes mellitus. **Case report:** Infant N.D.R., male, born at term, cesarean delivery, polyhydramnios and adequate birth weight. After delivery, the patient evolved in the first two hours of life with hypoactivity and hypoglycemia, initially diagnosed with early neonatal sepsis. Hypotonia, weak sucking, bilateral cryptorchidism and bilateral hip dysplasia were also observed. Submitted to GTT at 1 month and 20 days of age. G-band karyotype exams (46, XY) and analysis of 15q11 methylation at 1 month and 23 days of life confirmed the diagnosis of Prader-Willi syndrome, due to deletion of the paternal allele. At seven months of age, admitted to the pediatric endocrinology department, he was artificially breastfeeding with formula via GTT, did not hold objects, did not roll over, did not sit, in axial hypotonia, bilateral cryptorchidism, body mass index (BMI): Z-score 0 and -2 SD. He remained under follow-up by a multidisciplinary team. After initial dosages of routine exams, replacement therapy with rhGH was started in 2018. It evolved to closure of the GTT after 1 month, progressive improvement in motor tone and sitting without support, after three months of starting treatment. Currently at the age of 5, he is still being followed up and using rhGH, maintaining BMI:16.6 kg/m² (percentile p85). **Discussion:** PWS is the main genetic cause of childhood obesity. Clinical criteria are part of the initial screening for the indication of genetic testing. Its initial approach as early diagnosis and treatment changes the prognosis, and may provide these individuals with a better quality of life. **Conclusion:** The case report shows the improvement in the patient's life perspective after early diagnosis, therapy with rhGH and the support of a multidisciplinary team.

PT.091 EFFECTS OF A LIFESTYLE CHANGES BASED INTERVENTION ON CARDIOVASCULAR RISK FACTORS IN CHILDREN WITH OBESITY TREATED AT A CHILDHOOD OBESITY OUTPATIENT CLINIC

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Introduction: The obesity epidemic results from a complex interaction between genetic and environmental factors, and a non-pharmacological approach based on lifestyle changes is recommended as the primary treatment in the pediatric age group. This study investigated the effects of a long term multidisciplinary intervention on cardiometabolic risk factors in school-age children with obesity. **Patients and methods:** 101 participants aged 5-15 years (56 girls, 9.75 ± 1.7y) were allocated as follows: Intervention group with obesity (OB-Intervention, n = 64); Control group with obesity (OB-Control, n = 20) and control group with age appropriate BMI (EU-Control, n = 17). These children were treated at a childhood obesity outpatient clinic that offers an individualized and family-based lifestyle change program by a multidisciplinar team (pediatric endocrine, nutritionist, physical educator). BMI-z-score, waist circumference/height ratio (W/H), blood pressure (BP), physical activity levels, abdominal ultrasound, carotid thickness and biochemical (lipidic profile, glucose, insulin, vitamin D, leptin, adiponectin and PCR) assessments were performed before and after 1 year follow-up. **Results:** Acanthosis nigricans was present in 47% of children that enrolled in the OB-intervention and in 40% of those in OB-control group, but not among those with age-appropriate BMI before intervention. Blood pressure was elevated in 31% of OB-intervention and in 45% of OB-control group. Participants with excess weight were mostly classified as sedentary while eutrophic control children were mostly moderate active. In OB-intervention improvements ($p < 0.05$) occurred for BMI z-score (-10%), W/H (-5%) and physical activity levels (+50%), in addition to reduction of systolic BP and subcutaneous fat. In the OB-Control group no significant changes were observed. Components of the lipid profile reached important normalizations, in addition to the improvement in the nutritional status detected in 30% of the OB-Intervention group. Acantosis nigricans disappeared in 15% only in the OB-Intervention group, while in OB-Control group there was no change. **Conclusion:** 1 year of lifestyle change program, with a multidisplinary team, was able to improve BMI-z-score, physical activity, BP, abdominal fat distribution, and lipid profile of children with obesity. Lifestyle interventions including healthy eating and increasing daily physical activity are the therapeutic pillars of obesity in the pediatric age group. **License number of ethics committee:** CAAE: 0292.0.228.000-12/Universidade do Estado do Rio de Janeiro.

PT.092 NON-ALCOHOLIC FATTY LIVER DISEASE EVALUATED BY TRASIENT ELASTOGRAPHY IN OVERWEIGHT PEDIATRICS PATIENTS

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Introduction: Non-alcoholic fatty liver disease (NAFLD) is the most common liver disease in the pediatric population. Usually, NAFLD is associated with central obesity and metabolic syndrome, all linked by the presence of insulin resistance, which plays a fundamental role in their development. There are many methods do diagnose NAFLD. The gold standard is the hepatic biopsy, but this is difficult and stressful to perform in children [15,16]. One less invasive method is the hepatic transient elastography (TE). The objective was to evaluate the differences in obesity markers between children and adolescents with and without steatosis, and also to evaluate their correlation with controlled attenuation parameter (CAP) and liver stiffness measurement (LSM). **Patients and methods:** It was a cross-sectional study with thirty-eight patients (19 girls, 13.2 ± 2.7 y) diagnosed with overweight or obesity. Blood pressure, waist circumference (WC), ultrasound markers of abdominal fat and cardiovascular risk factors were obtained, as well as metabolic, hepatic and inflammatory laboratory tests. The TE was performed by an experience examiner with a Fibroscan. **Results:** Based on the TE, 8 females and 6 males had steatosis. The steatosis group was found as pre-hypertensive, had a higher prevalence of obesity, a greater thickness of right carotid intima media layer (0.07 vs 0.06 cm), greater thickness of intra-abdominal fat (5.94 *vs.* 3.87 cm) and subcutaneous fat (4.53 *vs.* 3.05 cm). In addition, insulin (41 *vs.* 14 mcUI/L), HOMA-IR (8,2 *vs.* 3,1), ALT (33 *vs.* 19 UI/L), adiponectin (2,75 *vs.* 6,46 µg/mL) and leptin (57 *vs.* 29 ng/mL) were different between the groups. The LSM was positively and significantly correlated with both carotid intima media thickness, insulin and HOMA-IR, whereas the CAP showed a positive and significantly correlation with Z-BMI, WC, blood pressure, abdominal fat, insulin, HOMA-IR, TG, leptin, ALT, GGT and ferritin, and a negative correlation with adiponectin. **Conclusion:** The results of this study may suggest that patients who already have liver fibrosis tend to have more cardiovascular complications and also the relationship between both LSM and CAP with insulin and HOMA-IR, confirming the role of insulin resistance in NAFLD. The study reinforces the need for obese or overweight children, especially those with a worse metabolic profile, to be investigated for early diagnosis, monitoring and treatment of NAFLD. **License number of ethics committee:** CAAE: 0292.0.228.000-12/HUPE/Universidade do Estado do Rio de Janeiro.

PT.093 ASSOCIATION BETWEEN BINGE EATING, DIETARY INTAKE, ANTHROPOMETRIC AND CARDIOMETABOLIC PARAMETERS IN ADOLESCENTS WITH OBESITY

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Introduction: Adolescence is the transition period between childhood and adulthood that can lead to the development of several diseases, including obesity and binge eating (BE). BE episodes contribute to positive decompensation in energy balance and excessive body fat accumulation. This study aimed to evaluate the association between BE, dietary intake, anthropometric and cardiometabolic parameters in adolescents with obesity. **Patients and methods:** This is a cross-sectional study comprising adolescents aged 16 to 18 years with Z-BMI > +2. Anthropometric measurements, cardiometabolic analysis (HDL-c, triglycerides, fasting glucose and blood pressure), Binge Eating Scale (BES) score and a 24-hour food recall (energy and macronutrients intake and food processing according to NOVA classification) were assessed. Individuals with endocrine diseases and prepubertal were excluded. Statistical analysis was performed through ANOVA or Kruskal-Wallis tests to compare groups with absent, moderate or severe BE. Pearson or Spearman tests assessed the correlation between the BES score and continuous variables and the level of significance was set at $p < 0.05$. **Results:** The sample consisted of 99 adolescents (56% female) aged 16.8 ± 0.5 with Z-BMI 3.6 ± 1.06. Absent, moderate and severe BE were observed in, respectively, 54.5%, 29.5% and 16.0% of the adolescents. Higher energy intake was observed in the severe BE group compared to the absent BE (3123.7 ± 2739.5 kcal *vs.* 1758.8 ± 482.6 kcal, p = 0,047). BES score was correlated with total energy value (r = 0.331, p = 0.014), energy intake in lunch (r = 0.244, p = 0.005), afternoon snack (r = 0.301, p = 0.026) and breakfast (r = -0.298, p = 0.027). BES score showed positive correlation with consumption of protein (g) (r = 0.287, p = 0.034), carbohydrate (g) (r = 0.280, p = 0.038), fat (g) (r = 0.286, p = 0.034), fiber (g) (r = 0.356, p = 0.008) and percentage energy contribution from monounsaturated fats (r = 0.317, p = 0.018) and polyunsaturated fats (r = 0.317, p = 0.01). In addition, BES score correlated with body fat percentage (r = 0.252, p = 0.033). No statistically significant differences were observed for the other parameters. **Conclusion:** In adolescents with obesity, individuals classified with severe BE compared to absent BE group had higher energy and the BES score showed correlation with variables of dietary intake and body fat percentage. **License number of ethics committee:** nº 0438/11 CAPPesq.

PT.094 INFLUENCES ON THE CONSUMPTION OF UNHEALTHY NUTRIENTS BY OBESE ADOLESCENTS PARTICIPATING IN A MULTIDISCIPLINARY PROJECT FOR THE TREATMENT OF OBESITY

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Introduction: Since the second half of the 20th century, favorable conditions for changes in dietary pattern and lifestyle have brought a favorable scenario for the development of chronic non-communicable diseases (CNCD). The nutritional transition has culminated in a significant increase in body mass, with emphasis on excess foods with high energy content, sodium, saturated fats, cholesterol and trans fats. **Objective:** To analyze the influences of a multidisciplinary project for the treatment of obesity in the consumption of unhealthy nutrients. **Patients and methods:** This is a longitudinal study (12 weeks duration), pre-experimental, comparative, with non-probabilistic sample. Twenty-five obese adolescents (body mass index: 31.8 ± 8.5 kg/m²) of both sexes were recruited. The interventions were performed by a multidisciplinary team, composed of professionals from Nutrition, Physical Education, Psychology and Physiotherapy, using an approach focused on health, quality of life and weight loss. In the pre- and post-intervention moments, the food records of 3 non-consecutive days (two non-consecutive days during the week and one weekend day) were completed. The analysis of the records were performed by Avanutri® software, version 2004. For comparative analysis, mean values of the three days of food records were used to compare the different moments. Calories, lipids, cholesterol, saturated fat and sodium were evaluated. The pre- and post-intervention moment was compared via paired samples t-test assuming a significance level of 5%. **Results:** There was a reduction only for calorie consumption (pre: 1656.2 ± 413.2 kcals - post: 1487.6 ± 484.4 kcals) ($p < 0.05$). On the other hand, no significant differences were observed for lipids (pre: 35.8 ± 10.0% - post: 32.8 ± 9.6%; $p > 0.05$); cholesterol (pre: 287.5 ± 111.9 mg - post: 260.5 ± 139.7 mg; $p > 0.05$); saturated fats (pre: 18.5 ± 6.9 g – powders: 15.7 ± 8.0 g; $p > 0.05$) and sodium (pre: 1649.3 ± 577.6 g – powders: 1565.6 ± 740.1 g; $p > 0.05$). **Conclusion:** Nutritional interventions were favorable in the process of food re-education, since adolescents reduced caloric intake/day by 168.60 kcals, that is, less 10.17% when compared to the pre-intervention moment. Therefore, longitudinal actions with longer periods can be investigated in order to analyze the behavior of nutrient consumption and possible impact on the health and quality of life of adolescents. **License number of ethics committee:** 4.913.453/2021.

PT.095 CONSUMPTION OF ULTRA-PROCESSED FOODS, PHYSICAL ACTIVITY, EXCESS WEIGHT AND DYSLIPIDEMIA IN SCHOOLCHILDREN RESIDING IN THE ATLANTIC FOREST REGION OF RIO DAS OSTRAS, RJ

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Introduction: High consumption of ultra-processed foods (UPF) and low levels of physical activity (PA) are the main direct determinants of overweight and dyslipidemia in children. Childhood obesity is associated with the early onset of non-transmissible chronic diseases, and childhood dyslipidemia is highly related to cardiovascular disease in adulthood. **Objective:** To evaluate UPF consumption, PA pattern, excess weight (EW) and dyslipidemia among students from the Atlantic Forest region, Rio das Ostras. **Methods:** A cross-sectional study with a sample of 420 children aged 6 to 10 years old, in the city of Rio das Ostras, RJ. Dietary intake was assessed using the Previous Day Food Questionnaire (PDFQ-3) and PA level using the Typical Day of Physical Activity and Food (TDPA). For the anthropometric evaluation, measurements of height, weight and waist circumference were taken. Nutritional status was classified according to the Body Mass Index (BMI/age), recommended by the World Health Organization and the presence of abdominal obesity (AO) was classified by the waist-to-height ratio (WHtR ≥ 0.50). A venous blood sample was collected overnight past 12 h were used the cutoff points suggested by the Brazilian Society of Cardiology, 2019. For statistical analyses, the SPSS version 21.0 program was used. Descriptive analyzes were presented as mean and standard deviation with a significance level of 5%. **Results:** Of the 420 children, 52.4% (n = 220) were girls, and 47.6% (n = 200) were boys. The mean age was 7.9 (SD 1.05) years. In the assessment of food consumption, it was observed that 98.2% of the students consumed some UPF in the previous day's diet, with a higher prevalence of this consumption in breakfast meals (89.7%). 96.9% of students did some PA. Regarding commuting to school, 81.7% of students used some type of transport and only 18.3% of students walked. According to the BMI/Age classification, 30.1% of the students were classified with EW, 15.3% as overweight and 14.8% with obesity. 18.3% were classified with AO. 77% of the students had dyslipidemia, 40.4%, 34.1%, and 57% had, respectively, increased total cholesterol, LDL-c, triglycerides and 42.6% reduced HDL-c. **Conclusion:** It is concluded that a high prevalence of EW was found in schoolchildren, abdominal fat accumulation, and a combination of both, there was also a high prevalence of dyslipidemia and it was accompanied by passive commuting to school and excessive UPF consumption. **License number of ethics committee:** CPEA 17781619.31001.5699.

PT.096 IMPORTANCE OF ULTRASENSITIVE C-REACTIVE PROTEIN AS A CARDIOMETABOLIC RISK BIOMARKER IN A GROUP OF CHILDREN AND ADOLESCENTS WITH OBESITY

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The C-reactive protein (CRP) is synthetized in the liver and its levels increase in infections, trauma and inflammations, acting as a biomarker in these cases, like the low-risk chronic inflammatory diseases, such as obesity. Moreover, the high-sensitive C-reactive protein (hs-CRP) evidences to be a biomarker of cardiometabolic risk (CMR). This work aims to establish the importance of the hs-CRP evaluation as the main biomarker in the pediatric group with obesity, in order to precociously detect cardiometabolic implications. This is a cross-sectional and prospective study, in which 342 individuals participated, of which 235 were obese, 128 males and 107 females. These participants had a body mass index (BMI) above the 97th percentile, a Z-score greater than +2, and an age between 6 and 18 years, with a mean of 10 ± 2.5 years. The control group consisted of 107 non-obese individuals, 52 males and 55 females with a mean age of 10 ± 2.3 years and Z-score +1. The sample was divided into three age groups according to the International Diabetes Federation (FID): 6 to 10 years, 10 to 16 years and over 16 years, with the respective percentages of the sample population 45%, 39% and 14% . As a result, hs-CRP showed a mean value of 2.36 ± 1.28 mg/dL; 95% CI: 0.7-9.1 in obese group compared to controls 0.01 ± 0.1 mg/dL; 95% CI: 0.01-0.1. There was a significant increase in hs-CRP in the obese group and a reduction in HDL ($p = 0.001$), hs-CRP with increased triglycerides ($p = 0.001$), hs-CRP with a higher degree of BMI ($p = 0.001$) and hs-CRP with abdominal circumference elevation ($p = 0.001$). The result of this study confirms the idea that the hs-CRP has high levels in children and teenagers with obesity and it shows the relation between obesity and the inflammatory process onset in this population in relation to those with normal weight, and this increase is more expressive in both sex in people with obesity in the age group of 10 to 16 years. This fact is due to the greater degree of obesity and of BMI, because it is known that the CRP elevation is directly proportional to the BMI values. Furthermore, a relevant fact was the use of case-control methodology, relating sex and chronological age according to the FID, showing the importance of this biomarker in a pediatric group and confirming the singularity of the present study. Therefore, it was concluded that the hs-CRP has a high sensibility, demonstrating to be a validated biomarker even in obese pediatric populations.

PT.097 EVALUATION OF THE EFFECTIVENESS OF LIRAGLUTIDE IN A PEDIATRIC PATIENT WITH SEVERE AUTISM SPECTRUM DISORDER

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Liraglutide is a medication used to control weight in obese or overweight adults associated with comorbidities. It works by increasing satiety and regulating appetite and is more effective when used alongside physical exercises (PE) and dietary changes. It can also be administered in pediatric patients over 12-year-old with a body mass index (BMI) ≥ 30 kg/m². This case reports the effectiveness of liraglutide in a pediatric patient with a BMI of 50 kg/m². The patient had severe autism spectrum disorder (ASD) and could not perform programmed PE. The data were retrieved at a pediatric endocrinology outpatient clinic with two years following up. An 11-year-old female patient with obesity since two years old, born preterm at 34 weeks and adequate weight for gestational age. From birth, milk formula was used, and complementary feeding was introduced at six months old. Familial history included the mother's bariatric surgery three years before pregnancy and a paternal history of obesity. Based on pathological antecedents, the patient was diagnosed with ASD at four years old and used risperidone, which increased her weight by 20 kg in one year. At the beginning of the medical appointments, the patient had a BMI in kg/m² of 48.3, and her mother reported uncontrolled eating. About six months after the first appointment, the patient presented a BMI of 50 kg/m², and liraglutide was prescribed. Three months later, the patient maintained her BMI. After ten months using liraglutide at a dose of 3 mg/day, the BMI decreased to 41.4 kg/m². And after 2 years of follow-up, the BMI was 40 kg/m². The drug's effect was reduced in the following appointments, with a slight increase in appetite and BMI. Therefore, liraglutide 3 mg/day was replaced with semaglutide 1 mg/week. Therefore, liraglutide has been shown to be effective for the patient with severe ASD, with a 20% reduction in BMI after 2 years of follow-up. It is concluded that early intervention through liraglutide is an option to prevent obesity from extending into adulthood, reducing the risk of future comorbidities.

PT.098 ROHHAD SYNDROME AS A DIFFERENTIAL DIAGNOSIS IN SYNDROMIC OBESITY: A RARE AND POTENTIALLY FATAL DISEASE

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Introduction: ROHHAD syndrome is a very rare disease with about 100 cases described in the literature and potentially fatal, whose etiology remains unknown. The acronym refers to hyperphagic and rapidly progressive obesity, hypothalamic dysfunction, central hypoventilation, and autonomic dysregulation. There is also an association with neural crest tumors, called ROHHADNET. **Case report:** A.C.A.O., female, 6 years old, referred for severe obesity – weight: 54.9 kg (>p97) // height: 115.5 cm (p50) // BMI: 41.5 (>p 99). Born at term with adequate weight and length, non-consanguineous parents. From the age of 3 onwards, he suddenly developed excessive weight gain associated with gibbosity, a rounded face and abdominal stretch marks. The mother also noticed that, on some occasions, when she denied food to her daughter, she took food from the garbage. At the age of 5, the child began to have difficulty walking and sleeping disorders. At age 6, he was diagnosed with hypothyroidism and desaturation during sleep, requiring BIPAP at night. At the age of 7, a paravertebral mass at the level of T8 was detected in the abdominal tomography, which resulted as ganglioneuroblastoma, surgical excision was performed. Hospitalizations for pulmonary causes are frequent needing admission in a pediatric ICU and intubation. Sequencing of the PHOX2B gene was negative. **Discussion/conclusion:** ROHHAD syndrome presents in early childhood with rapid and dramatic gain in weight but not height, followed by endocrinological disturbances and central hypoventilation. The etiology of ROHHAD is unclear. Clinical exome sequencing is not a useful diagnostic test, as specific mutations are not yet known, so the diagnosis is clinical. Differential diagnosis: Ondine syndrome (congenital central hypoventilation) – mutation in the PHOX2B gene. Investigations are directed towards the search for the underlying tumor, imaging and evaluation of the hormonal and metabolic profile. The prognosis of these children is directly proportional to the early diagnosis, the discovery of a diagnostic test for ROHHAD has great potential to decrease morbidity and mortality and improve overall patient outcome. Management includes ventilatory support in cases of severe apnea, tumor resection if necessary, supportive care and comorbidities.

PT.099 ASSOCIATION BETWEEN AMPK AND ADIPOQ GENES POLYMORPHISMS WITH CHILDHOOD OBESITY AND HYPERTENSION

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The AMPK and ADIPOQ genes act in energy homeostasis, but the role of their polymorphisms in obesity and hypertension is still not well understood. The aim of this study was to assess whether AMPK and ADIPOQ polymorphisms are associated with obesity and hypertension in children and adolescents. This cross-sectional study included 297 children and adolescents (mean age 11.37 ± 2.33 years), divided into three groups: obese (n = 104), obese and hypertensive (n = 51) and healthy controls (n = 142). DNA was extracted from peripheral blood samples and genotyping of AMPK and ADIPOQ polymorphisms (rs10074991, rs1342382, rs6436094, rs1501299 and rs266729) was performed using the TaqMan assay with qPCR. Multinomial logistic regression was used to estimate the association between genotypes and the risk of obesity and hypertension, adjusting for age, gender and HDL cholesterol levels. The results showed that the PRKAA1 rs10074991 GA genotype in the additive model (OR:0.53; 95%CI: 0.29-0.98; p = 0.04) was associated with protection against obesity, while the ADIPOQ rs1501299 TT genotype in the additive (OR: 3.76; 95%CI: 1.47-9.64; p = 0.01), recessive (OR: 2.88; 95%CI: 1.20-6.88; p = 0.02) and CT+TT in the dominant model (OR: 1.95; 95%CI: 1.08-3.50; p = 0.03) were associated with obesity susceptibility. The ADIPOQ rs1501299 CT genotype in the additive model (OR: 0.42; 95%CI: 0.20-0.90; p = 0.03) and CT+TT in the dominant model (OR: 0.41; 95%CI : 0.20-0.83; p = 0.01) were associated with protection against hypertension. The polymorphisms PRKAA2 rs1342382, PRKAG3 rs6436094 and ADIPOQ rs266729 showed no significant association with obesity or hypertension. This study provides evidence that AMPK and ADIPOQ polymorphisms are associated with obesity and hypertension in children and adolescents. These findings contribute to understanding the genetic basis of obesity and hypertension in the pediatric population, which may have implications for the development of strategies for prevention and treatment. **License number of ethics committee:** 1006.052.2007.

PT.100 ASSOCIATION BETWEEN DELIVERY METHOD AND BREASTFEEDING WITH OVERWEIGHT IN BRAZILIAN CHILDREN

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Introduction: Childhood obesity (CHO) is a big concern due to the rise of its prevalence. Its consequences, as cardiovascular risk and diabetes mellitus type 2, has been increase observed. Factors associated to delivery method and breastfeeding are determinants to CHO and modulate the future health of children. Therewith, this paper aims to analyze variables related to birth and breastfeeding to study its influence on overweight. **Aim:** Describe delivery method and breastfeeding in overweight school age children and compare them, in relation to these characteristics, with eutrophic children. **Patients and methods:** Observational study with 143 prepubertal children attended in a CHO research clinic, divided in 32 eutrophic children and 111 overweight's. The variables gender, age, delivery method, breastfeeding in the first 6 hours of life and exclusive breastfeeding period were analyzed. **Results:** Girls' group had 17 (23.9%) eutrophic children and 54 (76.1%) overweight's, while boy's group had 15 (20.8%) eutrophic children and 57 (79.2%) overweight's. In the eutrophic group the average age was 92.34 months and in the overweight group it was 99.71 months (p0.02). In the eutrophic group, 3 (5.9%) children were born by cesarean delivery and 29 (31.5%) by vaginal delivery. In the overweight group, 48 (94.5%) children were born by cesarean section and 63 (68.5%) by vaginal delivery (p0.0003). In the eutrophic group, 23 (26.1%) children were breastfed in the first 6 hours of life and 4 (9.8%) were not. In the overweight group, 65 (73.9%) children were breastfed in the first 6 hours of life and 37 (90.2%) were not (p0.04). In the eutrophic group, the median duration of exclusive breastfeeding was 4(IQR3) and in the overweight group it was 4 (IQR4) (p1.00). **Discussion:** It is observed that there is a higher prevalence of overweight children born by cesarean delivery. In the group of overweight children, the percentage of children who didn't receive breastfeeding in the first 6 hours of life is bigger than the percentage of children who received it. In relation to exclusive breastfeeding period , no statistically significant difference was observed. **Conclusion:** The study shows the influence of cesarean delivery on the development of CHO and the importance of breastfeeding in the first 6 hours of life on children's health. **License number of ethics committee:** 2218/2008; CAAE: 0292.0.228.000-12 – Hospital Universitário Pedro Ernesto da Universidade do Estado do Rio de Janeiro.

PT.101 EFFECTS OF A MULTICOMPONENT INTERVENTION ON ADIPOSITY AND LEPTIN LEVELS IN OBESE ADOLESCENTS

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Objective: To verify possible mediators of a multicomponent intervention on body fat percentage and leptin levels in obese adolescents. **Method:** Quasi-experimental study, with 39 overweight/obese subjects (control group (CG) = 21; intervention group (IG) = 18), aged between 10 and 17 years of both sexes. The GI participated in an intervention program for 24 weeks with physical exercises, nutritional and psychological guidance. Assessments were performed before and after the intervention period in both groups on the parameters of body fat percentage and circulating leptin levels. All intervention and evaluation activities were developed by previously trained professionals. Mediation analysis was tested using path analyzes in the PROCESS extension of the SPSS v. 23.0. **Results:** The mediation model showed that there was no direct effect of the intervention group on leptin levels (c = 0,464; $IC_{95\%}$: -0,643; 1,571). However, it was possible to observe an indirect effect of the intervention group on leptin levels through the effects of reducing the percentage of fat (ab = -1,008; $IC_{95\%}$: -2,076; -0,036), with the effect size (-0.502) classified as medium to large. **Conclusion:** The results of this multicomponent intervention suggest that the effectiveness of the intervention in reducing leptin levels can be attributed to the reduction in body fat percentage in obese adolescents. **License number of ethics committee:** 1.498.338 – Universidade de Santa Cruz do Sul.

PT.102 ANALYSIS OF THE PREVALENCE OF METABOLIC SYNDROME AND INSULIN RESISTANCE IN PREPUBERTAL OBESE CHILDREN FOLLOWED UP AT A RESEARCH CLINIC FOR CHILDHOOD OBESITY

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Introduction: Childhood obesity is epidemic. It is defined as an excessive accumulation of body fat that can be harmful to health. There is an association between childhood obesity and cardiovascular risk markers, gathered in the metabolic syndrome (MetS). The insulin resistance (IR) is a key point of the MetS. Our objective is to assess the prevalence of MetS and IR in prepubertal children with obesity included in a master's research project in the area of childhood obesity, aiming to compare the subgroups with and without MetS in relation to the prevalence of IR. **Patients and methods:** The group was consisted of 139 children. Prevalence calculations for IR and MetS were performed. As a definition of IR, a cutoff point of 2.5 or more was adopted for the homeostatic index for assessing insulin resistance (HOMA-IR). The definition of the International Diabetes Federation for children over ten years of age was adopted as a definition of MetS. For children under ten years of age, Brazilian cutoff points were adopted for HDL-cholesterol (HDL), triglycerides (TGL) and the definition of systemic arterial hypertension. **Results:** The prevalence of IR in the group was 47.48% (66), and that of MetS, 45.32% (63). Of the subgroup of individuals with MetS, 53.97% (34) had IR and in the subgroup without MetS, 42.11% (32). No statistically significant difference was found between groups, with p value equal to 0.1763. **Discussion and Conclusion:** MetS is frequent in obese individuals, which was confirmed in this group of prepubertal obese children. Its pathophysiology involves IR and hyperinsulinemia as key points of metabolic changes. In the subgroups of children with and without MetS, no statistically significant difference was observed in relation to the prevalence of IR. It can be inferred that this stems from the fact that the main alterations found in prepubertal children with MetS are related to HDL and TGL, and not to glucose and hypertension. Almost all of these children do not have altered glucose or high blood pressure. This analysis corroborates the proposal that other forms of evaluation of alterations in glucose metabolism that precede altered fasting glucose should be included as a criterion for MetS in children. **License number of ethics committee:** Comitê de Ética em Pesquisa do HUPE-UERJ sob o número CAAE: 51457721.5.0000.5259.

PT.103 ADIPOKINES AND CYTOKINES ARE DIFFERENTIALLY SECRETED DEPENDING ON THE OBESITY ONSET PERIOD IN A BRAZILIAN COHORT

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Obesity is a low-grade chronic inflammatory disease, and it has been growing fast for a long time. The adipose tissue is important in maintaining the homeostasis of the organism by buffering fatty acids that would otherwise be circulating and ectopically accumulating in other tissues, possibly causing inflammation and disfunction. However, when this natural buffering mechanism gets overwhelmed, immunometabolic alterations occur, giving rise to the harming effects of obesity and its comorbidities. Adipokines and cytokines are circulating molecules that modulate numerous events related to metabolism and inflammation. Their levels are modified by obesity, where there is an imbalance among adipokines, and a shift towards an inflammatory secretion profile. To gain insights on how these mediators behave in different onsets of obesity, we measured the levels of the adipokines leptin, adiponectin, and the cytokines BDNF, GDF15, PAI-1, TF, P-selectin, resistin, IL-6, MCP-1, TNF, IL-1β, related to coagulation, inflammation, and metabolism in the serum patients with obesity with two periods of onsets. This cohort was comprised of 201 unrelated patients, aged 18 to 65y. As inclusion criteria there were the presence of severe obesity (BMI ≥ 35 kg/m^2) with childhood onset (n = 122 individuals; 0-11 years) or adolescence/youth onset (n = 79 subjects; 12-21y). The onset information was self-reported. As exclusion criteria there were pregnancy, lactation, use of any medications to lose weight, and the presence of symptoms suggestive of syndromic obesity. Our results show that the molecules measured varied greatly depending on the onset period of obesity. BDNF, PAI-1 and resistin were increased in the childhood-onset group (CH) while the adolescence/youth-onset group (AY) had levels comparable to the eutrophic controls. Meanwhile, AY had lower levels of leptin, adiponectin, TF and MCP-1 compared to CH. IL-6, IL-1β and P-selectin showed no difference between CH and AY. TNF was the only cytokine increased in AY relative to CH. The data imply that a variety of coagulation-, inflammation- and metabolism-related mediators are secreted in an onset-dependent manner, with earlier onsets trending towards a worst scenario. **License number of ethics committee:** Ethics Committee of the Oswaldo Cruz Foundation (CAAE: 09225113.0.0000/Protocol nº 346.634).

PT.104 PSYCHOLOGICAL TRIGGERS AND WEIGHT STIGMATIZATION IN EATING BEHAVIORS IN CHILDHOOD AND ADOLESCENCE: FROM OBESITY TO ANOREXIA NERVOSA

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Introduction: Obesity and dissatisfaction with body image in adolescence affect an individual's relationship with their body and make this population susceptible to eating disorders (EDs), including anorexia nervosa (AN). The link between these conditions lie in body distortion, food restriction and difficulty in evaluating the amount of food consumed. Its presence is associated with physical and psychological impairments. **Case report:** A 10-year-old patient began outpatient follow-up due to a weight gain of 10 kg in 1 year. She had a BMI of 26.4 (> p97) upon arrival, which remained similar during the first year of follow-up, with reports of bullying at school. She returned after 4 years without follow-up, at 14 years of age, with a BMI of 17.22 (<15) having lost 34.9 kg in one year. She exercised daily to compensate for the calories ingested and had been amenorrheic for 7 months. According to the dietary recall from the first consultation at 10 years of age, there was a consumption of 3069 kcal/day, compared to 879 kcal/day at age 14. She was evaluated by psychiatry and diagnosed with anorexia nervosa. **Discussion:** EDs are commonly associated with obesity, and their prevalence in adolescence varies between 1-3%. A study conducted in São Paulo revealed that the risk of developing AN in patients with obesity was 3.63 times higher than in eutrophic adolescents. It is known that the physical, hormonal, and social changes during this period bring excessive concern with body image and appearance. Factors such as personality traits, obesity, and restrictive diets also predispose to the development of EDs in this population. It is important to emphasize the importance of triggers such as bullying and the presence of weight stigma in the search for inappropriate weight loss behaviors. A longitudinal study conducted with adolescents from 1999 to 2010 suggested that the reduction of bullying could be related to the decrease in inappropriate weight control behaviors. **Conclusion:** The desire for the ideal body, especially among adolescents, can predispose to AN in this population with obesity, despite their behaviors appearing to be opposite. Therefore, it is important for health professionals to have a welcoming and non-judgmental approach, in a multidimensional and interdisciplinary manner, covering not only biological dimensions but also biopsychosocial ones, paying attention to the interface between these two diagnoses and their range of complications.

PT.105 EVALUATION OF HEART RATE AS A PREDICTOR OF CHANGES IN HEART RATE VARIABILITY INDICES

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Introduction: Heart rate (HR) is an accessible parameter and can be widely used in the clinic. High HR has been positively associated with autonomic dysfunction. Thus, HR screening may be essential to predict changes in autonomic function. This study aimed to investigate resting HR as a predictor of changes in heart rate variability (HRV) in children. **Patients and methods:** In this cross-sectional study, 84 children with obesity and 41 normal weight were included in the study. Body weight was measured using an electronic scale (Omron®, HBF-514C), and height was assessed using a stadiometer (alturaexata®). A Polar H10 heart rate monitor was used to record the R-R interval. R-R recordings were processed by the Kubios HRV analysis software. The predictive power of HR for changes in HRV was assessed using receiver operating characteristic (ROC) curves. In this study, HR was considered a good predictor when its confidence interval was greater than 0.50 and the area under the ROC curve was greater than 0.70. In addition, a 95% confidence interval (95%CI) was used. **Results**: HR can be a good predictor of changes in the indices RMSSD and LF/HF indices in schoolchildren according to the ROC curve. For RMSSD, children with obesity (ROC = 0.90; 95%CI: 0.83-0.97) and normal weight (ROC = 0.89; 95%CI: 0.77-1.00) showed good predictive values, and for the LF/HF both children with obesity (ROC = 0.77; IC95%: 0.65-0.89) and normal weight (ROC = 0.88; IC95%: 0.74-1.00) showed good predictive values. Regarding the HR cut-off point, a general cut-off point of 93 bpm (sensitivity 84.62% and specificity 77.78%) for changes in RMSSD and 92 bpm (sensitivity 82.69% and specificity 87.50%) for changes in LF/HF was established, independent of nutritional status. and sex. **Discussion**: The values of the area under the ROC curve for HR as a predictor of changes in the HRV indices RMSSD and LF/HF, as well as the cut-off points, sensitivity, and specificity, suggest that resting heart rate may be an important cardiovascular risk screening tool in children. **Conclusion:** HR may be useful as a screening tool for the risk of autonomic nervous system dysfunction using the cutoff points established in this study. **License number of ethics committee:** 37352720.6.1001.5188.

PT.106 ALTERATIONS IN HEART RATE VARIABILITY AND INFLAMMATORY BIOMARKERS IN CHILDREN WITH OBESITY

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Introduction: Childhood obesity is an increasing problem worldwide and is associated with adverse health outcomes. The aim of this study was to evaluate the autonomic function and inflammatory biomarkers in children with obesity. **Patients and methods:** In this cross-sectional study, 125 children were allocated into two groups: 84 children in the obesity group and 41 normal weight group. Body weight was measured using an electronic scale (Omron®, HBF-514C), and height was assessed using a stadiometer (alturaexata®). Children were classified according to the body mass index for age and sex. A Polar H10 heart rate monitor was used to record R-R interval for 10 minutes. Heart rate variability (HRV) was analyzed using the Kubios software. Cytokines were analyzed using the cytometric bead array assay and the cytokines IL-2, IL-4, IL-6, IL-10, IL-17a, IFN-γ, and TNF-α were quantified. **Results:** Children with obesity had increased serum levels of IL-2 (9.14 ± 5.24 *vs.* 6.44 ± 3.21 pg/mL, p = 0.009) and decreased serum levels of IL-10 (4.29 ± 3.93 *vs.* 5.88 ± 3.70 pg/mL, p = 0.039) when compared to the normal weight group. Serum levels of cytokines IL-4, IL-6, IL-17a, INF-γ, and TNF-α were similar between groups (p > 0.05). Regarding the HRV analysis, children with obesity showed reduced RMSSD (30.1 ± 7.2-92.5 *vs.* 42.5 ± 15.3-140.6, p = 0.001) and SDNN (37.9 ± 12.7-84.9 *vs.* 47.9 ± 20.8-119.8, p = 0.002) in time-domain when compared to the normal weight group. In addition, children with obesity had an increased LF/HF ratio (1.509 ± 0.295-5.908 *vs.* 1.105 ± 0.417-7.762, p = 0.003) in frequency-domain, and increased SD2/SD1 ratio (2.15 ± 1.22-3.57 *vs.* 1.77 ± 1.03-3.55, p = 0.001) in non-linear indices when compared with normal weight group. **Discussion:** A higher concentration of IL-2 and a lower concentration of IL-10 were observed in children with obesity, which may indicate dysfunction caused by the greater amount of body fat. These children also had autonomic dysfunction, observed in linear and non-linear indices. These findings contribute to a better understanding of dysautonomia and low-grade chronic inflammation in children. **Conclusion:** Children with obesity have decreased HRV and signals of low-grade chronic inflammation, as reported by increased proinflammatory cytokine IL2 and decreased anti-inflammatory cytokine IL-10. **License number of ethics committee:** 37352720.6.1001.5188.

PT.107 PLYOMETRIC TRAINING AND NUTRITIONAL EDUCATION IMPROVE ANTHROPOMETRIC VARIABLES, BLOOD PRESSURE, AND HEART RATE VARIABILITY IN CHILDREN WITH OBESITY

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Introduction: Childhood obesity is a risk factor for cardiovascular disorders. Health strategies focused on the school environment may be essential to improve related cardiovascular function in children with obesity. This study aimed evaluate the effectiveness of a multicomponent intervention (MI) with plyometric training and nutritional education on body mass index (BMI) for age and sex, body fat percentage (%BF), blood pressure (BP) and heart rate variability (HRV) in children with obesity. **Patients and methods**: Thirty-three children of both sexes, aged between 7 and 10 years participated in the study. Body weight was measured using an electronic scale (Omron®, HBF-514C), and height was assessed using a stadiometer (Alturaexata®). Body fat percentage was measured using an adipometer (Sanny®). BP was measured with a digital sphygmomanometer (Omron Healthcare® HBP-1100). A Polar H10 heart rate monitor was used to record the R-R interval. The data collected by the heart rate monitor were transferred to a computer using the Elite HRV software and processed using the Kubios HRV analysis software. The analysis was performed before and after a four-month MI. The plyometric training was performed twice a week, and there were 12 sessions of nutritional education spread over the four months. **Results**: The MI was effective in reducing BMI for age and sex (2.63 ± 1.94-5.66 *vs.* 2.57 ± 1.78-5.57, p < 0.05), %BF (36.10 ± 28.60-58.80 *vs.* 32.14 ± 26.38-51.74, p < 0.05), systolic BP (110.3 ± 12.32 *vs.* 104.9 ± 9.31 mmHg, p < 0.05) and diastolic BP (62.0 ± 52.0-94.0 *vs.* 58.0 ± 49.0-79.0 mmHg, p < 0.05). Although MI has not improved HRV parameters in the frequency-domain (LF/HF ratio) and non-linear methods (SD2/SD1 ratio), MI effectively improved HRV in time-domain, such as SDNN (36.72 ± 17.88 *vs.* 44.28 ± 18.41 ms, p < 0.05) and RMSSD (28.60 ± 7.20-92.50 *vs.* 36.40 ± 15.20-129.8 ms, p < 0.05). **Discussion:** The improvement in BMI for age and sex, %BF, SBP, DBP, and HRV in the children with obesity after the MI reinforces the need to implement strategies with a nutritional approach and physical education in the school environment with a focus on the prevention of adverse health risks related to obesity, such as cardiometabolic diseases. **Conclusion:** The four-month in school follow-up strategy, consisting of physical training and nutrition education, was effective in improving cardiovascular parameters. **License number of ethics committee:** 37352720.6.1001.5188.

PT.108 ASSESSMENT OF THE NUTRITIONAL STATUS OF CHILDREN ASSISTED AT THE ASSOCIATION OF PARENTS AND FRIENDS OF EXCEPTIONAL CHILDREN AND SPECIALIZED CENTER FOR REHABILITATION III IN VIÇOSA-MG

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Introduction: Persons with disabilities (PWDs) commonly have inadequate nutritional status. In the case of care aimed at children with disabilities, individualized nutritional monitoring favors, early, the identification of determining factors that may be related to growth and development, guiding behaviors that favor the improvement of nutritional conditions. Faced with such peculiar and distinct demands, little is known about the prevalence of nutritional adequacy and inadequacy in children with disabilities, being important to analyze data referring to the nutritional status of children with disabilities from zero to six years of age, consulted in the electronic medical record of the nutrition sector of the Association of Parents and Friends of Exceptional Children and Specialized Center for Rehabilitation III (APAE/CER III) of Viçosa – Minas Gerais. **Patients and methods:** we consulted medical records, dated from children assisted by the institution's nutrition sector in April 2022. We classified the anthropometric data recorded in the medical records according to the specialized literature for each International Classification of Diseases (ICDs), when available, or by the Organization World Health Organization (WHO). **Results:** we compiled anthropometric data from the medical records of 37 children, aged between five months and five years and nine months, who had 10 different types of disabilities. As for nutritional status, 45.9% were eutrophic, 37.8% of those were underweight and 16.3% were overweight or obese. **Discussion:** According to the findings, 54.1% of the children had inadequacies in their nutritional status linked to the types and degree of disabilities that impose more striking difficulties in the daily diet of this group. Among the disabilities found in the medical records, 36.1% of the assessed children have Autism Spectrum Disorder and studies have shown that they tend to be selective regarding food, which ends up impacting their nutritional status. As for Down Syndrome, we verified the presence of this condition in 16.6% of the children monitored by the nutrition sector and the literature indicates high prevalence of overweight and obesity in this group. **Conclusion:** The high prevalence of underweight and overweight or obesity indicates the importance of specialized attention in nutrition for the prevention and rehabilitation of inadequacies in the nutritional status of children with disabilities from zero to six years of age.

PT.109 ASSOCIATION OF EATING BEHAVIOR WITH FOOD CONSUMPTION AND NUTRITIONAL STATUS OF CHILDREN WITH AUTISM SPECTRUM DISORDER

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Introduction: Autistic spectrum disorder (ASD) is characterized by deficits in communication and social interaction in different contexts. Children with ASD are at greater risk of being selective in food, which can contribute to the development of nutritional deficiencies and/or changes in nutritional status, being important to analyze the eating behavior of children with ASD and its association with food consumption and nutritional status. **Patients and methods:** We included 90 children aged between two and ten years old diagnosed with ASD who attend a reference institution for the care of persons with disabilities in the micro-region. We conducted a cross-sectional, analytical study through the application of a semi-structured questionnaire and a 24-hour recall on three non-consecutive days. We used the Body Mass Index/Age (BMI/A) to describe nutritional status. We assessed the consumption of fruits, vegetables, total calories, protein, iron, calcium, zinc, fibers, omega 3 and omega 6, using the Reference Dietary Intake Recommendations as a reference. We used the Scale for the Assessment of Eating Behavior in Autism Spectrum Disorder in order to assess eating behavior. **Results:** Food selectivity had the highest occurrence, followed by skills in meals, chewing motor skills, oppositional behavior and rigid behavior. Children without excess weight differed in that as they had lower scores for food selectivity ($p = 0.045$) and the more selective the children, the greater the chances of being overweight ($p = 0.038$) and not consuming vegetables ($p = 0.003$). The higher the score for rigid behaviors related to eating, the greater the chances of caloric inadequacy (Poisson Regression: 95% CI) ($p = 0.036$), inadequate fiber consumption (PR: 95% CI) ($p = 0.001$), higher consumption of calcium (Poisson Regression: 95% CI) ($p = 0.016$) and lower zinc consumption (PR: CI95%) ($p = 0.002$). **Discussion:** The diet of children with ASD showed a high consumption of unhealthy foods, combined with a low intake of fruits and vegetables, which can lead to problems related to overweight and nutritional deficiencies, impairing growth and development and possibly aggravating the symptoms of autism. **Conclusion:** Eating behavior reflected in food consumption and nutritional status, and a comprehensive assessment of children with ASD is necessary to favor more assertive nutritional interventions for this portion of the population. **License number of ethics committee:** 56933622.3.0000.5153/ Federal University of Viçosa.

PT.110 OBESITY AND OVERWEIGHT IN CHILDREN AND ADOLESCENTS IN THE CITY OF MACAPÁ: OBSERVATORY OF HEALTH RISKS AND PSYCHOSOCIAL FACTORS

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Introduction: Obesity is considered an important public health problem and is closely related to environmental, behavioral and genetic factors. **Patients and methods:** prospective, quali-quantitative study, carried out from 2017 to 2019, with children between 6 and 15 years old, assisted by a multidisciplinary team, using structured questionnaires for each activity. **Results:** More evident male gender, the predominant age group of 8 to 12 years, with weights between 60 and 79, 990 kg, aligning the Z-Score above +3 (48.3%), Z-Score between +2 + 3 (38.3%). About 41.6% BMI (27 to 30.9) and 23.3% over 31.0. Self-declared brown (71%), private education network (55%) and 73% users of the Unified Health System (SUS), parents with 70% undergraduate and graduate degrees, children with a 3rd to 7th grade education (73 .3%). Presence of comorbidity in 72% and 85% had an obese family member. **Discussion:** This research reflected in part what is already known by the scientific community. The parents' high level of education is inconsistent with the literature, which relates high education with a lower risk of developing obesity (Moreaus et al., 2012; Muthuri et al., 2016); children from private schools are more likely to develop obesity than those from public schools. Public schools follow the National School Feeding Plan (PNAE) – (Silva et al., 2016; DO Carmo et al., 2016; 2018); Correlation with familial obesity (85%) had an obese father or mother, which is in line with Mcloone; Morrison, 2014; Presence of comorbidity in 72% of the participants (allergic (asthma and rhinitis), dermatological (Acanthosis nigricans and stretch marks) and neuropsychiatric (Depression, Anxiety, ADHD, Autism), according to (Choudhary et al., 2007; Kusunoki et al., 2008 ; Mirmirani; Carpenter, 2014; Atay; Bereket, 2016; Peters; Dixon; Forno, 2018). **Conclusion:** It is suggested the development of studies in partnership with the municipal health and education departments of the state and private educational institutions, expanding the educational approach, the psycho-pedagogical aspects, social inclusion and the approach in the family nucleus. In addition, starting a campaign with the pediatric class and primary care professionals, in an attempt to create a movement aimed at introducing food and knowledge of the relationship "correct foods = healthy body-mind". **License number of ethics committee:** 66762117.5.0000.0003.

PT.111 EPIDEMIOLOGICAL PROFILE OF OVERWEIGHT PATIENTS ASSISTED IN THE AMBULATORY OF A PUBLIC HOSPITAL IN JOINVILLE AND THEIR DISTRIBUTION BY NEIGHBORHOO

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Introduction: Obesity is one of the most common chronic diseases in childhood. In Brazil, in 2019, 3 in 10 children between 5 and 9 years old were overweight. Obesity has a multifactorial etiology (environmental, socioecological and genetic influences), and is considered a risk factor for cardiovascular, orthopedic and metabolic diseases and cancer, also leading to psychological suffering. Overweight is more common in children who live in poverty, in families that have immigrated or in children who experience discrimination or stigma. **Methods:** Retrospective cross-sectional study of patients diagnosed with exogenous obesity treated between January 2012 and July 2019 at the Pediatric Endocrinology Ambulatory of a public hospital in Joinville, Santa Catarina, Brazil. **Results:** The medical records of 845 patients were reviewed: 50.4% were female, with a mean age of 10 years (±3.62). Most of them (67.2%) did not practice extracurricular physical activity. Average BMI-SDS was 2.98 (±0.91). In the sample, 272 (32.8%) patients out of 793 had systolic hypertension and 49 (3.2%) diastolic hypertension; 86 (11.8%) out of 731 patients had total cholesterol > 200 mg/dL, 79 (11.4%) out of 695 had LDL > 130 mg/dL, 93 (13.0%) out of 714 had HDL < 35 mg/dL, 118 (16.9%) out of 699 had triglycerides > 150 mg/dL; 135 (46.1%) out of 293 had insulin over 15 µIU/mL, 45 (6.3%) out of 711 had fasting blood glucose (FBG) between 100-126 mg/dL and only 1 (0.14%) had FBG > 126 mg/dL. The districts were divided according to population with income below one minimum salary and compared with the number of patients/population under 18 years old in each neighborhood, but no correlation was found (R^2 = 0,0000001). **Discussion:** This study showed a high prevalence of systolic hypertension, hyperinsulinism and hypertriglyceridemia, but few patients had glucose intolerance and only one patient had diabetes mellitus. We did not observe a significantly higher number of patients in lower-income neighborhoods, maybe due to the sample size, or because it is a public hospital that does not assist the entire pediatric population, or due to difficulty in accessing the specialized service by the population (distance and cost), or even the lack of understanding the risks of childhood obesity. **Conclusion:** This study showed early start of childhood obesity complications, however it did not find a correlation between obesity cases and neighbor income. **License number of ethics committee:** CAAE: 30963320.3.0000.5366, Instituição Proponente: Fundação Educacional da Região de Joinville – Univille.

PT.112 EFFECTS OF BARIATRIC SURGERY ON PRADER-WILLI SYNDROME IN ADOLESCENCE: A CASE REPORT

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Introduction: Prader-Willi syndrome (PWS) is a rare disease caused by loss of gene expression in the 15q11-q13 region of paternal chromosome 15. The indication of bariatric surgery as treatment is the subject of debate among specialists, considering its risks in the postoperative period. On the other hand, it can bring benefits such as a decrease in comorbidities and an increase in life expectancy. **Case report:** Female patient, 25 years old, diagnosed with Prader-Willi syndrome. She presented hypotonia, small hands and feet and delayed neuropsychomotor development until she was four years old, when she started to manifest binge eating and rapidly weight gain. In adolescence, she had systemic arterial hypertension, osteopenia, GH and gonadotropin deficiency, atrophic ovaries. Having a difficult eating control with progressive weight gain, she was prescribed a restrictive diet and daily physical activity to improve caloric expenditure. She was submitted to two orthopedic surgeries due to the impossibility of walking and exercising. Faced with the risk of permanent restriction to bed, given her morbid obesity, the multidisciplinary team and family opted to perform a laparoscopic sleeve gastrectomy on the patient aged 18, with a BMI of 51.1 kg/m², weight of 96 kg and height of 1.37 m . Recovery was uneventful and there was a 44.8% weight reduction in the twelve months after surgery. Furthermore, there was a decrease in binge eating and an increase in satiety, in addition to a reduction in arterial hypertension and adherence to a healthier diet. However, she started to suffer from depression six months after the procedure and gained weight again after two years, reaching a BMI of 43.7 kg/m² at the end of six years. **Discussion:** It is still controversial whether PWS patients should be treated surgically or not. Laparoscopic sleeve gastrectomy has shown fewer adverse effects than other chirurgical procedures in patients with the syndrome. Obesity-related comorbidities can also be reversed, which can result in increased life expectancy. **Conclusion:** After bariatric surgery, the patient experienced significant weight loss with low adverse effects, in addition to the resolution of comorbidities. However, the weight regain after the second year and the lack of data in the literature on the indication for surgery demonstrate that further studies are necessary regarding its use in patients with this syndrome.

PT.113 EVALUATION OF LIVER STEATOSIS IN CHILDREN AND ADOLESCENTS WITH EXCESS OF WEIGHT BY MRI, FIBROSCAN® AND AST/ALT RATIO

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Introduction: The non-alcoholic fatty liver disease (NAFLD) is a chronic liver disease resulting from excessive hepatic fat accumulation (at least 5%) and it is associated with obesity and metabolic syndrome. In the pediatric context, with the present obesity epidemic, NAFLD is already the most prevalent hepatic disease – some studies show that up to a third of the pediatric population has this disorder. The early diagnosis is challenging and is done by a combination of factors – clinical examination, biochemical analysis, and image studies. The present study compared the diagnostic methods for NAFLD –MRI, hepatic elastography with CAP (FibroScan®) and the AST/ALT ratio. **Patients and methods:** 24 patients with excess weight between 6 and 15 years of age participated in the study. For the assessment of obesity/overweight, the WHO BMI Standarts were used. For the hepatic evaluation the non-contrasted MRI with proton density fat fraction (PDFF) > 5% was considered positive, the hepatic elastography with CAP attenuation and the AST/ALT ratio < 1 was considered altered. **Results**: We found 12 individuals with steatosis diagnosed by the MRI, range 5% to 9%. While, by the FibroScan®, none of them had it. The AST/ALT ratio was altered in 5 patients, 4 of those also had altered MRI. The only patient with AST/ALT ratio less than one without NAFLD by MRI had a PDFF of 4%. **Discussion:** The MRI showed better accuracy to diagnose early steatosis in children and adolescents, while the FibroScan® had poor sensibility in this context. The AST/ALT ratio also had conflicted results. It may be too early to detected NAFLD changes by the FibroScan® in children. **Conclusion:** Despite the high costs, the MRI is the best choice to detect early steatosis in children and adolescents with excess weight when compared with FibroScan® and AST/ALT ratio. **License number of ethics committee:** 5.009.387.

PT.114 IS SCREEN EXPOSURE A CONTRIBUTING FACTOR TO THE CONSUMPTION OF ULTRA-PROCESSED FOODS IN CHILDREN?

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Introduction: Ultra-processed foods, when offered early in infant feeding, and untimely intake of fresh or minimally processed foods can trigger negative changes in the child's health. Several factors can influence food such as the environmental and social factor, therefore, exposure to screens. **Objective:** To identify the time of exposure to screens and associate it with the frequency of food consumption of children. **Methods:** Cross-sectional study with 168 children aged 6 months to 2 years, registered as users of Family Health Units, in a small town. The Child Development Assessment Questionnaire, which contains information on screen use (Yes/No) and screen time (≤2 hours/day and >2 hours/day) and the form from the Food and Nutrition Surveillance System of the Ministry of Health of Brazil, for children aged 6 months to 2 years. Exposure to screens and consumption of ultra-processed foods were defined as dependent and independent variables, respectively. Data analysis was conducted by performing simple logistic regression with a significance level of 5%. **Results:** Of the total number of children analyzed, there was a predominance of females (51.8%, n = 87) and 26.2% (n = 44) were overweight. The prevalence of food consumption of sausages, sweetened drinks, packaged snacks and sweets/delicacies was 7.7%, 38.1%, 27.4% and 26.9%, respectively. About the habit of watching television, 80.2% (n = 130) were regularly exposed to screens, and 23.3% (n = 30) were exposed to screens for more than two hours a day. there was a significant association between screen time for more than two hours and consumption of sausages [OR: 4.82, CI: 1.14 - 22.91]. **Discussion:** Current recommendations instruct that electronic instruments are not presented to children under two years of age, since screen time is associated with greater sedentary lifestyle and loss of satiety control. In addition, the media influence food choices, using children's advertising, such disclosure can arouse greater interest and preference for ultra-processed foods in children, as they are associated with characters and toys. **Conclusion:** The contribution of ultra-processed foods was significant in children's diet and was positively associated with exposure to screens. These findings denote the importance of nutritional interventions to promote healthy habits, thus preventing overweight in childhood. **License number of ethics committee:** Parecer: 4.807.555 - Universidade Federal de Lavras.

PT.115 IMPACT OF THE HERBICIDE GLYPHOSATE ON METABOLIC PARAMETERS DURING THE GESTATIONAL PERIOD IN RATS

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Glyphosate (GLY) is the most commercialized herbicide worldwide, including in Brazil. There is scientific evidence demonstrating that GLY-based formulations can act as endocrine disruptors, affecting the metabolism of living beings. The most common form of exposure is through the ingestion of contaminated food and water. Based on that, we aimed to evaluate whether low doses of GLY may be a risk factor for developing metabolic changes in rats during the gestational period. For this, 90 days old Wistar rats (n = 12 per group) were bred and the pregnancy was confirmed by the presence of sperm on the vaginal smear. Pregnant rats were daily treated with either GLY (0.5 mg/kg or 50 mg/kg) (the GLY 0.5 and GLY 50 groups) or water by gavage (the control group) during the 21-22 days of gestation, where some gestational outcomes were evaluated. The progenitors were separated from their offspring after weaning and kept the next seven days. The dam's body mass was measured daily and the animals underwent an oral glucose tolerance test (oGTT) on the gestational day (GD) 14 and postnatal day (PN) 27. On the PN28 they were submitted to an intraperitoneal insulin tolerance test (ipITT), followed by euthanasia. The experiments were institutionally approved (protocol ID 3797220921). Regarding the gestational outcomes, we observed a loss of the number of fetuses in 17% of the control and GLY 50 groups, while in the GLY 0.5 group, it achieved 33% of the rats. The gestational length, litter size, and body mass were all unchanged in the GLY groups. The glucose tolerance remained intact both in the GD14 and PN27 in the GLY groups. No major difference in insulin sensitivity was observed in the GLY-treated rats on PN28. We conclude that GLY exposure during the entire gestational period has no major impact on glucose homeostasis, gestational length, and litter size, but may be potentially harmful to fetal losses at non-toxic doses. Although our data do not reveal a serious impact on dams' glucose homeostasis it does not exclude possible interferences in the offspring, a topic that merits investigation. **License number of ethics committee:** protocol ID 3797220921, Universidade Federal de Santa Catarina.

PT.117 BISPHENOL S EXPOSURE ALTERS FAT DISTRIBUTION FAVORING INGUINAL WHITE ADIPOSE TISSUE IN ADULT MALE MICE FED A HIGH FAT DIET

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Obesity is an inflammatory disease and a major public health issue that correlates to other comorbidities. Some environmental substances, known as endocrine disruptors (EDs), contribute to the development of obesity through its obesogenic activity. Bisphenol (BP) S , BPA substitute, is a widely spread ED that exerts different effects in white adipose tissue (WAT) depots. We aimed to compare the impacts of BPS exposure and/or high-fat (HF) diet over epididymal (eWAT) and inguinal (iWAT) depots of male mice. C57BL/6 male mice fed a standard-chow, or a high-fat diet being exposed or not to BPS (25 µg/kg/bw) for 12 weeks, resulting in the fellow groups: SC, SCB, HF and HFB. Body weight gain, and WAT depots mass were assessed as well as adiposity index. Oral Glucose Tolerance Test, plasmatic cholesterol, and triglycerides (TG) analyses were performed. Both eWAT and iWAT depots underwent morphometric analysis. Data presented as mean ± standard deviation and analyzed by one-way ANOVA, followed by Holm-Sidak post-test ($p < 0,05$). After 12 weeks, HF and HFB groups had gained more body weight and showed increased adiposity index when compared to SC and SCB groups. The adiposity index of SCB animals was also higher than SC group. WAT depots were augmented in all groups compared to the control, and HF group showed an increase in WAT masses compared to SCB group. eWAT of HFB group reduced in comparison to HF group, however, iWAT was bigger in HFB group when compared to HF group. All experimental groups were glucose intolerant compared to SC group, and HF and HFB groups had a worsening in this parameter compared to SCB group. Plasmatic cholesterol and TG levels of HF and HFB groups were higher than the levels of SC and SCB groups. As for cholesterol, it was also augmented in SCB group when compared to control and HFB group showed a decrease in comparison to HF group. Adipocytes of eWAT and iWAT were bigger in HF and HBP groups than in SC and SCB groups. Regarding eWAT depot, adipocytes of SCB group were also bigger than those of SC group. Morphometric analyses of eWAT also showed a higher count of crown-like structures in HF and HFB groups when compared to SC and SCB groups. The association between HF diet and BPS exposure promoted fat storage in iWAT depot and reduced eWAT. BPS alone alters the morphology of the eWAT but does not potentiate the effects of the HF diet in the HFB group, different from iWAT. In conclusion, BPS modulates lipid distribution within WAT depots. **License number of ethics committee:** CEUA 1929240521 (Universidade Federal Fluminense).

PT.118 THE USE OF AIP TO SCREEN LIVER AND CARDIOVASCULAR FUNCTION IN WOMEN WITH SEVERE OBESITY

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Introduction: Non-alcoholic fatty liver disease (NAFLD) is a prevalent condition in obesity and is linked to metabolic disorders, such as hypertension, hyperglycemia, insulin resistance, dyslipidemia and metabolic syndrome. Individuals with NAFLD are at greater risk for cardiovascular disease (CVD). Plasma atherogenic index (AIP) has been a tool used for cardiovascular risk screening, which is calculated using the logarithm of the TG/HDL-C ratio and is independently correlated with greater chances of coronary heart disease. **Patients and methods:** Forty-five women with severe obesity were selected. Age, weight, waist (WC), abdominal (WC), hip (CQ) and neck (NC) circumferences, liver function (ALT, AST), lipid profile and adiponectin by the ELISA method were assessed. SPSS software was used to statistical analysis. Data were evaluated for normality by Shapiro-Wilk. Volunteers were grouped based on the AIP median, classified as low and high risk. Correlations between variables were performed by Spearman and comparison of means was performed by Generalized Linear Model. **Results:** The group with the highest AIP had lower adiponectin values ($p < 0.005$) and higher ALT. In the total sample, a correlation between AIP and ALT ($p = 0.004$, $r = 0.439$) was seen. In the AIP high risk group, ALT correlated with glucose ($p = 0.022$, $r = 0.484$), insulin ($p = 0.014$, $r = 0.518$), HOMA-IR ($p = 0.000$, $r = 0.754$) and AST ($p = 0.000$, $r = 0.747$). There was a correlation between NC and insulin ($p = 0.035$, $r = 0.463$). **Discussion:** In this research, patients with higher AIP had lower adiponectin, a cytokine with protective role for NAFLD. We observed that our sample has a significant correlation between AIP and ALT, one of the main markers for liver disease. There is already evidence that the AIP indicates a prognosis of liver alterations, but not in severe obesity. In line with these findings, a study found a significant relationship between the increase in AIP and the increase in ALT, BMI, WC, GGT and the lipid profile in individuals with obesity. Therefore, the AIP seems to be a strong parameter for association with NAFLD in patients with obesity. NAFLD is associated with increased morbidity and mortality from CVD. Thus, reinforcing the role of AIP in screening for liver dysfunction. **Conclusion:** We can conclude that AIP seems to be an important marker in individuals with severe obesity to screen both cardiovascular and liver function, being a cheap and easy toll to be used in the clinical practice. **License number of ethics committee:** Universidade Federal de Goiás, 3.251.178; Hospital HGG, 961/9.

PT.119 EVALUATION OF BIOMETRIC PARAMETERS AND COLON MORPHOLOGY IN MALE MICE FED A HIGH-FAT DIET ASSOCIATED OR NOT WITH EXPOSURE TO BISPHENOL S

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Introduction: Bisphenol is a plasticizer present in the environment that may contribute to the development of obesity, considered an endocrine disruptor (ED). Bisphenol A (BPA) is the best known of these and has been banned after being proven to be an environmental contaminant. Bisphenol S (BPS) also has ED chemical characteristics and is the major substitute for BPA. The gastrointestinal tract (GIT) is the first site of contact after food and water intake, and therefore the gut may be the first site of inflammation induced by diet and EDs. The aim of this study is to demonstrate that exposure to BPS, together with hyperlipidic diets, could generate intestinal disturbances, with altered permeability and gut microbiota. **Patients and methods:** Adult male C57BL/6 mice received standard (SC) or hyperlipidic diet (HF), being exposed or not to BPS at 25 µg/kg/day for 12 weeks, forming the groups SC, SCBPS, HF, HFBPS. Body mass, food and water intake were evaluated daily. After euthanasia, fecal pellet counting was performed and the colon was collected for subsequent histology analysis. In addition, intestinal crypts were measured and serotonin secreting cells (5-HT cells) were counted. **Results:** The SCBPS and HF groups showed increased body mass compared to the SC group. Despite the higher feed intake, the SC and SCBPS groups consumed less energy than the HF and HFBPS groups. This result may explain why animals in the HF-fed groups had fewer fecal pellets at the time of euthanasia. The SCBPS and HF groups showed smaller gut size compared to the SC group. The SCBPS and HF groups presented smaller intestinal crypts compared to the SC group and the HFBPS group had smaller crypts compared to all groups. The SC group showed a higher percentage of calyceal cells compared to the SCBPS, HF and HFBPS groups. The animals in the SCBPS, HF and HFBPS groups showed a higher amount of 5-HT cells/µm² compared to the SC group. **Discussion:** The weight gain in the groups where BPS was administered can be explained due to its participation in the stimulation of lipid synthesis through its influence on exacerbating the activation of PPARγ. The morphological changes suggest an effect of BPS and HF diet on intestinal function. **Conclusion:** Individually, exposure to BPS was able to induce increased body mass in animals fed a standard diet, decrease intestinal crypts and increase the amount of 5HT cells/µm². When associated with the hyperlipidic diet, it exacerbates these conditions. **License number of ethics committee:** 1929240521.

PT.120 HEART RATE VARIABILITY MEASURES, QUALITY OF LIFE AND DEPRESSION IN PATIENTS WITH OBESITY: PRELIMINARY RESULTS BEFORE BARIATRIC SURGERY

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Introduction: Heart Rate Variability (HRV) has been considered a transdiagnostic factor of psychopathology. Specifically, low HRV given by a withdrawal of parasympathetic activity has been found in depression, lower quality of life, and obesity. This study investigates the relationships between HRV, quality of life, and depression symptoms in adult patients with obesity one month before their bariatric surgery. **Patients and methods:** Sixty-seven patients with obesity [91% female; aged = 42.8 ± 8.2 years; body mass index (BMI) = 45,74 ± 5,74 kg/m²] were recruited to the *Centro de Pesquisas Clínicas Multiusuário* (CePeM) at the Pedro Ernesto University Hospital (HUPE) in Rio de Janeiro. During an outpatient visit before the bariatric surgery, patients filled out the Short-Form Health Survey-36 items questionnaire on the perceived quality of life (QoL), and the Hospital Depression Scales questionnaire for screening of depression symptoms. Thereafter, the LF, HF/RSA, and the RMSSD component of HRV were measured using the Faros 360° EKG Holter (Bittium Corporation) in a 5-lead configuration with a sampling rate of 1000 Hz. Patients were fasting for at least two hours, were lying on the examination table, and were required to rest for 5 minutes before beginning the 15-minutes ECG recording. **Results:** Patients with a lower perceived QoL showed a statistically significant reduction in parasympathetic activity compared to patients with a higher perceived quality of life [LF: $F_{(1,65)} = 9,882$, $p = 0,003$; HF: $F_{(1,65)} = 4,853$, $p = 0,031$; RSA: $F_{(1,65)} = 4,166$, $p = 0,045$; RMSSD: $F_{(1,65)} = 4,277$, $p = 0,043$]. In addition, patients with positive depression screening showed a statistically significant reduction in parasympathetic activity compared with patients with negative or borderline depression screening [LF: $F_{(2,64)} = 7,326$, $p = 0,001$; HF: $F_{(2,64)} = 4,555$, $p = 0,014$; RSA: $F_{(2,64)} = 5,121$, $p = 0,009$; RMSSD: $F_{(2,64)} = 3,516$, $p = 0,036$]. Interestingly, age is not a moderating variable in the association between autonomic activity, perceived QoL, and depressive symptoms (age: $p > 0.05$). **Conclusion:** This study represents a first phase of a longitudinal research project investigating the psychological and physiological QoL of patients with obesity whoa are undergoing to a bariatric surgery. Our preliminary results showed that the psychological and physical well-being of these patients is compromised. We believe that bariatric surgery can be an excellent option to achieve a good existential balance. **License number of ethics committee:** Hospital Universitário Pedro Ernesto – CAAE: 60506922.1.0000.5259.

PT.121 THE IMPACT OF DEPRESSION SYMPTOMS ON OBESITY: PRELIMINARY DATA ON A GROUP OF PATIENTS BEFORE BARIATRIC SURGERY

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Introduction: Symptoms of depression are strongly associated with obesity, especially with higher classes of obesity requiring bariatric surgery. A well-functioning of the parasympathetic nervous system has been found to be a health factor and considered a transdiagnostic marker of psychopathology. Dysautonomia has been found in both depression and obesity. This study investigates the impact of depression on obesity in order to structure treatment pathways to improve the psychological and physical quality of life of patients. **Patients and methods:** Sixty-seven patients with obesity [91% female; aged = 42.8 ± 8.2 years; body mass index = 45.74 ± 5.74 kg/m^2] were recruited from the Pedro Ernesto University Hospital in Rio de Janeiro, Brazil. During an outpatient visit before the bariatric surgery, patients filled out the Hospital Depression Scale (HAD), and the Beck Depression Inventory (BDI) to assess the depression symptoms. Thereafter, the LF, HF/RSA, and the RMSSD component of HRV were measured using the Faros 360° EKG Holter in a 5-lead configuration with a sampling rate of 1,000 Hz. Patients were fasting for at least two hours, were lying on the examination table, and were required to rest for 5 minutes before beginning the 15-minutes ECG recording. **Results:** The relative risk of developing symptoms of depression patients with obesity class III compared to patients with obesity class II is 1.471 (95% CI, 0.995 to 2.174). The odd ratio of symptoms of depression in patients with obesity class II vs patients with obesity class III is 0,298, indicating a lower risk of developing depressive symptoms for patients with obesity class II compared to patients with obesity class III. Pearson's bivariate correlation analyses showed that parasympathetic activity, as measured by the LF-HRV, HF-HRV, RSA, and RMSSD, is statistically and negatively associated with symptoms of depression, as measured by the HAD and the BDI (Table 1). **Conclusion:** This study is an initial phase of a longitudinal research project that assesses the physiological and psychological health correlates of patients with obesity and undergoing bariatric surgery. Our preliminary results showed that depression is a factor hindering the health of our patients and should always be evaluated and treated carefully.

Table 1. Correlation analysis between depression and parasympathetic activity

	HF	RSA	RMSSD	HAD	BDI
LF	.802**	.795**	.750**	-,319**	-.308*
HF		.987**	.827**	-,280*	-.283*
RSA			.793**	-,299*	-.279*
RMSSD				-0,227	-.243*
HAD					.719**

License number of ethics committee: Hospital Universitário Pedro Ernesto/UERJ: CAAE: 60506922.1.0000.5259.

PT.122 EFFECTS OF CONSUMPTION OF KEFIR BY LACTATING WISTAR RATS ON THE GUT MICROBIOTA OF OVERFED OFFSPRING IN THE NEONATAL PERIOD

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Introduction: Environmental factors, such as nutrition, in early life have consequences that are manifested as a risk for developing diseases in adult life, such as obesity. Analyzing the growing prevalence of obesity and its association with poor eating habits, the model of neonatal overfeeding in rodents is proposed as a way to simulate the current nutritional scenario and the development of diseases. Neonatal overfeeding by reducing the litter size is capable of programming body weight and metabolic and hormonal changes, favoring the emergence of chronic diseases associated with obesity. It is not known how neonatal overfeeding can modulate the intestinal microbiota, as obesity is associated with intestinal dysbiosis. The ingestion of probiotics, mainly during this period, results in beneficial effects on the gut microbiota of newborns. Objective: to evaluate the effect of maternal kefir consumption on the intestinal microbiota of overfed offspring in the neonatal period. Methodology: Lactating Wistar rats and their offspring were divided into Normal litter (NL); Kefir normal litter (KNL); Small litter (SL); Kefir small litter (KSL). The NL and SL dams received 1 mL of filtered water/day; KNL and KSL dams received milk kefir daily (1.0 x 108 CFU/mL) during lactation. The nutritional status and intestinal microbiota (16S rRNA gene sequencing) of the offspring was evaluated at the end of lactation. **Results and discussion:** During lactation, both SL and KSL offspring showed higher body weight (BW) gain compared to NL and KNL groups ($p < 0.05$) up to 21 days. At weaning, the offspring from the SL and KSL groups presented greater BW compared to the NL group (+34.84% and +30.24%, respectively, $p < 0.001$). Microbiome analysis revealed significant differences in bacterial abundances between groups treated or not with kefir. The groups treated with kefir (KNL and KSL) showed an increase in the abundance of the phylum Bacteroidota, while the groups that did not receive kefir showed an increase in the phyla Firmicutes and Proteobacteria. Typically, an increase in the Firmicutes phylum compared to the Bacteroidota phylum is associated with increased food intake and increased risk of obesity. **Conclusion:** Therefore, the administration of kefir to lactating Wistar rats positively affected the intestinal microbiota of breastfed offspring, despite no change in body weight gain. **License number of ethics committee:** Número de protocolo 21/2016 e emitido pela Comissão de Ética em Pesquisa com Animais de Laboratório.

PT.123 CHANGING THE DIETARY PROFILE AND TREATMENT WITH SILYMARIN REDUCES THE WORSENING OF METABOLIC FATTY LIVER DISEASE (MFLD) INDUCED BY FRUCTOSE CONSUMPTION IN C57BL/6 MICE

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In recent years there has been an increase in the consumption of fructose present mainly in drinks sweetened with corn syrup. It is known that fructose consumption is associated with the etiology of numerous metabolic disorders, including metabolic fatty liver disease (MFLD). This work aims to evaluate the effect of silymarin and the change in dietary profile on the antioxidant status and hepatic lipogenic pathway in C57BL/6 mice submitted to consumption of 30% fructose in water. The animals were divided into: control group (C)-water *ad libitum* for 8 weeks; fructose group (F)-30% fructose diluted in water for 8 weeks; fructose group treated with silymarin at the lowest dose (FS1)-fructose 30% for 4 weeks + silymarin 120 mg/kg/day from the 4th week to 8th week; fructose group treated with silymarin at the highest dose (FS2)-fructose 30% for 4 weeks + silymarin 240mg/kg/day from the 4th week to 8th week; and a group without treatment (FWT)-fructose withdrawn after the 4th week and offered water until the 8th week. To analyze the hepatic lipid profile, the triglycerides (TG) and cholesterol (Ch) content was evaluated using the commercial LABTEST kit, the gene expression of the lipogenic enzymes ACC-α and FAS by real-time PCR, the histology by HE staining and the antioxidant status by measurement of superoxide dismutase (SOD) and catalase (CAT) activity. Animals were approved by the UFOP in the Animal Ethics Committee. The results show that the F group was able to induce an increase in hepatic TG and Ch in relation to other groups and that the FWT, FS1 and FS2 groups were able to reverse the process. The F group was able to increase the gene expression of ACC-α and FAS in relation to the C group and that the FWT, FS1 and FS2 groups were able to reduce it. Still, in the morphometric evaluation and the degree of hepatic steatosis, it was observed that the F group induced accumulation of hepatic ectopic fat, being reduced in the FWT, FS1 and FS2 groups. Regarding the antioxidant status, we observed that the F and FWT groups were able to increase the SOD/CAT ratio when compared to the FS1 and FS2 groups. The results suggest that consumption of fructose for 8 weeks is capable of inducing MFLD and the treatment related to fructose withdrawal, by itself, is capable of protecting the liver from damage caused by hepatic steatosis. Still, treatment with silymarin at the highest dose is important to improve the antioxidant status and reduce MFLD. **License number of ethics committee:** Number: 6557170919. Universidade Federal de Ouro Preto (UFOP).

PT.124 CHRONIC BISPHENOL S EXPOSURE ALTERS BIOMETRIC, BIOCHEMICAL AND HEPATIC PARAMETERS IN A DIET-INDUCED OBESITY MODEL

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Introduction: Obesity has reached epidemic levels worldwide and is deeply linked to the metabolic-associated fatty liver disease (MAFLD). Some environmental substances known as endocrine disruptors (ED) might help the development of obesity. Bisphenol A has been related to obesogenic activity but not much is known yet about bisphenol S (BPS), its main substitute that does not possess any sort of regulation worldwide. Therefore, the aim of the study is to analyze the effects of BPS exposure on biometric, biochemical and hepatic parameters of mice fed a standard or high-fat diet. **Methods:** (CEUA 1929240521) C57BL/6 adult male mice (3-mo-old) were divided into 4 groups: standard control diet (SC), control diet exposed to BPS (SCB, 25 µg/kg/day), high-fat diet (HF) and high-fat diet exposed to BPS (HFB, 25 µg/kg/day) for 12 weeks. Biometric and plasma data, oral glucose tolerance test (OGTT) and liver stereology were measured. Data were presented as mean ± standard deviation and analyzed by one-way ANOVA, followed by Holm-Sidak post-test ($p < 0,05$). **Results:** The SCB, HF and HFB groups showed an increase in final body mass in relation to SC. The mean feed intake and water consumption was lower and the energy intake was higher in the HF and HFB groups when compared to the SC and SCB groups. Fasting glucose and the area under the curve of the OGTT was higher in the SCB, HF and HFB groups compared to the SC group, and the HFB group also showed an increase in relation to the SCB and HF groups. Plasma triglycerides and cholesterol levels were higher in both HF and HFB groups in comparison to SC and SCB, and cholesterol levels were also higher in SCB in relation to SC group and lower in HFB in comparison to HF group. Absolute liver mass and hepatic steatosis was higher in the SCB, HF and HFB groups compared to SC, as well as in the HF and HFB groups in relation to the SCB. Furthermore, the SCB, HF and HFB groups showed a reduction in the percentage of reticular fibers when compared to the SC. **Discussion:** BPS promoted body mass gain and increased fasting glucose concentration in the SCB group, in addition to worsening the glycemic profile and increasing absolute liver mass and liver damage. The HFB group increased only fasting glucose compared to the HF group. **Conclusion:** BPS was able to worsen the metabolic profile of mice fed a control diet but did not promote great changes on animals fed a high fat diet. **License number of ethics committee:** CEUA 1929240521 (Universidade Federal Fluminense).

PT.125 FATTY ACIDS SERUM AND CARDIOVASCULAR RISK IN WOMEN WITH SEVERE OBESITY

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Introduction: Metabolic syndrome (MetS) is a cluster of metabolic conditions such as abdominal obesity, insulin resistance, dyslipidemia, and arterial hypertension, and is associated with increased cardiovascular risk. Several serum fatty acids (FA) seem to play an important role in the development of cardiometabolic diseases, being necessary to investigate its influence on the parameters of MetS. **Methods:** This study included 41 women with severe obesity. Biochemical tests were performed and gauged weight, height, and abdominal circumference (AC). The score of cardiovascular risk (MetScore) was calculated using AC, systolic blood pressure, HDL-C cholesterol, triglycerides (TG), and fasting glucose. The patients were grouped according to the MetScore average into: higher and lower cardiovascular risk. Gas chromatography was used to measure serum FA. Generalized Linear Models were used to compare the means of the groups. **Results:** The mean of body mass index (BMI) was 48.38 kg/m²; all circumferences were above recommendations, blood glucose average of 110 mg/dL, at least 1 type of dyslipidemia, and high blood pressure. FA analyses showed 58.18% saturated FA (SFA), 26.64% polyunsaturated FA (PUFA) and 17.15% monounsaturated FA (MUFA). Higher MetScore was correlation with: %area of palmitic acid (p = 0,00), oleic FA (p = 0,005), cis vaccenic FA (p = 0,042), total MUFA (p = 0,002), and lower %area gamma-linolenic (GLA) (p = 0,003) and eicosatetraenoic acid (p = 0,03). **Discussion:** Palmitic acid impairs the hepatic metabolism of glucose and lipids, favoring atherosclerosis and hypertriglyceridemia, insulin resistance and inflammatory. It is known that plasma MUFA do not represent only food intake, as they are mainly affected by de novo lipogenesis from SFA by stearoyl-CoA desaturase 1 enzymes (SCD-1), which are associated with obesity, IR, DM2 and MetS. FA GLA has beneficial health effects due to its conversion to dihomo-gamma-linolenic (DHGLA), which is metabolized forming substrates for the production of eicosanoids that suppress inflammation, promote vasodilation. The protective effects of omega 3 (n3) in MetS are related to the reduction of TG and LDL-c metabolism in the liver, improving insulin sensitivity and reduce arterial hypertension. **Conclusion:** Women with severe obesity and higher cardiovascular risk tend to have lower values of FA n3 and n6, which are considered cardioprotective and higher lipogenic activity correlated with increased cardiovascular risk. **License number of ethics committee:** O projeto matriz que deu origem a este estudo foi aprovado pelo Comitê de Ética em Pesquisa da Universidade Federal de Goiás sob o no do parecer 3.251.178 e do Hospital Estadual Geral de Goiânia Dr. Alberto Rassi sob o n° do parecer 961/19, com o número do Rebec sendo RBR-22pqs9 e o Universal Trial Number: U1111-1233- 3168.

PT.126 EFFECT OF MATERNAL FIBER INTAKE ON OFFSPRING IN AN EXPERIMENTAL OBESITY MODEL

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Introduction: Obesity is a multifactorial chronic disease characterized by excess body fat, especially in the visceral region, which gives this condition a systemic and low-grade inflammatory state. Some studies recognize gut microbiota as a relevant influence on obesity through intestinal colonization induced by fiber consumption. This research aims to investigate if the maternal diet can modulate the offspring's microbiota and change its susceptibility to the development of obesity in adulthood. **Methods:** Nine female mice (C57BL/6), aged 8 weeks old, were maintained under controlled conditions (26 ± 2 °C, 12h light/dark cycle) and water ad libitum. From pregnancy until offspring weaning, every three female mice consumed three different diet: standard chow diet (SCD) with 5% cellulose and 0% pectin, high fiber diet (HFD) with 5% cellulose and 10% pectin and no fiber diet (NFD) with 0% cellulose and 0% pectin. After weaning, the offspring (n: 18) were divided into control and obese group. During 12 weeks, the control and obese group consumed SCD and high-fat diet, respectively. **Results and discussion:** From mother feces analyzed by selective media for bacteria growth, we observe a high proportion of both aerobic and anaerobic acid lactic bacteria (ALB) colonies in HFD compared to the NFD (5.47 ± 0.01 *vs.* 4.84 ± 0.44 log CFU/mg feces). The soluble fiber (pectin) intake by HFD resulted in a rise in food intake at 7.34 ± 6.37 g *vs.* 5.72 ± 3.36 g in NFD. Nevertheless, the HFD group showed a drop in body weight compared to the NFD from pregnancy until offspring weaning (1.04 ± 0.79 *vs.* 2.71 ± 0.86 g). These data revealed that fiber consumption modulates microbiota and protects against excessive weight gain. Both maternal and offspring microbiota have shown similar profiles in microbiota composition. Feces from obese offspring from NFD mothers counted 5.04 ± 0.58 log CFU/mg in aerobic ALB and 4.91 ± 0.27 log CFU/mg in anaerobic ALB. In addition, obese offspring from HFD mothers counted 4.49 ± 046 log CFU/mg in aerobic ALB and 4.49 ± 046 log CFU/mg in anaerobic ALB. On the other hand, maternal fiber intake demonstrated to reduce food intake in obese offspring derived from HFD mothers compared to obese offspring derived from NFD mothers (7.28 ± 1.91 g *vs.* 8.16 ± 1.77 g). **Conclusion:** In sum, the maternal diet enriched with soluble fiber intake can contribute to the management of obesity, such as modulating the gut microbiota and the phenotype of obesity-induced in the offspring. **License number of ethics committee:** 179/2021.

PT.127 THE INFLUENCE OF VISCERAL ADIPOCYTE SIZE ON ADIPONECTIN AND PAI-1 CONCENTRATION IN WOMEN WITH SEVERE OBESITY

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Introduction: The adipose tissue can expand by hyperplasia or hypertrophy, being the last one associated with inflammation and higher cardiometabolic risk. Moreover, the type of tissue, visceral adipose tissue (VAT) or subcutaneous adipose tissue (SAT) contribute distinctly to metabolic health. However, it is still unclear the contribution of adipocyte size of different sources on serum cytokines. **Patients and methods:** Twenty-three pre-bariatric women with body mass index (BMI) above 40 kg/m² were included. It was collected height, weight, neck (NC), waist (WC) and hip circumferences (HC). Blood samples were collected to analyze Plasminogen Activator Inhibitor-1 (PAI-1) and adiponectin (determined by the enzyme-linked immunoassay method). Adipose tissue biopsies from SAT and VAT were collected at the bariatric surgery and evaluated by histological analyses. The adipocyte area was measured using ImageJ. To evaluate normality, Shapiro-Wilk was used. Patients were grouped by VAT adipocyte size median and t-test was used to compare groups. Pearson's or Spearman's analysis assessed correlations between variables and significance was set as $p < 0.05$. **Results:** The mean of BMI was 49.76 kg/m² and the mean of NC and WC were higher than the reference value. Correlation between PAI-1 levels and SAT ($r = -0.787$; $p < 0.05$) was observed. The group with lower VAT adipocyte size presented higher adiponectin levels ($p < 0.05$). Furthermore, we saw a correlation between PAI-1 levels and VAT adipocyte size in the group with smaller adipocytes ($r = 0.650$; $p < 0.05$). **Discussion:** Larger VAT adipocytes presented lower levels of adiponectin in our study, similar results were observed in patients with severe obesity in Mexico. VAT has a lower expansive capacity, leading to oxidative stress and increasing inflammation, which results in lower release of anti-inflammatory cytokines, such as adiponectin. This is the first study showing that smaller adipocytes from VAT are associated with PAI-1 concentration. Cuenca et al., observed similar pattern with resistin, another pro-inflammatory adipokine. We postulate that other parameters, such as IR may influence more on PAI-1 secretion and should be considered in future studies to better understand the influence of tissue type and adipokines secretion. **Conclusion:** Visceral adipocytes size seems to influence PAI-1 and adiponectin concentrations, though others variables should be studied to better understand this relationship. **License number of ethics committee:** Parecer da Universidade Federal de Goiás (3.251.178) e do Hospital Estadual Geral de Goiânia Dr. Alberto Rassi (961/19).

PT.128 FENOFIBRATE AND EZETIMIBE CONSORTIUM INDUCE MORPHOFUNCTIONAL CHANGES IN INTESTINAL ABSORPTIVE EPITHELIUM: POTENTIAL MECHANISM TO HYPERCHOLESTEROLEMIA IMPROVEMENT

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Introduction: It is very common dyslipidemia in obese people and animals, which increases the triacylglycerols and cholesterol plasma levels and increasing the risk of acute myocardial infarction and stroke in the world population. Fibrates and others antilipemic drugs are frequently used to treat dyslipidemia, but if intestines, under antilipemic drugs control, contribute to this improvement is still unknown. This study has the potential to clarify this subject since it was designed to investigate morphofunctional changes into the absorptive epithelium induced by the association of two antilipemic drugs for clinical use (fenofibrate/FF and ezetimibe/EZ). **Methods:** For answering, C57BL/6 mice became obese after feeding a high-fat diet (HFD) for 9 weeks, and afterwards, they received fenofibrate (FF: 400 mg^{-1}) and ezetimibe (EZ: 5 mg^{-1}), alone and combined in olive oil by gavage. Obese animals (control) received no compound. After 15 days of treatment, the animals were euthanized, blood was collected for total cholesterol measurement and the jejunum, main absorptive segment of the small intestine, was removed, cleaned and submitted to optical and electronic microscopy procedures, proteomic analysis and functional permeability assay by FITC-dextran (CEUA: 8861200821). **Results:** We observed that all treatments were able to reduce lipid droplets in the obese absorptive epithelium; however, FF and EZ consortium was more efficient in decreasing cholesterolemia and intestinal permeability. Additionally, the FF and EZ together regulated much more the absorptive epithelium proteome than their isolated did. **Discussion and conclusion:** Based on the findings, it is possible that antilipemic drugs consortium is more effective in inducing integrity in the absorptive epithelium as well as less greasy, which can contribute to the improvement of hypercholesterolemia in obesity, since the intestines are the gate of lipids to the circulation. This study is supported by Fapesp (Proc. n° 2019/05086-7). **License number of ethics committee:** CEUA/ICB/USP-SP: 8861200821.

PT.129 EFFECT OF TREATMENT WITH BOVINE MILK EXTRACELLULAR VESICLES ON BONE AND METABOLIC CHANGES IN DIET-INDUCED OBESITY IN MICE

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Introduction: Obesity is characterized by fat accumulation in white adipose tissue (WAT) and metabolic changes. Excessive intake of refined carbohydrates and saturated fats are pointed out as factors for developing the disease. Studies have investigated different ways of treating obesity and its complications. Despite the effectiveness of some strategies, new approaches have been proposed. Milk extracellular vesicles (MEVs), nanoparticles found in human and animal milk, have demonstrated beneficial potential in experimental inflammation and bone loss models. However, it has not yet been elucidated whether MEVs can modulate metabolic and bone changes resulting from obesity. Thus, the research aimed to evaluate MEVs' effect on bone and metabolic changes in mice with diet-induced obesity. **Methods:** BALB/c mice were fed a diet rich in refined carbohydrates (HC) or saturated fats (HF) and were treated with MEVs administered in the drinking water. Metabolic parameters and morphology of the femur, WAT and liver were analyzed. This project was approved by the CEUA/UFMG ethics committee under protocol nº 23/2019. **Results:** The animals fed the HC and HF diets showed a reduction in bone mineral density (BMD) of the femur, an increase in visceral adiposity and a larger area of adipocytes in the WAT, a higher liver damage score and alterations in the serum levels of glucose, cholesterol and triglycerides compared to the respective control group. Mice treated with MEVs fed with an HC diet showed greater femoral BMD, decreased fat cell area and histopathological liver score, associated with lower levels of glucose and serum triglycerides compared to untreated animals. Although no alterations in BMD were observed in the HF model of mice treated with MEVs, they demonstrated a positive metabolic local effect by reducing the area of adipocytes in the WAT and the histopathological liver damage. **Conclusions:** Mice fed with an HC diet treated with MEVs could influence bone, systemic, and local metabolic alterations. However, those mice fed an HF diet treated with MEVs showed only a local metabolic effect. Therefore, we demonstrate that these components have the potential to act in the treatment of bone and metabolic alterations resulting from obesity and can be allied in the therapeutic management of patients with these diseases. **License number of ethics committee:** CEUA/UFMG – protocol nº 23/2019.

PT.130 OBESITY AND COGNITION: BODY COMPOSITION AS A BETTER PREDICTOR OF COGNITIVE PERFORMANCE IN AN ATTENTIONAL COMPUTERIZED TASK

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Introduction: Obesity is related to cognitive performance (CP). CP decreases when body mass index (BMI) increases**.** Although this correlation exists, body composition and visceral obesity showed to be an even better predictor of CP. Cognition can be divided into six basic domains, being attention/concentration one with the utmost importance, since the ability to achieve and maintain focus on an adequate stimulus is crucial for the performance of all other domains. The main purpose of this study was to analyze the correlation between body composition and attentional performance. **Participants and methods:** The participants were included from a university hospital. The exclusion criteria were: participants with neurological diseases; use of psychotropics medications, such as antidepressants and stimulants; uncontrolled clinical diseases and age below 18 years old. Sociodemographic data was collected. Attention was assessed using the Continuous Visual Attention Test (CVAT). The CVAT is a Go/No-Go continuous performance test validated for clinical use in Brazil that produces variables, such as commission errors (CE), and Variability of response time (VRT) that are directly correlated with attentional performance. Body composition was calculated using "BIA 450 Bioimpedance Analyzer". BMI and waist circumference were measured in every participant. After applying all exclusion criteria, 50 participants were included and divided into 2 groups based on this sample median BMI (27,7 kg/m²). **Results:** Both groups showed no significant difference between sex, age and scholarity distribution. As expected, age was the most relevant variable in all models. The lower BMI group showed no significant correlation between body fat percentage (%BF) and any CVAT variable performance. In the higher BMI group, %BF had significant association with VRT ($p = 0.024$; $\beta = 0.363$) and CE ($p = 0,41$; $\beta = 0.412$). **Discussion:** The present study supports the existing literature correlating body composition and CP, however, BMI is not the best predictor of CP. According to the literature, the decline in CP can be explained by many causes: inflammation, vascular disease, dyslipidemia, impaired brain glucose metabolism or even the lack of attention while eating causing more obesity. **Conclusion:** %BF showed to be a good predictor of CP in people with BMI higher than 27.

PT.131 INVESTIGATION OF THE EFFECTS OF GOLD NANOPARTICLES ASSOCIATED WITH CARNITINE ON PARAMETERS INFLAMMATORY AND OXIDATIVE STRESS IN THE FAT OF ANIMALS MANIFESTED TO OBESITY

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Introduction: Obesity is a low-grade chronic disease that has become an epidemic. New therapeutic propositions are needed. Gold nanoparticles (GNPs) stand out due to their anti-inflammatory and antioxidant effects. Carnitine has binding potential and the association may aid in the transfer of long-chain fatty acids to mitochondria for oxidation. The aim of this study was to investigate the effects of GNPs associated with carnitine on inflammatory parameters and oxidative stress in animals subjected to obesity. **Methods:** 80 Swiss male mice received control diet (CD) (control group) or high fat diet (HFD) (obese group) for 10 weeks. At the end of the sixth week, the groups were divided into daily treatment with saline, GNPs (70 ug/kg), carnitine (500 mg/Kg) or GNPs associated with carnitine for 4 weeks. Body weight was assessed weekly. After the animals were euthanized, the mesenteric fat was removed for analysis of oxidative damage and antioxidant defense. **Results:** HFD contributed to increased weight and mesenteric fat. Treatment with carnitine associated or not reduced accumulated fat. Oxidative damage to lipids was higher in obese groups when compared to controls. Reduction in protein carbonylation in the obese groups treated with GNP and carnitine alone, except in the GNP and carnitine combination group. IL-6, IL-1β and IL-10 were altered in the control group treated with GNPs and Carnitine association when compared to saline. Decreased CAT activity when comparing obese and non-obese groups. In the obese group treated with GNPs and carnitine, no significant results were observed in relation to SOD levels, which were high in the other groups. **Discussion:** Treatment with GNP alone did not interfere with the adipose tissue, but the combined treatment reduced it in relation to the saline obese group, perhaps due to the effect of carnitine on the translocation and oxidation of fatty acids. In the SOD enzyme, the organism was able to detect the damage caused and promoted the signaling for the increase in the production of antioxidant defenses. However, both treatments were not able to reverse the production of reactive species caused by obesity. **Conclusion:** The association caused an inflammatory effect in non-obese animals, indicating that the treatment may not be effective in conditions without an installed inflammatory effect. Carnitine associated or not with GNPs brought positive effects in the reduction of mesenteric fat. **License number of ethics committee:** O projeto foi aprovado pela Comissão de Ética no Uso de Animais da UNISUL sob o protocolo: 21.008.4.01.IV.

PT.132 CEREBRAL ENERGY METABOLISM IS ALTERED IN FEMALE MICE SUBMITTED TO OBESITY AND OFFSPRING DEPRIVATION STRESS

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Introduction: Obesity generates neuroinflammation, oxidative stress and changes in energy metabolism, causing brain impairment in important structures in controlling mood and satiety. It has been linked to an increase in brain disorders such as depression and impaired cognitive function. This study aimed to evaluate the brain energy metabolism in female mice submitted to obesity and stress due to offspring deprivation (OD). **Methods:** Eighty female Swiss mice, 40 days old, were weighed and divided into two groups (n = 40): Control Group and Obese Group, for induction of the animal model of obesity, through consumption of a high-fat diet for 8 weeks. Subsequently, the females underwent pregnancy, after the birth of the offspring, again divided into groups (n = 20): Control, Control + OD, Obese and Obese + OD, for induction of the stress protocol by OD. After the offspring completed 21 days of age, weaning was performed and the matrices were euthanized, the brain was removed and the structures hypothalamus, prefrontal cortex, hippocampus and striatum were isolated for evaluation of energy metabolism. The research project was approved by the UNISUL Animal Ethics Committee (20.003.4.01. IV). **Results:** obesity led to lower activity of complex I and creatine kinase (CK) in the hippocampus, and inhibition of complex II in the hypothalamus. OD generated an increase in citrate synthase activity and a decrease in complex I activity in the hippocampus, a decrease in succinate dehydrogenase and complex II activity, and an increase in malate dehydrogenase in the hypothalamus. Association of obesity with OD led to a decrease in the activity of complex I in the hippocampus and of citrate synthase, isocitrate dehydrogenase and complex II in the hypothalamus, and an increase in CK activity in the striatum. **Discussion:** The structures most affected by obesity and OD were the hypothalamus and hippocampus, given the mitochondrial dysfunction found in these structures, and the striatum with greater CK activity. These structures are involved in controlling hunger and satiety, as well as memory and mood. When analyzing the groups separately, it was observed that OD led to more pronounced mitochondrial damage; however, the association of obesity with OD, as well as obesity alone, also generated losses. **Conclusion:** It is concluded that obesity and OD lead to mitochondrial dysfunction s, which may lead to losses in feeding control and cognition of the matrices. **License number of ethics committee:** 20.003.4.01.IV CEUA: Universidade do Sul de Santa Catarina.

PT.133 POSITIVE RELATIONSHIP OF SERUM FATTY ACIDS AND INFLAMMATORY PROFILE IN WOMEN WITH SEVERE OBESITY

Lima GB[1], Billerbeck NC[2], Figueiredo N[2], Kattah FM[1], Oliveira ES[1], Oyama LM[3], Moreira RG[4], Horst MA[1], Dâmaso AR[5], Lima GC[1], Corgosinho FC[1,2]

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Introduction: Leptin plays an important role in energy balance control, however, its concentrations tend to be high in individuals with obesity, as a result of leptin resistance state. High concentrations of leptin have been associated with an increased inflammatory profile in this population. On the other hand, adiponectin acts as an anti-inflammatory cytokine improving insulin sensitivity. Thus, the leptin/adiponectin and adiponectin/leptin ratios have been considered important markers of the pro- and anti-inflammatory state, respectively. Fatty acids have also been studied for their pro- and anti-inflammatory effects, such as omega-3s, which appear to reduce low-grade inflammation, particularly in individuals with obesity. **Objective:** The objective of this study was to evaluate whether there is a correlation between serum fatty acids and leptin/adiponectin and adiponectin/leptin ratios in women with severe obesity. **Patients and methods:** Forty-four severely obese women were evaluated. Blood was collected for analysis of adipokines by ELISA and fatty acids by chromatography. Data normality was assessed using the Shapiro Wilk test, and Person's or Spearman's correlation was used according to data normality. For data with strong correlation, regression was performed. The software used was R Studio (version 4.2.2) and $p < 0.05$ was considered significant. **Results:** The volunteers had a mean age of 40.21 + 8.3 years and BMI of 48.38 + 6.66. We identified 22 plasmatic fatty acids at the patient's serum. The results show a moderate positive correlation between the leptin/adiponectin ratio and the C20:3n6 ($p < 0,000$) fatty acid. And a strong positive correlation between the adiponectin/leptin ratio and the C22:6n3 ($p < 0,000$) fatty acid. W-3 fatty acid was an independent factor for adipo/lep ratio ($p < 0.000$, R^2: 0,54). **Discussion:** The C20:3n6 fatty acid can be derived from the C18:2n-6, $p < 0,000$) present in the westernized diet. It metabolites form eicosanoids that have an inflammatory action and regulate cytokines, explaining the correlation found here. On the other hand, C22:6n3 can bind the transcription factor gamma (PPARγ), which plays a significant role promoting gene expression of anti-inflammatory citockynes, such as adiponectin. **Conclusion:** For the first time we showed that Omega-3 fatty was an independent factor for adipo/leo, while omega-6 fatty was correlated with lep/adipo in women with severe obesity, demonstration the relation between the fatty acids and inflammatory process. **License number of ethics committee:** Comitê de Ética em Pesquisa da Universidade Federal de Goiás e Hospital Estadual de Goiânia, Dr. Alberto Rassi (nº 961/19).

PT.134 HOMA-IR AS A PREDICTOR OF PAI-1 LEVELS IN WOMEN WITH SEVERE OBESITY

Kattah FM, Figueiredo N, Oliveira ES, Lima GB, Lima GC, Dâmaso AR, Oyama LM, Melo PRE, Horst MA, Corgosinho FC

Introduction: Obesity is a chronic inflammatory disorder that increases the risk of cardiovascular diseases (CVD). Given the high CVD mortality rate, early screening with a preventive aim is of utmost importance among individuals with obesity. Plasminogen activator inhibitor (PAI-1), a cytokine that links obesity and CVD, represents a promising biomarker, although it is not a part of a common clinical routine due to its high cost. Therefore, it is necessary to find good predictors that would allow an indirect assessment of PAI-1 levels and consequently an estimation of CVD development risk. **Patients and methods:** In this study, which included 47 women with severe obesity, it was measured weight, height, neck (NC), waist (WC), and hip circumference (HC) and blood samples to analyze the metabolic profile (glucose/lipid profile; c-reactive protein) and PAI-1 (determined by ELISA immunoassay). Statistical analysis was performed using the Statistical Package for the Social Sciences (SPSS). Normality was evaluated using the Shapiro-Wilk test. Volunteers were grouped according to the PAI-1 median value (21 pg/mL). Pearson's or Spearman's correlation analysis was performed to correlate variables and the t-test for independent samples to compare differences of means between groups. A bivariate logistic regression model was performed using Wald Test. P-value ≤ 0.05was considered statistically significant. **Results:** Women with severe obesity who have higher levels of PAI-1 have lower values of High density lipoprotein cholesterol (HDL) and Quantitative Insulin Sensitivity Check Index (QUICKI) and higher values of Homeostasis Model Assessment-Adiponectin (HOMA-AD) and Homeostatic Model Assessment of Insulin Resistance (HOMA-IR). HOMA-IR showed to be a good predictor of PAI-1 in this sample ($B = 0.2791$; $p = 0.017$). **Discussion:** For the first time, this study showed HOMA-IR as a predictor of PAI-1 levels in women with severe obesity. A previous study observed the influence of HOMA-IR on PAI-1 concentration in individuals with normal weight, overweight and obesity, but not severe obesity. Previous studies have demonstrated the relationship between PAI-1 and metabolic parameters showing that individuals metabolically unhealthy independently of BMI have higher levels of PAI-1 **Conclusion:** HOMA-IR could be used as a predictor of PAI-1 levels, pointing out the relevance of assessing glycemic parameters for the prevention of CVD in women with severe obesity. **License number of ethics committee:** Research Ethics Committee of the Federal University of Goiás and the State Hospital of Goiânia, Dr. Alberto Rassi (nº 961/19).

PT.135 ACTIVATION OF BROWN ADIPOSE TISSUE IN WOMEN WITH METABOLICALLY HEALTHY AND UNHEALTHY OBESE PHENOTYPES IN COMPARISON TO LEAN SUBJECTS

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Introduction: BAT has attracted attention for its importance in physiology and for being a potential therapeutic target for obesity and diabetes. The subset of individuals with obesity termed metabolically healthy obesity (MHO) has not yet been studied for BAT activation. Thus, the aim was to compare cold-induced BAT activation among women with MHO and metabolically unhealthy obesity (MUO) phenotypes, with a metabolically healthy normal weight (NW) group (BMI < 25). **Patients and methods:** Cross-sectional ongoing study with 69 women (21 MHO, 12 MUO, 36 NW) aged between 20 and 39 years old. Metabolically healthy participants had no alterations in blood pressure, fasting glucose, HDL, and triglycerides. BAT activity was assessed by infrared thermographic camera positioned in the supraclavicular region at ambient temperature (28 °C) followed by 2-h of cold exposure (18°C). Images were obtained at baseline, 15, 30, 45, 60, 75, 90, 105, and 120 minutes. The area under the curve of temperature (AUC_{temp}) obtained during the 2-h period and the maximum temperature (T_{max}) obtained during of cold exposure were considered. Waist circumference, body composition and distribution using DEXA, glycemic and lipid profiles, and HOMA-IR index were evaluated. **Results:** MHO and MUO phenotypes did not differ according to BMI and age ($p > 0.05$). The NW group showed higher AUC_{temp} (4,135 °C [4,098-4184 °C]) and T_{max} (35 °C [34-35 °C]) values than MHO (4,060 °C [4,001-4,084 °C], 34 °C [33-35 °C]) and MUO (4,071 °C [4,056-4,098 °C], 34 °C [34-35 °C]) [$p = 0.018$; $p = 0.08$], respectively. AUC_{temp} and T_{max} of the supraclavicular region (BAT region of interest) were negatively correlated with BMI (r = -0.575 and -0.500), blood glucose (r = -0.463 and -0.452), triglycerides (r = -0.383 and -0.396), total cholesterol (r = -0.229 and -0.261), HOMA-IR (r = -0.444 and -0.402), total body fat (r = -0.607 and -0.550), android fat (r = -0.623 and -0.538), gynoid fat (r = -0.577 and -0.512), visceral adipose tissue (r = -0.563 and -0.534) and diastolic blood pressure (r = -0.243 and -0.248) [$p < 0.001$ for all]. AUC_{temp} was negatively correlated with A1c (r = -0.281, $p = 0.05$). **Conclusion:** Preliminary results indicated that both obese groups did not differ from each other in relation to BAT activation. NW women showed better activation of BAT compared to obese women, and the degree of BAT activation showed an inverse association with worse metabolic and body adiposity parameters. Number Fapesp: 2021/02008-5. **License number of ethics committee:** CAAE: 39037120.0.0000.5404, Universidade Estadual de Campinas (Unicamp).

PT.136 ASSOCIATIONS BETWEEN CHRONOTYPE AND WEIGHT CYCLING WITH METABOLIC AND BODY ADIPOSITY PARAMETERS

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Introduction: Obesity is a disease that may be associated with weight cycling, which consists of repeated intentional loss and recovery of body weight. Another relevant aspect is its higher prevalence in people with the evening chronotype, which is a parameter that indicates the time of day when an individual prefers to carry out activities such as eating, sleeping, and concentrating. Thus, the aim was to investigate the associations between chronotype, body weight cycling, and metabolic parameters in individuals with a wide range of adiposity. **Patients and methods:** This cross-sectional study included 153 adults (129 women) aged 19-42 years. Waist circumference (WC), sagittal abdominal diameter (SAD), body composition using dual-energy X-ray absorptiometry, glycemic and lipid profiles, and the HOMA-IR index were evaluated. A weight cycling questionnaire from the Nurses Health Study was applied, which allowed the classification of participants into non-cyclers (NC), light cyclers (LC), moderate cyclers (MC), and severe cyclers (SC). To classify the chronotype (morning, intermediate, and evening), the Morningness-Eveningness Questionnaire was used, whose final score can vary from 16 to 89; the higher the score, the more morning the chronotype will be. For statistical analysis, ANOVA, Kruskal-Wallis, and Spearman correlation tests were used, with a significance level of $p < 0.05$. **Results:** The mean age was 29 ± 5 years, and BMI was 27.0 ± 7.3 kg/m². There were 17% NC, 9% LC, 19% MC and 55% SC. For chronotypes, 33% were morning, 50% were intermediate, and 17% were evening. The morning participants had lower insulinemia and HOMA-IR values than the intermediate group ($p < 0.03$) and lower SAD and visceral fat mass values than the intermediate ($p < 0.02$) and evening ($p < 0.01$) groups. SC had higher means of BMI, diastolic blood pressure, WC, SAD, glycemia, glycated hemoglobin, insulinemia, HOMA-IR, cholesterol, LDL, triglycerides, % android fat and visceral adipose tissue compared to the other groups ($p < 0.03$). MC group had a higher mean BMI and glycated hemoglobin level than the NC group ($p < 0.04$). **Conclusion:** The evening and intermediate chronotypes and severe cycler groups had worse cardiometabolic health than other groups. Evaluation of chronotype and weight cycling are clinical indicators that must be included in the anamnesis of obese patients, with the aim of assisting in the diagnosis and management of the disease. Pibic/CNPq and Fapesp (2022/15297-8). **License number of ethics committee:** 39037120.0.0000.5404, Unicamp.

PT.137 EFFECTS OF METFORMIN ON THE INFLAMMATORY RESPONSE OF EXPERIMENTAL ARTHRITIS IN MILD-OBESE MICE

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Rheumatoid arthritis (RA) is the most prevalent rheumatic disease globally. Its prognosis is related to synovial joints stiffing, associated with pain and swelling. However, RA's effects are not only restricted to joints. Patients with RA have systemic metabolic alterations, leading to an increased risk of developing cardiovascular diseases. When RA is associated with obesity, a disease characterized by the expansion and inflammation of adipose tissue, there is a worse prognosis. However, few studies elucidate the role of metabolism in the severity of rheumatoid arthritis. Thus, we aimed to evaluate whether the metabolic alterations caused by mild obesity change the immune response of chronic experimental arthritis. This study was approved under protocol 288/2017 by the Ethics Committee on Animal Use (CEUA) of the Federal University of Minas Gerais (UFMG). Male Balb/c mice were fed a chow diet (C) or a high-refined carb diet (HC) throughout the experimental period. After four weeks, the arthritis induction protocol started with an intra-articular injection of PBS or mBSA (AIA). After the first immunization, we treated animals with 5 mg/mL of metformin, administered in the drinking water ad libitum (MET). Therefore, we formed experimental groups (i) C PBS, (ii) C AIA, (iii) HC PBS, (iv) HC AIA, (v) C MET AIA, (vi) HC MET PBS, and (vii) HC MET AIA. Mice fed the HC diet did not have a difference in weight but increased the adiposity index, adipocyte area, and blood glucose. This same group had worsening markers of arthritis severity, such as hypernociception, increased neutrophils, IL-1β, and IL-17 cytokines in the joint cavity, and a higher arthritis score. Treatment with metformin in the lean group reduced all metabolic parameters evaluated, such as blood glucose, adipocyte area, and adiposity index, in addition to reduced joint inflammation, evidenced by lower neutrophil counts and reduced MPO enzyme. Obese animals treated with metformin showed a reduction in blood glucose and adipocyte area but not in the adiposity index. However, once again, all inflammatory parameters of arthritis were minimized after metformin treatment. We found evidence that glucose metabolism influences the inflammatory process in this experimental arthritis model and animals with a diet rich in refined carbohydrates. Our data, therefore, indicate that metformin has therapeutic potential in arthritis associated or not with obesity. **License number of ethics committee:** 288/2017, CEUA/UFMG.

PT.138 ASSOCIATION BETWEEN LIPIDOGRAM AND RICHNESS AND DIVERSITY OF THE GUT MICROBIOTA IN WOMEN WITH OBESITY

Gil JS[1], Coimbra VOR[1], Siais LO[1], Grangeiro ED[1], Nascimento MAA[1], Soares MM[1], Soares MM[1], Mello IS[1], Silva RMB[1], Mattos FC[1], Lopes TS[1], Alves MR, Faller ALK[1], Carneiro JRI, Rosado EL[1]

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Introduction: Obesity, a chronic disease that has been increasing in recent years, has been associated with dysbiosis, which can contribute to changes in lipid metabolism, which may result in dyslipidemia. Greater gut microbiota (GM) richness and diversity appears to be associated with health benefits. However, Jia *et al.* (2021) point out a lower diversity of GM in individuals with hyperlipidemia, probably due to the inflammatory profile, characterized by a lower abundance of bacteria producing short-chain fatty acids and a greater abundance of bacteria producing lipopolysaccharides. However, more studies are needed, especially in humans with obesity, to achieve a better understanding of the association between GM and alterations in the lipid profile. **Patients and methods:** This is an observational study with 42 adult women with obesity. To evaluate total cholesterol (TC), triglycerides (TG) and high density lipoprotein cholesterol (HDL-c), blood was collected after twelve hours of overnight fasting, and low density lipoprotein cholesterol (LDL-c) and very low density lipoprotein cholesterol (VLDL-c) were calculated. GM was evaluated by the 16S ribosomal sequencing method. The SPSS 22.0 program was used for statistical analyses, considering p-value < 0.05. Data were expressed as median and interquartile range. **Results:** The participants had a Body Mass Index of 46.93 (12.06) kg/m² and 170.5 (64.0) mg/dL of TC, 122.5 (83.0) mg/dL of TG, 101.5 (46.0) mg/dL of LDL-c, 44.0 (12.0) mg/dL of HDL-c and 22.5 (11.0) mg/dL of VLDL-c. There was a moderate negative correlation between genera richness with TG (r = -0.394; p = 0.01) and VLDL-c (r = -0.391; p = 0.011). The richness and diversity of phyla, as well as the diversity of genera, were not associated with any lipid indicator. **Discussion:** The results corroborate the evidence shown by Jia *et al.* (2021) according to which the greater GM diversity contributes to the improvement of lipid homeostasis. At the same time, Lei *et al.* (2022) also concluded that GM has a causal relationship with the pathophysiology of dyslipidemia and can lead to worsening dysbiosis. **Conclusion:** The present study suggests that the genera richness seems to be associated with the improvement of the participants lipid profile, since it was observed that the greater the GM genera richness, the lower the TG and VLDL-c values. **Keywords:** Obesity; gut microbiota; human microbiome; lipid profile. **License number of ethics committee:** Número do Parecer: 3.475.044 Instituição: UFRJ – Hospital Universitário Clementino Fraga Filho da Universidade Federal do Rio de Janeiro.

PT.139 INVESTIGATION OF THE EFFECTS OF GOLD NANOPARTICLES ASSOCIATED WITH CARNITINE ON NEUROCHEMICAL PARAMETERS OF MICE SUBJECTED TO OBESITY

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Introduction: Obesity leads to inflammation in adipose tissue that can reach the central nervous system leading to oxidative stress and mitochondrial dysfunction. Due to the lack of effective treatments for obesity, it is necessary to search for new therapeutic alternatives. Gold nanoparticles (GNPs), by serving as drug carriers, could take carnitine to the adipose tissue so that they act in this tissue, increasing the oxidation of fatty acids, decreasing inflammation and restoring cerebral homeostasis. The aim of this study was to investigate the effects of GNPs associated with carnitine on neurochemical parameters in mice subjected to obesity. **Methods:** Eighty male Swiss mice that received a normolipid diet or a high-fat diet for 10 weeks were used. At the end of the sixth week, the groups were divided into daily treatment with saline, GNPs of 20 nm (70 ug/kg), carnitine (500 mg/kg) or GNPs associated with carnitine, the treatment lasted 4 weeks. Body weight was monitored weekly. At the end of the tenth week, the animals were euthanized and the mesenteric fat removed and weighed, the brain structures hypothalamus, prefrontal cortex, hippocampus and striatum were isolated for analyzes of oxidative stress and energy metabolism. **Results:** Obesity led to greater body weight, greater accumulation of mesenteric fat, oxidative damage in the hippocampus and mitochondrial dysfunction in the prefrontal cortex, hippocampus and striatum. Treatment with GNPs or association proved to be effective in reversing oxidative stress and mitochondrial dysfunction in the structures, whereas isolated or associated carnitine demonstrated a more pronounced effect at the reducing the accumulation of mesenteric fat. **Discussion:** GNPs catalyze the oxidation of NADH to NAD+, this effect is positive because complex I in the electron transport chain oxidizes NADH to NAD+, and is the main site where ROS production occurs. Thus, modulation by complex I GNPs could be a target for this molecule to prevent oxidative stress. The effect of carnitine in reducing mesenteric fat is justified by the fact that carnitine has the main function of transporting fatty acids into the mitochondria, acting on the oxidation of these fatty acids. **Conclusion:** The association of GNPs with carnitine can be a promising option for the treatment of obesity, as long as there is an associated dietary control. **License number of ethics committee:** This research project was submitted to the evaluation of the Ethics Committee on Animal Use (CEUA) of University of Southern Santa Catarina (UNISUL) and approved under protocol 21.008.4.01.IV.

PT.140 COMPARISON BETWEEN GUT MICROBIOTA RICHNESS AND DIVERSITY IN BRAZILIAN WOMEN WITH OBESITY WITH AND WITHOUT SYSTEMIC ARTERIAL HYPERTENSION

Siais LO[1], Coimbra VOR[1], Grangeiro ED[1], Soares MM[1], Nascimento MAA[1], Melo IS[1], Silva RMB[1], Gil JS[1], Lopes TS[1], Ribeiro-Alves M[1], Faller ALK[1], Mattos FCC[1], Carneiro JRI[1], Rosado EL[1]

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Introduction: Gut microbiota (GM) is a complex ecosystem that has been implicated in metabolic diseases such as obesity and cardiovascular diseases (CVD) due to its inflammatory potential. Although clinical and experimental studies have suggested that alterations in GM may be involved in regulating systemic arterial hypertension (SAH), one of the most prevalent CVD in the world, particularly in individuals with obesity, this mechanism remains not fully understood. Recently, some studies reported lower GM richness and diversity in people with SAH, but there is still little research in this scope in humans with obesity. Thus, this study aimed to evaluate the association between SAH and GM richness and diversity in women with obesity. **Patients and methods:** Cross-sectional, observational study performed with 42 adult women with obesity. GM analysis was performed using stool samples through the 16S ribosomal sequencing method and GM composition was evaluated by calculating Chao richness and Shannon diversity index. Data on the diagnosis of SAH were self-reported. Thus, the population was divided into two groups according to the presence or not of the disease. For statistical analysis, SPSS v.22 software was used, considering p-value < 0.05. Comparisons between groups were performed using the Mann-Whitney test. **Results:** Among 42 participants, 25 had SAH and 17 had no diagnosis. No statistical difference was observed between the groups with regard to the richness (p = 0,631) and diversity (p = 0,848) of phyla that compose the GM, but concerning the genera, both richness (p = 0,012) and diversity (p = 0,025) were higher in women with SAH than in those without SAH. **Discussion:** Surprisingly, according to our findings, genera richness and diversity were higher in women with SAH. The opposite was demonstrated in a study by Li *et al.* (2017), in which individuals with SAH and pre-SAH had lower microbial richness and diversity when compared to the control group. Still, Yang *et al.* (2015) observed a reduction in both parameters in people with SAH. In addition, Louca *et al.* (2021) concluded that GM diversity and composition were associated with SAH. **Conclusion:** In the present study, it was observed that women with obesity and SAH presented higher genera richness and diversity than those without SAH. This result diverges from the usually found in literature, suggesting that other factors implicated in GM composition must be evaluated. **License number of ethics committee:** 16427219.2.0000.5257.

PT.141 ASSOCIATION BETWEEN *LACTOBACILLUS* AND TRIGLYCERIDE CONCENTRATIONS IN BRAZILIAN WOMEN WITH OBESITY

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Introduction: According to the 2022 World Obesity Atlas, it is estimated that, in the current year (2023), about one billion individuals will be diagnosed with obesity. The excess adipose tissue characteristic of this disease leads to changes in lipemia, especially in the increase in triglyceride (TG) concentrations, which may be associated with the composition of the gut microbiota (GM). On the other hand, gram-positive bacteria such as *Lactobacillus* (Bacillota) may be positively related to reduced TG concentrations. Thus, the present study aimed to evaluate the association between the presence of *Lactobacillus* and TG concentrations in women with obesity. **Patients and methods:** Cross-sectional study, carried out with 37 adult women with obesity. The study population was divided into tertiles, according to the TG concentrations (1st tertile: TG ≤ 87.25; 2nd tertile: TG > 87.25 and < 117; 3rd tertile: TG ≥ 117 mg/dL). The sample was divided according to fasting triglyceridemia. GM was evaluated by the 16S ribosomal sequencing method. Statistical analyzes were performed using SPSS v. 22.0, considering p-value < 0.05. **Results:** The presence (11.11%) of the genus *Lactobacillus* (Bacilota) was observed in tertile 1, but not in the second and third tertiles. **Discussion:** In the present study, it was not possible to observe any association between triglyceridemia and the genus of bacteria *Lactobacillus*. Ettinger *et al.*, (2014), demonstrated that probiotic strains, such as *L. rhamnosus* GR-1, are capable of improving the lipid profile, reducing blood pressure, and significantly attenuating ventricular hypertrophy, thus being able to improve cardiovascular health. On the other hand, in studies with individuals with multiarterial diseases and cardiovascular diseases, higher concentrations of *Lactobacillus* were observed (GAO et al., 2018; Wilson *et al.*, 2020). **Conclusions:** The genus *Lactobacillus* seems to be associated with lower TG concentrations in women with obesity. Yet, there are few studies on the association between GM and lipid profiles in humans. **License number of ethics committee:** 16427219.2.0000.5257.

PT.142 BROWN ADIPOSE TISSUE (BAT): PRESENCE AND FUNCTIONALITY AMONG PATIENTS WITH FAMILIAL PARTIAL LIPODYSTROPHY (FPL), OBESITY AND EUTROPHY

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Introduction: Familial partial lipodystrophy (FPL) is a rare disease with reduced subcutaneous fat in the limbs and buttocks. The presence and functionality of brown adipose tissue (BAT) on FPL is unknown. **Aim**: Evaluate the activity of BAT in response to cold exposure by infrared thermography on FPL, obesity and eutrophy. **Methods:** Evaluated 103 individuals: 5 FPL with confirmed molecular diagnosis; 50 with normal weight (NW) and 48 with obesity (OB). Glucose, insulin, lipid profile, AST/ALT and CRP were measured. HOMA-IR was calculated. Anthropometric measurements: waist (WC), hip (HC), neck (NC) circumferences, sagittal abdominal diameter (SAD) and waist/hip ratio (W/H). Body composition and visceral fat (VAT) were assessed by DXA. BAT was evaluated by infrared thermography in rooms with temperature at 28 °C (acclimatization for 30 min) and 18 °C (cold exposure of 2 h). Thermographic images were obtained every 15 min at: supraclavicular (Tscv, BAT location) and pectoral (relative temperature data -Trel), area under the temperature curve (AUCt) and maximum temperature (Tmax). **Results:** There was difference in the medians of BMI ($p < 0.0001$) and VAT ($p < 0.0001$) – BMI (kg/m^2): FPL: 27.2 (26.6; 29.1), NW: 21.4 (20.1; 23.4) and OB: 34.6 (31.2; 38.4); VAT weight (g): FPL: 1272 (1019; 1848), NW: 113 (70.5; 268.5), OB: 1152 (808.5; 1791.5). FPL group had higher W/H, NC, glucose, insulin, triglycerides, ALT, HOMA-IR, and lower CRP and HDL *vs.* NW ($p < 0.001$ for all). FPL group *vs.* OB group presented lower %fat, CRP and HDL ($p < 0.001$) and greater VAT and triglycerides ($p < 0.001$). FPL group presented lower Tscv at 45, 75 and 105 min on the cold *vs.* NW ($p < 0.001$); and lower Trel values at 45, 75 and 105 min *vs.* NW and OB ($p < 0.01$). NW group presented higher Tscv value at 15, 45, 75 and 105 min and higher AUCt and Tmax *vs.* OB group ($p < 0.01$). AUCt was negatively correlated with BMI ($r = -0.55$), WC ($r = -0.48$), SAD ($r = -0.54$), % fat depots: total ($r = -0.56$), android ($r = -0.58$), gynoid ($r = -0.49$) and VAT ($r = -0.48$); glucose ($r = -0.42$) and CRP ($r = -0.40$); $p < 0.0001$ for all. **Discussion:** As expected, euthrophy showed better BAT stimulation compared to obesity. The lowest BAT activity was observed in the LPF group, which allows speculate that BAT may contribute to the pathophysiology of the obesity and its comorbities. **Conclusion:** FPL presents a dysmetabolic condition probably related to reduced BAT activation. Fapesp Grant: 2020/12112-1. **License number of ethics committee:** 39037120.0.0000.5404 – Faculty of Medical Science - University of Campinas; 39037120.0.3003.5440 – Hospital das Clínicas of Faculty Medicine of Ribeirão Preto – USP.

PT.143 EXPOSURE TO BISPHENOL S ASSOCIATED WITH A HIGH-FAT DIET IMPAIRED KIDNEY FUNCTION IN MICE

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Introduction: Obesity is a multifactorial disease, and its progression could be linked to renal dysfunction. In addition, exposure to endocrine disruptors, such as bisphenols, could potentially deteriorate kidney function through increased inflammation and oxidative stress. **Objective:** Evaluate the impact of Bisphenol S (BPS) and high-fat diet exposure on renal function in mice. **Methods:** Male C57BL/6 mice were divided (n = 9) into Control (C), High Fat (HF), Control+BPS (CBPS), and High Fat+BPS (HFBPS) groups. BPS (25 µg/kg body mass/day) was offered in the drinking water. Body mass, Systolic Blood pressure (SBP) and glucose tolerance test (OGTT) were measured. After 12 weeks, animals were euthanized, kidneys were weighed and plasma was collected to assess biochemical analyses. Glomerular Filtration Rate (GFR) was measured. Ethics Committee approval nº 1929240521. **Results:** Concerning Systolic Blood pressure, CBPS and HF groups showed an increment compared to the control group ($p = 0.0256$; $p = 0.0003$, respectively). In OGTT, the HF and HFBPS groups showed a larger area under the curve than the control group ($p < 0.0001$, for both) and HFBPS was higher compared to CBPS ($p = 0.0003$). Plasma urea and creatinine were increased in the HFBPS group compared to the control (66.22 ± 13.04 *vs.* 51.22 ± 10,59, $p = 0.0296$; 0.2514 ± 0.05 *vs.* 0.1467 ± 0.04, $p = 0.0008$, respectively), while creatinine was higher in HFBPS compared to CBPS and in HF compared to C (0.2514 ± 0.05 *vs.* 0.1750 ± 0.05, $p = 0.0214$; 0.2200 ± 0.04 *vs.* 0.1467 ± 0.04, $p = 0.0240$). GFR was decreased in the HFBPS group compared to C, CBPS and HF (0.6087 ± 0.2602 *vs.* 1.110 ± 0.2227, $p = 0.0016$; 0.6087 ± 0.2602 *vs.* 1.155 ± 0.2706, $p = 0.0004$; 0.6087 ± 0.2602 *vs.* 1.172 ± 0.2580, $p = 0.0004$, respectively). Total cholesterol was increased in HBPS compared to CBPS and C ($p = 0.0416$; $p < 0.0001$), as well as in CBPS compared to C ($p = 0,0010$). The right kidney mass was higher in CBPS, HF, and HFBPS when compared to the control (0.1928 ± 0.0147 *vs.* 0.1651 ± 0.0193, $p = 0.0160$; 0.2097 ± 0.0071 *vs.* 0.1651 ± 0.0193, $p < 0.0001$; 0.1908 ± 0.0175 *vs.* 0.1651 ± 0.0193, $p = 0.0284$). **Discussion:** The preliminary results demonstrated that BPS could aggravate kidney dysfunction in a high-fat diet model. Further studies are necessary to elucidate the metabolic pathways involved in this condition. **Conclusion:** Exposure to BPS and a high-fat diet could worsen renal dysfunction, biochemical parameters, and renal mass. **License number of ethics committee:** 1929240521.

PT.144 IMPACT OF CHRONIC SLEEP PERTURBATION ON BIOMETRIC AND METABOLIC OUTCOMES IN RATS

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It is known that a decrease in sleeping hours predisposes to cardiometabolic diseases, cognitive deficits, and even cancer. While some studies associating sleep deprivation with metabolic outcomes come from clinical observation, where it is difficult to isolate the causality factor, others come from preclinic studies, where the daily duration of sleep deprivation is unrealistic. Thus, we proposed to evaluate the impact of moderate chronic sleep perturbation (SP) on biometric and metabolic parameters in rats, trying to mimic the human routine of going to bed later and waking up earlier during the week. For this, adult rats of both sexes were submitted to an SP protocol (multiple platform water) twice a day, between 06:00-08:00 h and 16:00-18:00 h, for 4 consecutive weeks, with interruption on the weekends. Body mass and food intake were analyzed throughout the protocol. Glucose and insulin tolerance tests, and biochemical, molecular, and organ masses analyses were also performed during the protocol progression. SP resulted in lower body mass gain in both sexes and changed the pattern of food intake, with oscillations between a tendency to reduce food intake during sleep perturbance days with a compensatory increase in rest periods. Male but not female rats became glucose intolerant at the end of the protocol compared with the control groups. Also, males but not females became more insulin sensitive. Rats from both sexes submitted to SP exhibited lower adipose mass without any change in plasma triacylglycerol values and had lower clock gene expression in peripheral tissues. We conclude that moderate chronic SP in rats reduces body mass and adiposity in association with altered food intake and clock gene expression regardless of sex. Chronic SP also promotes glucose intolerance in a sex-dependent manner. This study reinforces the need for attention to the quantity and quality of sleep and its impact on metabolic health. **License number of ethics committee:** CEUA-UFSC nº 9662240920.

PT.145 KETOGENIC DIET DURING LACTATION ON BODY COMPOSITION AND PHYSIO-METABOLIC PATTERNS IN THE OFFSPRING OF ADULT RATS

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Introduction: There are controversial results regarding the use of ketogenic diets (KD). Used in critical periods of development, such as lactation, KD are of scientific interest for because its effects are still unclear, although experimental evidence suggests that KD may predispose to the onset of diseases in adulthood. **Methods:** 16 nulliparous, adult Wistar rats, 56 female, and 58 male pups, were used. After delivery, the rats were assigned to the Control Group (CG n = 8) and Ketogenic Group (GK n = 8). The pups of both groups were assigned: Control Group Male (GCM n = 28), Control Group Female (GCF n = 30), Ketogenic Group Male (GKM n = 30), and Ketogenic Group Female (GKF n = 26). During lactation, the CG received the AIN-93G diet (3.6 cal/g, 18% protein, 63% carbohydrate and 19% lipid), and the GK received the ketogenic diet (5.4cal/g; 19% protein, 10% carbohydrate and 71% lipid). After weaning, the offspring of both groups received a commercial diet until they were 90 days old. In lactating rats, body weight and food and energy intake were quantified. In the *in vivo* pups, BW and food consumption were quantified; at 90 days of life, a glucose tolerance test (GTT) and insulin tolerance test (ITT) were performed. *Post-mortem*, organ wet weight, serum biochemical composition, liver lipid percentage, and AKT protein expression of the insulin signaling pathway in soleus muscle were analyzed. **Results:** The GK rats showed lower food intake at the end of lactation. GKM rats showed lower weight gain between 30 and 90 days of life. The GKM presented a higher plasma glucose concentration at the 30' time point of the GTT, and the GKF at the 60' time point; in the ITT the GKM presented higher plasma glucose concentration in most of the analyzed time points, and the GKF in the 0' and 30' time points, which resulted in a larger area under the glucose curve. The GKM had lower abdominal fat weight, and the GKF had higher abdominal fat, liver, soleus, and EDL muscle weight than the CG. The GKM also had higher concentrations of serum total cholesterol, LDL cholesterol, and HDL cholesterol, while the GKF had a lower concentration of serum glucose and a higher concentration of triglycerides. **Conclusion:** Maternal exposure to KD during lactation led to changes in offspring weight gain and body composition in postnatal life, in addition to increased circulating lipid fractions and changes in blood glucose across tests, with some of these results being divergent between the sexes. **License number of ethics committee:** 0053/21 – Comitê de ética e pesquisa em animais – Universidade Federal de Pernambuco. .

PT.146 EFFECTS OF SYNTHETIC FRUCTOSE INTAKE ON BODY COMPOSITION, ENERGY INTAKE, AND BIOCHEMICAL PROFILE

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Introduction: The intake of fructose-rich foods, such as industrialized beverages, has increased considerably. Some evidence shows that habit contributes to the development of non-transmissible chronic diseases, especially those related to metabolism. **Objective:** To analyze the effect of synthetic fructose added to drinking water two days a week on weight gain, energy intake, and biochemical profile of Wistar rats from adolescence to adulthood. **Methods:** A total of 20 males were randomly divided into 2 groups: Control (C) and Fructose (F2) that remained in an inverted cycle vivarium (8:00-20:00 dark and 20:00-08:00 light) in an environment with light, temperature, and controlled humidity. Fructose (supplied 2 days a week) was added to drinking water at a concentration of 20% and given along with the commercial feed (PTN: 25.55%; CHO: 52.04%; LIP: 4.11%; VET: 3.47 kcal/100 g) ad libitum. On the other days of the week, water was offered without the addition of fructose. Body weight was monitored weekly, the gain was calculated over the period, and visceral fat was collected and weighed after euthanasia. **Results:** The protocol used caused 15% greater body weight gain in the F2 group (C = 170.3 +- 19.87; F2 = 204.0 +- 30.8 g, p = 0.012), but with no difference in visceral fat deposits despite an intake energy 5% lower (C = 668141 +- kcal; F2 = 631881 +- kcal, p < 0.001). However, there was an increase in blood glucose, cholesterol, and liver enzymes TGP and TGO. **Discussion:** The results point to the control of the chronic intake of synthetic fructose. Disturbances in the biosynthesis of hepatic cholesterol and hepatocyte injury enzymes are observed. The observed hyperglycemia may be an indication of glucose intolerance or even insulin resistance. Evidence from the literature indicates that fructose, even if ingested without excess energy, has a highly lipogenic metabolism compared to other monosaccharides. Its entry into the glycolytic pathway is not allosterically or hormonally controlled by fructokinase C, leading to the overproduction of trioses, such as the synthesis of glyceraldehyde and dihydroxyacetone phosphate (DHAP), integrating it into the glycolysis cycle and stimulating lipogenesis. **Conclusion:** These preclinical results show that an excess of monosaccharides such as fructose, even without excess energy, must be limited to avoid pathologies related to metabolism. **License number of ethics committee:** 0041/2020 – Comitê de Ética e Pesquisa em animais – Universidade Federal de Pernambuco.

PT.147 EFFECTS ON INSULIN SIGNALING OF MICE OFFSPRING EXPOSED TO DIET CONTAINING INTERESTERIFIED PALM OIL DURING DEVELOPMENT AND RECHALLENGED IN ADULT LIFE

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Poor nutrition during critical developmental periods can contribute significantly to the onset of obesity and related health issues, including insulin resistance and type 2 diabetes. Interesterified fats have become popular in the food industry as a replacement for trans-fats. These fats are produced through a process of random rearrangement of fatty acids on triacylglycerols (TAGs). Studies have demonstrated a link between consumption of diets containing interesterified fats and the development of metabolic disorders affecting insulin signaling in metabolically active tissues such as the liver. Nevertheless, the effects of maternal consumption of interesterified fats on offspring's glucose homeostasis remain largely unknown. Female C57BL/6J mice were assigned to either a control diet containing natural palm oil (PALM) or a modified diet with interesterified palm oil (INTER) for four weeks during mating, pregnancy, and lactation. Murinometric and biochemical parameters were evaluated during pre-gestational and lactational periods. Offspring were weaned onto a control PALM diet from day 21 until day 42, then split into four experimental groups based on their dam's diet and the diet they received during the following 8 weeks, natural palm oil (P) or interesterified palm oil (I): PP, PI, IP, and II. Glucose, insulin, and pyruvate tolerance tests were conducted, and weekly weight gain and consumption were assessed. On day 98, the offspring were euthanized, and soleus and liver tissues were collected for qRT-PCR and Western Blotting analysis. Both dam and offspring weight gain did not differ between the control and experimental groups. Following weaning, there were no differences in glycemic homeostasis between the groups. However, preliminary analysis indicates a reduction in pAkt in the soleus of male and female offspring in the PI and II groups compared to the PP and IP groups. Only male offspring showed a similar pattern in hepatic pAkt compared to the soleus. Our preliminary results show that a rechallenge with interesterified fat in adult life may induce molecular alterations in the liver and soleus of the offspring. However, further analyses are needed to investigate other biomarkers of insulin signaling. **License number of ethics committee:** 5722-1/2021 – CEUA/Unicamp.

PT.149 FEXARAMINE MITIGATES HEPATIC STEATOSIS THROUGH ACTIVATION OF INTESTINAL FXR AND GUT-LIVER AXIS MODULATION IN HIGH-FAT DIET -FED MICE

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Introduction: In the pathogenesis of the nonalcoholic fatty liver disease (NAFLD), dysbiosis leads to intestinal permeability and changes in bile acids (BAs) composition through the gut-liver axis. BAs have become targets for NAFLD treatments. Thus, the intestinal FXR agonist, fexaramine improves hepatic steatosis via the gut-liver axis. **Methods:** Three-month-old C57Bl/6 male mice were randomly divided in two groups (n=20) and received a control (C, 10% of total lipid energy) or high-fat (HF, 50% of total lipid energy) diet for 12 weeks. Then, they were subdivided into C, C+FEX, HF, and HF+FEX (n = 10). Fexaramine was administered (FEX-5 mg/kg) diluted in 0,2% DMSO/PBS via orogastric gavage for three weeks. Body mass (BM), glucose metabolism, liver stereology, qPCR 16S rRNA gene expression, ileum gene expression (tight junctions (TJs) and incretin), and liver gene expression (lipogenesis, beta-oxidation, inflammatory cytokines, and BAs) were analyzed. **Results:** Fexaramine reduced BM and glucose intolerance, the *Firmicutes/Bacteroidetes* ratio, and increased the abundance of beneficial bacteria *Lactobacillus* sp., *Prevotella* sp. and reduced the harmful bacteria, *Escherichia coli*. Consequently, the ileal gene expression of *Fxr-Tgr5* and *Cldn-Ocldn-Zo1* was increased, and *Tlr4-Il6-Il1beta* was decreased. Furthermore, liver *Srebp1c-Ppargamma-Fas* and *Tlr4-Il6-Tnfalpha* gene expression decreased, and *Ppar-alpha* and *Fxr-Shp* expression increased, respectively ameliorating hepatic steatosis. **Discussion:** In the present study, Fexaramine modulates BAs-gut microbiota composition through intestinal FXR consequently induce benefits to the intestinal reach circulation and regulates organism host homeostasis. Whereas BAs and Fgf15 could modulates the hepatic FXR, which reduces glucose and lipids metabolism, reducing lipids droplets accumulation. The hypothesis for the positive effects of Fexaramine is that it acts through the modulation of the association between intestinal-specific FXR and the gut microbiota composition alteration. **Conclusion:** Fexaramine improved dysbiosis and intestinal permeability by intestinal FXR. Hepatic steatosis was ameliorated by hepatic FXR activation, lipogenesis inhibition and increased beta-oxidation. However, Fexaramine treatment resulted in glucose intolerance, insulin resistance, intestinal permeability, and hepatic steatosis in a control group, thus demonstrating that caution is still needed with the use of fexaramine in this dietary model. **License number of ethics committee:** CEUA 015/2019.

PT.150 CONDENSED MILK INGESTION BY C57BL/6 MICE ALTERS FEEDING BEHAVIOR AND GLYCOGEN STORES IN THE GASTROCNEMIUS MUSCLE

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Introduction: The intake of sugary drinks can interfere with the total intake of solid food and/or the total daily energy or nutritional value. The study aimed to analyze the effect of *ad libitum* condensed milk intake on muscle and liver glycogen stores and on parameters related to eating behavior. **Methods:** 18 young mice with an initial body weight of 22.09 ± 0.97g were randomly divided into groups fed a standard diet (C, n = 10) distributed at 3.6 kcal/g with a caloric contribution of 29% protein, 59 % protein, and 11% lipid, and, the group fed a standard diet (3.6kcal/g) plus condensed milk *ad libitum* (CL, n = 8) with an energy value of 3.05 kcal per gram and percentage of caloric contribution 9.8% protein, 72.0% carbohydrates (sucrose), and 17.7% lipids for 8 weeks. Weight gain was monitored over the period, and parameters of eating behavior and liver and muscle glycogen reserves were determined. The significance level adopted was $p < 0.05$. **Results:** The animals in the CL group had 15% more body weight at the end of the period when compared to the C group (C = 27.8 ± 1.6 g; CL = 31.5 ± 2.1 g, $p < 0.0001$); the analysis of eating behavior parameters showed that the addition of condensed milk to the diet reduced the amount of chow ingested by around 70% (C = 0.64 ± 0.12 g ; CL = 0.23 ± 0.13 g, $p < 0.0001$), and reduced rate of ingestion (C = 0.048 ± 0.008 g/min; CL = 0.017 ± 0.004 g/min, $p < 0.0001$) during an observation period of 90 min. Liver glycogen storage was not modified (C = 4,155 ± 0.505; CL = 3,495 ± 1,071 g, $p = 0.102$), but muscle storage was reduced in 88% compared to the control group (C = 0.737 ± 0.177 g; CL = 0.095 ± 0.020 g, $p < 0.0001$). **Discussion:** From the results, it can be inferred that the supply of condensed milk *ad libitum* for 8 weeks to a standard diet, caused a reduction in solid food intake and meal size, slowed down the speed of the food intake and decreased muscle glycogen; which may suggest signs of the onset of insulin resistance. **Conclusion:** Excessive intake of sugary beverages such as condensed milk can be highly harmful to health, compromising the adequate supply of energy and/or nutrients given the drastic reduction in solid food intake to the detriment of the consumption of beverages with low protein content but high in simple sugars. **License number of ethics committee:** 0049/2020, Universidade Federal de Pernambuco.

PT.151 HEDONIC AND HOMEOSTATIC FOOD RESPONSE OF OBESE FEMALE RATS SUBMITTED TO ACUTE STRESS (TAIL PINCH)

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Introduction: The homeostatic and hedonic control of food is influenced by stress that alters food intake and preference, leading the individual to changes in nutritional status. Thus, the hedonic and homeostatic response of obese rats subjected to acute stress was evaluated. **Methods:** 15 female Wistar rats, 21 days old, formed a control group - C (n = 7) and an obesogenic group – O (n = 8) with a westernized diet (4.6 kcal/g; 39.68% carbohydrate (52.31% simple carbohydrate; 24.50% protein and 35.80% lipid) or standard diet on a 12h light/12 h dark cycle. It was evaluated the evolution of weight, average weekly consumption, weekly and accumulated caloric consumption, the energy intake of macronutrients, and the tail pinch test, which consists of pinching the base of the animal's tail and evaluating the consumption of palatable food (cereal) and after 72 hours of standard chow, for a period of 30 minutes to 1 hour. **Results:** Excessive weight gain started in the 8th week (C = 176.8 ± 10.7 g; O = 218 ± 26.9 g; $p < 0.04$), even though O had a lower mean intake compared to C (C = 62, 6 ± 5.6 g; O = 34.7 ± 10.0 g; $p < 0.004$). There was no difference in mean weekly caloric intake (C = 217.2 ± 19.4 kcal; O = 159.8 ± 45.8 kcal; $p > 0.13$) and cumulative mean caloric intake (C = 217.2 ± 19.4 kcal; O = 159.8 ± 45.8 kcal; $p > 0.13$). After pinching, C ate more standard chow (C = 1.4 ± 0.6 g; O = 0.4 ± 0.4 g; $p < 0.004$), but with no difference in cereal intake. However, there was a difference in intragroup consumption of palatable food C (cereal = 3.6 ± 1.1g; standard = 1.4 ± 0.6 g; $p < 0.002$) and O (cereal = 3.3 ± 3.6 g; standard = 0.4 ± 0.4 g; $p< 0.004$). **Discussion:** Even with greater weight gain, group O consumed less food due to the satiating power of the diet. However, group C did not differ in energy intake, so the decisive factor for excessive weight gain was dietary nutritional quality. Concomitant to these results, the findings of the tail pinch test confirm previous studies in the literature, as both groups increased cereal consumption to the standard ratio, regardless of the dietary intervention performed. This is due to a stereotyped eating behavior due to the integration between the dopaminergic, endocannabinoid, and nociceptive systems, thus developing as a response, the food reward in search of pleasure/pain relief mainly through palatable foods. **Conclusion:** Given the above, it is concluded that acute stress increases the intake of palatable foods, contributing to obesity. **License number of ethics committee:** 0017/2022, Universidade Federal de Pernambuco.

PT.152 THE RESIDUAL EFFECT OF PHYTOMEDICINE *P. ACULEATA* IMPROVES THE LIPID PROFILE OF FEMALE RATS FED WITH A WESTERNIZED DIET

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Introduction: In recent years, the number of studies in the area of phytotherapy has been increasing worldwide to find new treatments for the control of chronic diseases, mainly due to comorbidities associated with obesity. One example is the phytomedicine from *P. aculeata*, popularly known as "Turk", "Turk's thorn" or "suprest" due to its hypolipidemic and hypoglycemic characteristics. This medicinal plant is used in some populations in Brazil, such as in Northeast Brazil, due to its easy access and low cost. Therefore, the present study aimed to investigate the lipid profile of westernized female rats treated with *P. aculeata* phytomedicine. **Methods:** 17 female Wistar rats, 21 days old, formed 2 groups: obese group – O and obese group with *P. aculeata* extract – OP. Biochemical parameters (cholesterol, triglycerides and high-density lipoprotein – HDL), thoracic and abdominal circumference, Lee index, and body weight were evaluated. The rats remained in an inverted cycle and were exposed to a Westernized diet (4.6 kcal/g; 39.68% carbohydrate (52.31% simple carbohydrate); 24.50% protein and 35.80% lipids) from weaning until the end of the study. The extract of *P. aculeata* was administered at a concentration of 140 mg/kg for 30 days after 8 weeks with a westernized diet in the OP group (group O was administered with distilled water to suffer the same stress), after 1 week the rats were euthanized. The significance of 5% was considered. **Results:** The results show a reduction in total cholesterol (O = 78.15 ± 13.54 mg/dL; OP = 62.55 ± 12.47*mg/dL, $p < 0.0310$) and HDL (O = 60.44 ± 8.90 mg/dL; OP = 49.16 ± 8.45*mg/dL, 62.55 ± 12.47*mg/dL, $p < 0.0210$) weight (O = 272.3 ± 38, 1 g, OP = 270.7 ± 24.2, $p > 0.9999$) Lee index (O = 2.810 ± 0.061 g/cm; OP = 2.808 ± 0.055 g/cm, $p > 0.9327$), abdominal circumference (O = 216.57 ± 1.57 cm; OP = 16.13 ± 0.99 cm, $p > 0.5150$) and thoracic (O = 14.58 ± 0.20 cm; OP = 14.13 ± 0.74 cm, $p > 0.1714$). **Discussion:** Even with the animals exposed to the westernized diet, the residual effect of the phytomedicine *P. aculeata* reduced the levels of total cholesterol and HDL. Similar findings are seen in the literature, where bioactive compounds from medicinal extracts act by interfering with cholesterol biosynthesis through HMGCoA reductase. **Conclusion:** The extract of *P. aculeata* at a dose of 140 mg/kg shows a residual effect on the reduction of hypercholesterolemia caused by the ingestion of a westernized diet. **License number of ethics committee:** 0017/2022, Universidade Federal de Pernambuco.

PT.153 ASSESSMENT OF BODY COMPOSITION AND COGNITIVE FUNCTION IN PATIENTS WITH HISTORY OF HEPATIC STEATOSIS BEFORE AND AFTER BARIATRIC SURGERY

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Introduction: The liver is a primary organ in the performance of several vital functions, including macronutrient metabolism. Liver steatosis is increasingly associated with metabolic syndrome in obesity, for which, the bariatric surgery is considered as one of the main treatments. The aim of this study was to investigate how hepatic steatosis affects body composition, cognitive performance, and circulating metabolites before and after the surgery. **Patients and methods:** Body composition was analyzed by bioimpedance testing. Patients also accomplished a battery of cognitive tests. Biochemical parameters were obtained from electronic medical records. IL -6 was analyzed by ELISA. Circulating metabolites were analyzed by GC/MS using plasma samples. Statistical analysis was performed on total subjects of the study or on the stratified subjects by the degree of hepatic steatosis (group 1: absent and mild; group 2: moderate and severe). The analysis was performed at two different time points, before and after bariatric surgery (12 months), using Jamovi version 1.8.4 and MetaboAnalyst. **Results:** Data analysis showed a lower effect of surgery on muscle mass gain ($p = 0.009$) and body fat loss ($p = 0.0013$) in group 2. Regarding cognitive test, an improvement in the attention test (Toulouse-Piéron-Cancelation and Stroop color) was observed in both groups after the surgery. However, the performance of unstratified subjects in the memory test (Digit Span) was reduced after the surgery. Group 2 showed lower levels of HDL cholesterol ($p = 0.041$), higher insulin level ($p = 0.013$) and Homa- IR ($p = 0.037$) before surgery. Metabolic profiling showed that amino acids and lipids are the main class of molecules that were altered between the groups. **Discussion:** Higher degree of hepatic steatosis affected muscle mass gain and body fat loss. According to the literature, muscle homeostasis depends on the balance of several metabolic pathways, which is regulated by insulin. Therefore, our observation can be explained by insulin resistance present before surgery, which can also alter the profile of the circulating metabolites. **Conclusion:** A higher degree of hepatic steatosis appears to be associate with insulin resistance, which can attenuate the effect of the bariatric surgery. **License number of ethics committee:** 503.590.

PT.154 THERAPEUTIC MANAGEMENT OF OBESITY AND HEPATIC STEATOSIS WITH LIRAGLUTIDE 3.0 MG AND KETOGENIC DIET

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Introduction: Obesity, the excess body fat, is a serious global public health problem due to its direct causal relationship with other diseases and complications already described in the medical literature. Complications such as type 2 diabetes mellitus (T2DM), dyslipidemia, hepatic steatosis, cardiovascular events, sleep apnea, neoplasms, metabolic syndrome and psychosocial issues that reduce patients quality of life and increase the mortality. The focus of the treatment includes lifestyle changes and, in specific cases, pharmacological and surgical treatments. This report aims to highlight the therapeutic management of obesity, the therapy used and to analyze the positive result obtained above average using liraglutide 3.0 mg. **Case report:** Male, 36 years old, obesity class II, hepatic steatosis, dyslipidemia and prediabetes. BMI 36.1 kg/m², waist circumference (WC) 114 cm, neck circumference (NC) 48 cm, HbA1c 6.1%, insulin 30 mg/dL, uric acid 7.6 mg/dL, total cholesterol (TC) 295 mg/dL, LDL 224 md/dL, ALT 55 U/L. No other changes. Management included liraglutide 3.0 mg 1x/day, continuous use, rosuvastatin 20 mg/day, ketogenic diet, multivitamin, omega 3 1,000 mg/day, biomagnesium 02 tablets/day and clinical follow-up. **Discussion:** Recent studies have shown that liraglutide at a daily dose of 3.0 mg subcutaneously, used as an adjunct to a hypocaloric diet and physical activity, may be associated with weight loss in overweight or obese adults, showing simultaneous reductions in the variables glucose levels, cardiometabolic risk factors and improvement in life quality. Furthermore, the combination of weight loss and improved glycemic control probably contributes to the reduction in the prevalence of pre-diabetes and the late onset of T2DM. **Conclusion:** After 4 months of treatment, the patient had a significant weight loss of 22.5% of body weight (25 kg), BMI 28 kg/m² (normal body fat and lean mass), in addition to a reduction of 20.5 cm in WC, 6.5 cm of NC, improvement in blood pressure levels, control of prediabetes, normalization of levels of transaminases, uric acid, insulin and HbA1c (6.1% to 5.4%). Decreased levels of TC and fractions, but LDL still off target. The positive result obtained and the notoriety of its unusual outcome considering the patient's hyper-responsive behavior to the change in lifestyle associated with liraglutide 3.0 mg as less than 4% achieve this result using this therapeutic approach.

PT.155 EVALUATING HEALTH-RELATED QUALITY OF LIFE WITH TIRZEPATIDE IN THE SURMOUNT-1 STUDY

Poon JL, Zhang S, Ford J, Malik R, Stenfanski A, Santos QGR

Introduction: In SURMOUNT-1, a phase 3, 72-week, randomized, double-blind clinical trial in participants with obesity, tirzepatide (TZP), a GIP/GLP-1 receptor agonist, resulted in significantly greater weight reduction than placebo. Changes in participant-reported health-related quality of life (HRQoL) were also assessed using the Impact of Weight on Quality of Life-Lite Clinical Trials Version (IWQOL-Lite-CT) instrument. **Methods:** The IWQOL-Lite-CT (20 items) was collected at baseline and endpoint of the primary treatment period (week 72 or early discontinuation). TZP 5 mg, n = 545; TZP 10 mg, n = 539; TZP 15 mg, n = 535; placebo, n = 477. The physical function (5 items) and psychosocial (13 items) composite scores were calculated. The sum of all items provided the total score. Scores were transformed to a scale of 0 to 100. Change in transformed scores from baseline to endpoint (last non-missing value prior to treatment discontinuation) were analyzed using an analysis of covariance model. **Results:** Mean scores at baseline with TZP 5 mg, 10 mg, and 15 mg doses and placebo were: total, 64.2, 61.9, 63.0, and 63.2; physical function, 64.4, 61.9, 63.3, and 64.0; psychosocial, 64.3, 62.1, 63.2, and 63.2, respectively. Significant improvements in all scores were observed with TZP 5 mg, 10 mg, and 15 mg doses compared to placebo at endpoint (all $p < 0.001$): mean total score increased by 18.6, 21.2, and 22.6, *vs.* 10.5; mean physical function score increased by 17.8, 20.7, and 21.8, *vs.* 10.1; and mean psychosocial score increased by 19.6, 22.1, and 23.6 versus 11.0, respectively. **Conclusion:** IWQOL-Lite-CT indicated significantly improved physical and psychosocial function among participants treated with TZP *vs.* placebo. Abstract previously presented at Obesity Week 2022.

PT.156 TIRZEPATIDE *VS.* SEMAGLUTIDE 2.4 MG FOR OVERWEIGHT AND OBESITY: AN INDIRECT TREATMENT COMPARISON

Wang D, Malik R, Yu M, Kan H, Bunck MC, Stenfanski A, Garcia-Perez LE, Hankosky E, Cercato C

Introduction: Tirzepatide (TZP) is a GIP/GLP-1 receptor agonist that induces clinically meaningful body weight (BW) reduction in people with obesity and/or overweight. In the absence of a head-to-head trial, this study compared the efficacy of TZP vs semaglutide 2.4 mg (SEMA) using an indirect treatment comparison (ITC) with placebo as the common comparator. **Methods:** Using aggregate data from SURMOUNT-1 and STEP-1 trials, mean percent change in BW from baseline and log odds ratio (OR) of achieving ≥ 5% weight loss target were compared between TZP (10, 15 mg) at week 72 and SEMA at week 68 using Bucher method for the efficacy estimand (trial product estimand in STEP-1). Sensitivity analysis was completed using the treatment regimen estimand (treatment policy estimand in STEP-1). **Results:** For the efficacy estimand, both TZP doses resulted in significantly greater reductions in percent change in BW *vs.* SEMA (TZP 10 mg mean difference: -4.48%, 95% confidence interval [CI] (-5.88%, -3.08%); TZP 15 mg mean difference: -5.68%, 95% CI (-7.08%, -4.28%); $p < 0.001$ for both). Significantly more participants achieved ≥ 5% weight loss with TZP 10 mg (log OR 0.69, 95% CI (0.16, 1.22); $p = 0.011$) and 15 mg (log OR 0.71, 95% CI (0.18, 1.25); $p = 0.009$) *vs.* SEMA. All treatment regimen estimand results were consistent with the primary analyses ($p \leq 0.012$), except analysis of log OR of achieving ≥ 5% weight loss between TZP 10 mg and SEMA ($p = 0.07$). **Conclusions:** In this ITC, greater weight loss was seen with TZP 10, 15mg versus SEMA. Previously presented at Obesity Week 2022.

PT.157 TIRZEPATIDE REDUCES BODY WEIGHT ACROSS BODY MASS INDEX (BMI) CATEGORIES: A SURMOUNT-1 PRE-SPECIFIED ANALYSIS

Aronne LJ, Jastreboff AM, Le Roux CW, Malik R, Ahmad N, Liu B, Bunck MC, Zhang S, Stenfanski A, Chachamovitz DSO

Introduction: This pre-specified analysis of SURMOUNT-1 trial evaluated the efficacy of tirzepatide (TZP) according to baseline severity of obesity. **Methods:** Adult participants, with obesity, or overweight (OW) with weight-related comorbidities (excluding diabetes), were randomised (1:1:1:1) to once-weekly TZP 5, 10, or 15 mg, or placebo (PBO). Percent change from baseline in body weight (BW) and proportion of participants achieving ≥ 5% BW reduction at week 72 were assessed in participants with BMI ≥27-<30 (OW), ≥30-<35 (Class 1 obesity), ≥35-<40 (Class 2 obesity), and ≥ 40 kg/m² (Class 3 obesity). On treatment data prior to discontinuation of study drug were used for analysis. **Results:** 2,539 adults were randomised (female = 68%, mean age = 45 years, BW = 104.8 kg, BMI = 38.0 kg/m²). All TZP doses lowered BW *vs.* PBO regardless of baseline BMI category ($p < 0.001$). The estimated treatment difference (95%CI) of TZP 5, 10, and 15 mg, respectively, *vs.* PBO for the %BW change from baseline was: -13.6% (-18.0,-9.3), -15.2% (-19.6,-10.8), and -15.2% (-19.6,-10.7) in OW; -13.9% (-15.7,-12.2), -19.3% (-21.1,-17.5), and -18.6% (-20.4,-16.7) in Class 1 obesity; -13.3% (-15.3,-11.2), -20.0% (-22.0,-17.9), and -22.5% (-24.5,-20.4) in Class 2 obesity; and -13.4% (-15.5,-11.3), -18.2% (-20.2,-16.2), and -20.3% (-22.3,-18.3) in Class 3 obesity. The proportion of participants achieving ≥ 5% BW reduction in each BMI category, respectively, was greater ($p < 0.001$) with TZP (92-100%, 90-98%, 90-98%, and 87-97%) *vs.* PBO (30%, 28%, 25%, and 30%). **Conclusions:** In adults with obesity, each TZP dose led to significant BW reductions *vs.* PBO irrespective of baseline BMI. The higher TZP doses (10 and 15 mg) led to greater BW reductions. Abstract previously presented at Obesity Week 2022.

PT.158 TIRZEPATIDE-INDUCED WEIGHT LOSS IS ASSOCIATED WITH BODY COMPOSITION IMPROVEMENTS ACROSS AGE GROUPS

Kushner RF, Aronne LJ, Stenfanski A, Ahmad N, Mao H, Bunck MC, Garcia-Perez LE, Zhang S, Chachamovitz DSO

Introduction: This analysis from SURMOUNT-1 trial evaluated the change in total body mass (TBM) and body composition (BC) across age subgroups. **Methods:** Adult participants, with BMI ≥ 30 kg/m², or ≥ 27 kg/m² and ≥ 1 weight-related comorbidity (excluding diabetes), were randomised (1:1:1:1) to once-weekly tirzepatide (TZP; 5, 10, or 15 mg) or placebo (PBO). TBM and BC were evaluated in a subpopulation that underwent dual-energy x-ray absorptiometry (DXA). Change from baseline in TBM and BC (fat mass to lean mass ratio [FM:LM]) at week 72 was assessed within age subgroups of <50, ≥50-<65, ≥65 years (post-hoc). On treatment data prior to discontinuation of study drug were used for analysis. **Results:** 255 adults were enrolled in the DXA substudy (female = 72%, mean age = 46 years, BMI = 38.0 kg/m², TBM = 101.8 kg, FM:LM = 0.94) and 160 had baseline and postbaseline DXA data (99, 41, and 20 in the subgroups with age <50, ≥50=<65, and ≥65 years, respectively). The percent change from baseline in TBM was -21.5%, -20.8%, and -22.0% with TZP (pooled 5/10/15 mg) *vs.* -2.3%, -12.2%, and -3.8% with PBO in the subgroups with age <50, ≥50-<65, and ≥65 years, respectively ($p < 0.001$, $p = 0.023$, and $p < 0.001$). The BC (FM:LM) change from baseline was -0.25, -0.24, and -0.25 with TZP (pooled 5/10/15 mg) *vs.* -0.03, -0.14, and -0.04 with PBO in the subgroups with age <50, ≥50-<65, and ≥65 years, respectively ($p < 0.001$, $p = 0.089$, and $p = 0.029$). **Conclusions:** In adults with obesity/overweight, TZP-induced weight reduction is associated with improvement in BC that is significant and consistent across age groups. Abstract previously presented at Obesity Week 2022.

PT.159 EFFECT OF TIRZEPATIDE ON BODY WEIGHT REDUCTION BY NUMBER OF OBESITY-RELATED COMPLICATIONS

Machineni S, Yu M, Dunn J, Stenfanski A, Wang F, Bunck MC, Neff LM, Santos QGR

Introduction: This post-hoc analysis of data from the SURMOUNT-1 trial was undertaken to explore the association between obesity-related multimorbidity and the weight-reduction efficacy of tirzepatide (TZP), a GIP/GLP-1 receptor agonist. **Methods:** Adults with a BMI ≥ 30 kg/m², or ≥ 27 kg/m² and at least one diagnosed weight-related complication (hypertension, dyslipidemia, obstructive sleep apnea, or cardiovascular disease), excluding diabetes, received TZP (5 mg, 10 mg, or 15 mg) or placebo for 72 weeks. History of obesity-related complications (ORC) was determined at baseline by participant self-report; 10 ORC were evaluated for these analyses, excluding prediabetes. Participants were grouped by number of baseline ORC [0 (n = 944; 37%), 1 (n = 686; 27%), or ≥ 2 (n = 909; 36%)]. Percent change in body weight (BW) from baseline was analysed using mixed model repeated measure with treatments by ORC groups interaction on the efficacy estimand. **Results:** At week 72, there was no statistically significant interaction ($p = 0.373$) between TZP treatment and number of ORC at baseline. The percent BW reduction in TZP groups vs placebo was: -13.5, -13.5 and -13.6 for 5 mg, -20.4 -18.4, and -17.8 for 10 mg, and -20.2, -18.9, and -20.7 for 15mg, for participants in the 0, 1, and ≥ 2 baseline ORC groups, respectively. Thus, treatment differences in percent reduction from baseline in BW for each dose of TZP *vs.* placebo were consistent across all ORC groups. **Conclusions:** Regardless of the number ORC at baseline, all TZP doses resulted in greater reduction in BW compared with placebo in SURMOUNT-1. These results are consistent with the overall study results. **Disclosure:** Abstract previously presented at Obesity Week 2022.

PT.160 USE OF SEMAGLUTIDE IN PATIENT WITHOUT TYPE 2 DIABETES WITH WEIGHT REGAIN AFTER BARIATRIC SURGERY: A CASE REPORT

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Introduction: Bariatric surgery (BS) is an effective treatment for weight loss in patients with obesity. However, approximately 20%-25% of patients experience considerable weight regain or insufficient loss after the procedure. Thus, pharmacological options, as semaglutide, are being used to optimize weight loss in this situation. **Case report:** A 55-year-old male patient comes to the endocrinology outpatient clinic for follow-up of obesity treatment after BS with 123.4 kg, 44% of body fat (BF) and 38.6 kg of muscle. His maximum weight was 170 kg, and underwent Roux-en-Y gastric bypass, reaching a minimum weight of 100 kg, but later presenting a gain of about 23.4kg (in consultation, BMI: 42.2 kg/m²). He has hypertension and at the time was using valsartan 160 mg, hydrochlorothiazide 12.5 mg, and metoprolol 100 mg. He was a former smoker, consumed 1 bottle of alcoholic beverage every 15 days, and walked 3 times a week. In this context, semaglutide was started, 1mg per week, he had no adverse effects and reported decreased hunger. At the same time, he sought follow up with a nutritionist, reduced his alcohol intake and started weightlifting. Over two years, the patient decreased his antihypertensive medication, currently using only metoprolol 50 mg. At last follow-up he had a BF of 24.3%, 40.3 kg of muscle and a BMI of 32.3 kg/m², having lost about 28,8 kg in about 2 years. **Discussion:** Obesity is a chronic and progressive disease and even after BS, multidisciplinary follow-up is necessary to check weight, comorbidities and complications of this procedure. In the present case, the patient had a 41% weight loss after BS, however, he recovered 23,4% of that loss. With the use of semaglutide in a 1 mg/week dose, the patient reached a 23,5% weight loss, without any weight regain, even using a dose below what was recently approved of 2.4mg/week. Therefore, the patient had a significant benefit in terms of weight loss, with a progressive decrease in BMI from 42.2 to 32.3 kg/m² and in BF from 44% for 24.3% in about 2 years. In addition, the use of this drug may potentiate the remission of comorbidities, as seen in the reduction of antihypertensive medication in the case. **Conclusion:** Semaglutide seems to be a good option for patients who have undergone BS and experienced weight regain. More studies, especially randomized clinical trials, need to be conducted to evaluate the benefits of this medication in this subpopulation.

PT.161 RELATIONSHIP BETWEEN THE PRESENCE OF SEVERE PAIN AND OBESITY

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Introduction: The research starts from the premise that obesity does not only characterize an inadequate nutritional status, but a disease with pro-inflammatory endocrine characteristics that demonstrate an association between obesity and pain. This work correlates the presence of severe pain with obesity in patients undergoing general surgery procedures in a medium-sized public hospital in southern Brazil. **Objective**: To identify whether there is a relationship between obesity and pain intensity during the first postoperative day in patients submitted to herniorrhaphy, open and video cholecystectomies. **Patients and methods:** Retrospective, descriptive, quantitative work where the medical records of all patients who underwent cholecystectomies and herniorrhaphy during the year 2020 at the hospital were analyzed. Of the 188 medical records, 79 were included, excluding patients who received mild analgesia without anti-inflammatory drugs (n = 90), minors (n = 14), patients with cancer (n = 1) and medical records incomplete (n = 4). The sampling method was non-probabilistic and the size determined by convenience. **Discussion and results:** There is an association between obesity (BMI > 30 kg/m²) and the degree of severe pain among patients who used anti-inflammatory drugs without analgesia ($\chi 2$ = 13.35; p = 0.001). Of the total number of people analyzed (n = 79), we noticed that of all people with severe pain, 56.3% (n = 18) of them were obese, while in those without severe pain this percentage was 17% (n = 8). Extrapolating the analysis to patients using fixed anti-inflammatory drugs, with or without using fixed mild analgesia (n = 111), a significant association was found between obesity and the degree of severe pain between the patients ($\chi 2$ = 12.03; p = 0.002). It was noted that, of all people with pain, 58.5% (n = 24) of them were obese while those without pain this percentage was 25.7% (n = 18). Considering all patients, with or without the use of anti-inflammatory drugs associated or not with the use of mild analgesia, a significant association was found between obesity and the degree of severe pain among all patients ($\chi 2$ = 7.16; p = 0.028). It was noted that, of all people with severe pain, 50.7% (n = 36) of them were obese while those without severe pain this percentage was 30.6% (n = 30). **Conclusion:** With or without confounding factors (varied approaches for pain control), we can say that obesity has a direct influence on the prevalence of severe pain in patients undergoing surgery. **License number of ethics committee:** 4490640 – CEP Universidade Franciscana.

PT.162 ANALYSIS OF THE CLINICAL TREATMENT OF AN OBESITY GROUP IN A POOR COMMUNITY IN PRIMARY HEALTH CARE IN THE CITY OF SÃO PAULO; BRAZIL

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Introduction: Obesity is a pandemic, chronic, multifactorial, relapsing, and stigmatized disease. It is a worldwide public health problem, much neglected in developing and underdeveloped countries, such as Brazil. **Patients and methods:** This is an analytical, cross-sectional study between the years 2009 to 2022 of the Jardim de Abril Obesity Group, located in a poor community in the western zone of the city of São Paulo, Brazil. This service has been providing multidisciplinary clinical treatment for Obesity and pre and post bariatric follow-up for over 13 years to 418 participants, in 162 monthly meetings and 3870 consultations. These patients receive medical care with endocrinological, nutritional, and psychological consultations, in addition to pharmaceutical and nursing care. All participants undergo nutritional calorie restriction (minimum of -500 kcal/day); have monthly Bioimpedance testing and anthropometric measurements (such as weight; height; BMI calculation; abdominal and hip circumferences; blood pressure, and heart rate). Monthly they have an educational lecture with a theme related to Obesity and distribution of 5 baskets of healthies foods for the 5 best weight-lossers among the consultations; aiming to rescue self-esteem and competitive character. **Results and discussion:** The population served is 80% female, with an age range of 8 to 80 years, 22% overweight and 78% obese (Grades I, II and III). Of these, 14.28% had an Eating Compulsive Disorder (ECD); 100% were female. The most commonly used medications are: Sibutramine (70%); Orlistat (15%) and Liraglutide (15%) – on label; Fluoxetine (50%); Topiramate (30%); Buproprion (17%) and Lisdexamphetamine (3%) – off label. Also 3.12% had already undergone bariatric surgery. Regarding weight loss 34.6% eliminated 5.0% of excess weight; 30.8% about 10%; 19.20% about 15%; 7.70% about 20%; 5.70% about 25%, and 2% about 30% Unfortunately in this follow-up period we have had 15 deaths; 70% from cardiovascular complications and 30% from oncological diseases. **Conclusion:** Multidisciplinary clinical treatment in primary health care can and should prevent, treat Obesity, and refer to surgical treatment when necessary. The treatment of this disease increases life expectancy, reduces mortality, and saves financial costs with its complications for the public coffers and health insurance and health insurance companies.

PT.163 PSYCHOLOGICAL AND SUBJECTIVE FUNCTIONING AFTER BARIATRIC SURGERY: WHAT BENEFITS ARE NOTICED BY PATIENTS?

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Introduction: This work aimed at presenting a descriptive analysis about observed changings and benefits by patients after three and six months bariatric surgery performed in a University Hospital in Rio de Janeiro, Brazil. Obesity is a chronic disease that subjectively may affect self-esteem and body image, leading to angriness, emptiness or frustration sensation. Daily difficulties are described as impairment in quality of life in a person which body is usually stigmatized, humiliated by society and their own family. The bariatric surgery arrives as an option of health improvement in all senses. Psychology is a fundamental part in multidisciplinary satff due to the fact that the psychologist acts knowing the patient history and talking about obesity and the surgery. After the surgery, it was noticed that beyond the comorbidity reduction, there were psychological and social relevant changes. **Patients and methods:** The patients are sent from the Regulation System to the Bariatric Surgery Service of a University Hospital in Rio de Janeiro, Brazil. Before and after the procedure body image pictures are presented in the appointments as well as questions about self-perception are made. After the surgery, it was noticed similar answers among patients and a textual analysis was built. Among the answers in common, eight ones were selected. It was included 108 appointments in a small sample of 27 patients for two years. In a semi-structured interview questions about physical disposition, beauty, body perception, libido, socialization and personal care were made. **Results:** After three months 52% of the patients feel less tiring, 23% thinner, 66% better libido and 78% better hygiene conditions. After six months 66% of the patients feel prettier, 23% thinner, 66% more sociable and 21% notice skin excess. **Discussion:** First of all, it was observed after three months there is better personal care perception, secondly the decrease of tiredness and then better libido. The loss of weight is noticed in 23% and may mean the thinning beginning. **Conclusion:** It is concluded that the weight loss bariatric surgery provides effective medical problems solutions but also it is seen, in the patients' opinion, better psychological and functioning results such as health quality and benefits in personal improvements like mobility, social life, libido, self-esteem and personal care. **License number of ethics committee:** Hospital Universitário Pedro Ernesto, CAAE: 42329120.9.0000.5259.

PT.164 MULTIPROFESSIONAL SUPPORT IN WEIGHT REGAIN AFTER SLEEVE CASE REPORT

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Introduction: Obesity is a chronic, multifactorial disease, its treatment is challenging and demands continuous multidisciplinary clinical follow-up. In this context, hospitalization is presented as a safe model based on the multidisciplinary support of patients with obesity who have already undergone one or more types of treatments and have regained weight. The article presents the context of hospitalization of patients with obesity and weight regain and emphasizes the importance of multidisciplinary support in the weight loss process, improvement of comorbidities and maintenance of healthy clinical weight. The case study data were obtained through review of medical records in a hospital specialized in the treatment of obesity in the city of Camaçari – Bahia. **Case report:** Adult male, 41 years old, developed obesity in adolescence, with a history of anxiety disorder. After several attempts at previous treatments, at the age of 37, he underwent bariatric surgery, losing 40 kg. He had regained 25 kg after 2 years of surgery, due to generalized anxiety and dysfunctional eating behavior practices. In view of this, the patient sought hospitalization for a period of 06 months, in view of the need for a more comprehensive (multidisciplinary) follow-up that would work on the various factors associated with obesity. **Discussion:** The patient was hospitalized for 190 days, during which time he was monitored by doctors, nurses, physiotherapists, psychologists, nutritionists, occupational therapists, physical education teachers; consumed very low-calorie diets (500-1,000 kcal/day) adapted with the use of high-protein supplements and practiced supervised physical activities. With regard to the psychological aspects, the patient underwent individual clinical follow-up, where demands were addressed that revolved around symptoms of binge eating, anxiety and personality. There was satisfactory adherence to the Cognitive Behavioral Therapy model, allowing the observation of the reduction of dysfunctional signs. The multidisciplinary groups held daily dealt with subjective themes about the social influences on obesity, going through the symptoms involved, until addressing nutritional and physical activity points. **Conclusion:** Multiprofessional support during hospitalization is of paramount importance in the process of losing and maintaining a healthy weight in the long term. **License number of ethics committee:** 65578822.1.0000.0057.

PT.165 RESPONSES OF A MULTIDISCIPLINARY PROJECT IN BODY COMPOSITION AND ANTHROPOMETRY OF OVERWEIGHT ELDERLY

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Introduction: The increase in overweight and obesity has impacted different age groups, and is associated with the development of chronic non-communicable diseases (NCDs). If not treated, the consequences of NCDs will be significantly greater with advancing age and may denote in cardiovascular diseases and mortality. **Objective:** To investigate the responses of a multidisciplinary project in body composition and anthropometry in overweight elderly. **Patients and methods:** We evaluated 48 elderly (68.40 ± 3.5 years), of both sexes. Participants participated in a 12-week multidisciplinary project, consisting of nutritional (1x/week), psychological (1x/week) and physical exercise (2x/week) interventions, with approaches to health, quality of life and weight loss. The parameters evaluated were anthropometry and body composition – body mass, body mass index (BMI), fat percentage (%F), fat mass (FM), lean mass (LM), fat free mass (FFM) and skeletal muscle mass (SMM). Body composition was evaluated via the electrical Bioimpedance InBody 570®. Data were compared via paired t-test, assuming a significance level of 5%. **Results:** The following significant differences were verified: body mass (89,05 ± 20,69 kg, post: 87,41 ± 20,12, $p < 0,001$), BMI (33,08 ± 5,94, post: 32,09 ± 5,72, $p < 0,001$), %F (43,95 ± 5,98, post: 42,35 ± 6,98, $p < 0,001$) e FM (39,49 ± 12,50 kg/m², post: 37,41 ± 11,89 kg/m², $p < 0,05$), values after the intervention period. However, for the variables LM (46,34 ± 9,02 kg, post: 46,80 ± 9,38 kg, $p = 0,17$), FFM (49,30 ± 9,47 kg, post: 49,72 ± 9,47 kg, $p = 0,22$) e SMM (27,12 ± 5,55 kg, post: 27,42 ± 5,93 kg, $p = 018$) no significant differences were identified ($p > 0,05$). **Conclusion:** The results showed positive impacts in reducing body weight, BMI, %F and FM. Twelve weeks of intervention were able to promote positive changes in body composition and anthropometry of elderly participants in a multidisciplinary project. **License number of ethics committee:** 3.373.307/2018.

PT.166 REDUCED OR CONTROLLED OBESITY AND TIME-RESTRICTED EATING IN CLIMACTERIC WOMEN

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Introduction: The climacteric period is marked by changes that leads to the onset/worsening of obesity and its comorbidities. Time-restricted eating (TRE) has been associated with metabolic improvement in animals and humans. Body mass index (BMI) is used to measure obesity but doesn't take into account the individual's body weight history. Therefore, Abeso/SBEM proposed a new classification for obesity based on the percentage of weight loss in relation to the maximum weight attained in life (MWAL), since weight loss from 5% reduces risk factors associated with obesity. The aim of this study was to evaluate the impact of TRE on obesity reduction/control based on the MWAL in climacteric women submitted to caloric restriction. **Patients and methods:** 42 climacteric obese women were divided into 2 groups: CG (n = 22) – control group (Caloric Restriction (CR) and meal times from 7 am to 11 pm), and; TREG – TRE group (n = 20) (CR and TRE – fasting from 7 pm to 7 am), for 10 weeks. MWAL and BMI were assessed before and after the intervention period. Correlations were measured using Fisher's exact test. A significance level of $p < 0.05$ was considered for all cases. At the end of the experimental period, participants were classified based on the MWAL as controlled, reduced, or unchanged obesity. **Results:** The BMI considering the MWAL was 35.12 kg/m² (±3.12) and 35.21 kg/m² (±4.14) for CG and TREG, respectively. After 10 weeks of follow-up the groups presented the following outcomes: final BMI: CG-31.23 kg/m² (±4.24) and TREG-31.53 kg/m² (±3.29); unchanged obesity: CG – 27.3% and TREG – 15%; reduced obesity: CG – 40.9% and TREG – 50%; controlled obesity: CG – 31.8% and TREG – 35%. Therefore, there was no correlation (r = 0.667) between the achievement of reduced/controlled obesity and TRE protocol as applied in this study. **Discussion:** CR is unequivocally the basis for weight loss. However, it is already evident that the adjustment of eating times to biological clocks can greatly impact the reduction of risk factors associated with obesity. Conversely, nocturnal eating leads to circadian disruption, with consequent metabolic impairment. However, studies with 18h of daily fasting bring very robust anthropometric and metabolic results, which allows us to infer that a shorter temporal eating window can bring more anthropometric and metabolic benefits. **Conclusion:** TRE as it was imposed, that is, overnight fasting for 12h, did not have a greater impact on changing the obesity category than CR alone. **License number of ethics committee:** CAAE: 39826320.3.0000.5208 – Comitê de Ética e Pesquisa em Humanos – Universidade Federal de Pernambuco.

PT.167 CORRELATION BETWEEN THE PERCENTAGE OF WEIGHT LOSS BASED ON THE MAXIMUM WEIGHT ATTAINED IN LIFE, AND BIOCHEMICAL PARAMETERS IN INDIVIDUALS WITH SEVERE OBESITY

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A new obesity classification proposed by the Brazilian Society of Endocrinology and Metabolism (SBEM) and the Brazilian Society for the Study of Obesity and Metabolic Syndrome (Abeso) was based on the maximum weight attained in life (MWAL). The new classification considers that a small weight loss can promote clinical improvement in individuals with obesity regardless of the current BMI. Previous studies have shown that a 5%-10% weight loss promotes significant effects on biochemical markers, reducing the risk of developing diabetes and cardiovascular events. However, the studies rarely used the MWAL and do not focus on individuals with severe obesity. The study aimed to evaluate the correlation between the weight loss percentage based on MWAL and biochemical parameters in individuals with severe obesity. The MWAL was obtained through a questionnaire. The fasting glucose, fasting insulin, glycated hemoglobin, triglycerides, LDL cholesterol, HDL cholesterol, and C-reactive protein levels were determined. Spearman's correlation was performed between the weight loss percentage and biochemical parameters. Thirty-two adults (mean age: 36.9 years old) with BMI ranging from 40.1 and 62.1 kg/m² were included (mean BMI: 45.1 kg/m²). The mean weight loss percentage was 4.1% (0.5%-14.1%). A significant negative correlation was found between the percentage of weight loss and fasting serum insulin levels (r = -0.378; P = 0.004). No significant correlations were observed between the percentage of weight loss and the other biochemical parameters. Our preliminary results are consistent with a slight improvement in metabolic profile with weight reduction relative to MWAL. More studies, especially longitudinal studies, are needed to clarify if there are correlations between the weight loss percentage based on MWAL and biochemical parameters in individuals with severe obesity. **License number of ethics committee:** Parecer: 5274811, CAAE: 55240321000005259 – Hospital Universitário Pedro Ernesto – UERJ.

PT.168 ANÁLISE DO COMPORTAMENTO DO PESO EM PACIENTES SUBMETIDOS À CIRURGIA BARIÁTRICA ACOMPANHADOS EM CENTRO DE REFERÊNCIA PARA O TRATAMENTO DE OBESIDADE NO ESTADO DA BAHIA

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Introduction: One of the great challenges that public health faces is the increasing spread of obesity. Bariatric surgery (CB) is an alternative that promotes high weight loss. Despite the benefits attached, regain is a challenge. The study proposes to analyze the behavior of weight after BC and possible associated factors. **Methods:** Retrospective cohort with 95 individuals submitted to Roux-en-Y gastric bypass between 2008 and 2016 followed up at the Obesity outpatient clinic. Variables collected: body mass index (BMI kg/m²), excess weight immediately before surgery (PE, in kg), weight lost (PP, in kg), percentage loss of excess weight (%PEP), % of weight regain, postoperative weight evolution, in addition to clinical variables. Established concepts: surgical success (%PEP ≥ 50) and significant weight regain (≥15% in relation to nadir). Data were computed by BioEstat3R23.Statistically significant associations: $p < 0.05$. **Results:** 95 patients, 91% female, age 44.4 ± 2.7 years and mean post-BC time of 29.8 ± 5.0 months. Nutritional and psychological follow-up performed by 85% and 66% of the patients, respectively. Regular physical activity by 52% and 44% had binge eating. The mean weight and BMI immediately before BC were, respectively, 125.9 ± 4.8 kg and 48.2 ± 1.5 kg/m². Success of BC: 59% of patients. Group <50%PEP presented higher weight and higher preoperative BMI and lower mean age. minimum BMI was seen between the 2nd and 3rd year after surgery and significant regain in 38% of patients, being more evident, between the 3rd and 4th year after BC. Group > 75%PEP obtained lower regain index (4.7%). **Discussion:** Surgery failure was associated with higher weight and pre-BC BMI, evidence corroborated with other studies. Lower weight loss was evidenced in younger individuals, a finding that differs from the literature. Significant weight regain was more evident from the 3rd year after BC. The regain is possibly related to the high rate of sedentary lifestyle, binge eating, non-attendance to nutritional and psychological follow-up evidenced. **Conclusion:** BC promoted an adequate reduction in excess weight, especially in the first 3 years after surgery, but a significant portion of the population evolved with weight regain after this period. Weight regain reinforces that obesity is a chronic, multifactorial disease and requires specific and continuous treatment even after surgery. **License number of ethics committee:** O estudo foi aprovado pelo Comitê de Ética e Pesquisa em Seres Humanos/CEP/UNIFACS com o processo de parecer nº 1.723.626 e CAE: 56681216.0.0000.5033.

PT.169 BARIATRIC SURGERY IN A PATIENT WITH COMPLETE ANDROGEN INSENSITIVITY SYNDROME (CAIS)

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Introduction: The androgen insensitivity syndrome (Morris syndrome) is a genetic disease transmitted by a recessive gene linked to the X chromosome, characterized by alterations in peripheral androgen hormone receptors. Clinical and experimental data suggest that androgen receptor (AR) signaling plays a role on body composition. **Case report:** A 33-year-old patient with complete androgen insensitivity (CAIS) underwent Roux-en-Y gastric bypass at age 20. Preoperatively she had a BMI = 65.77 kg/m² and, 18 months after surgery, she lost 83% of the excess weight having achieved surgical success. She sought medical attention in a reference center in Rio de Janeiro after gaining almost 40 kg and began treatment with topiramate. It draws attention to the fact that, despite the previous clinical history of primary amenorrhea, the pathology was confirmed by karyotype only after bariatric surgery (BS), and she underwent gonadectomy and hormone replacement with estradiol. **Discussion:** There are few studies in the literature that have evaluated weight and body composition in this group of patients. A small study in adult women with CAIS found an increased percentage of obesity in the CAIS group compared to the Italian female population (16.7% *versus* 3.6%, respectively), as well as an increase in total fat mass and fat percentage, suggesting that CAIS women appear to be at increased risk for insulin resistance and metabolic syndrome. However, the association of CAIS with obesity, especially class 3, is not commonly described. **Conclusion:** This is the first case described in the literature of a patient with CAIS and class 3 obesity undergoing BS. The effect of AR disruption on body composition was not extensively investigated and more studies in this population are needed. Assessment of body composition seems to be advisable in these individuals.

PT.170 QUALITY OF LIFE ASSESSMENT IN PATIENTS WITH OBESITY BEFORE BARIATRIC SURGERY

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Introduction: Obesity is a chronic disease associated with various comorbidities, physical limitations as well as psychological distress and social stigma. It's possible that the quality of life (QL) of these patients is worse than that of the general population. The objective of the present study was to evaluate the QL in patients with obesity. **Patients and methods:** The Short Form 12 questionnaire was applied to 20 patients, aged between 30 and 60, with class 3 obesity awaiting bariatric surgery (BS) in a public service in Rio de Janeiro. The protocol was approved by the ethics committee, and all patients provided written informed consent. The questionnaire is a condensed version (12 items) of the SF-36 Health Survey, a commonly used generic health status tool and a generic assessment of health-related QL from the patient's perspective. The SF-12 incorporates two dimensions: the physical and mental component summary, which are aggregates of the 8 scale scores. **Results:** The questionnaire was applied to 16 women and 4 men with a mean age of 45.5 years**.** The mean body mass index (BMI) was 49.0. Our results showed an average score of 36.6 and 41.7 for the physical and mental component summary, respectively. The score ranges from 0 to 100, where values below 50 represent a worsening of QL compared to the population average. **Discussion:** The worse QL showed in our study is consistent with the available literature. A meta-analysis that used the same questionnaire demonstrated an inverse association between BMI and QL, especially in patients with class 3 obesity. Compared to normal weight adults, those with higher BMI obtained lower QL scores, both in the physical and mental components. A large Swedish intervention study followed a total of 655 surgically treated patients over a period of 10 years. Better and worse QL scores were associated with the magnitude of weight loss and regain, respectively. Some limitations of our study should be listed, our sample size is small and with a predominance of female patients. On the other hand our group will apply the same questionnaire one year after the BS to evaluate the possible improvement in QL. **Conclusion:** Our study showed that patients with obesity waiting for BS have worse QL compared to normal weight adults. Further studies with large sample sizes should be encouraged to validate our results. **License number of ethics committee:** 58647522.3.0000.5266, Instituto Estadual de Diabetes e Endocrinologia Luiz Capriglione.

PT.171 IMPACT OF PREOPERATIVE WEIGHT LOSS IN POST-BARIATRIC WEIGHT OUTCOMES AT PEDRO ERNESTO UNIVERSITY HOSPITAL

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Introduction: Preoperative weight loss (PWL) is widely recommended in medical practice before bariatric surgery (BS), but its effects on weight outcomes are still unclear. **Objectives:** This study aimed to evaluate PWL and its impact on excessive weight loss (%EWL) following BS in a public university hospital. **Patients and methods:** The study included 95 patients (77 females/18 males); 44.0 ± 12.4 years, who had undergone a BS (sleeve gastrectomy or Roux-en-Y gastric bypass) between September 2021 and August 2022. The patients were divided according to the preoperative %EWL, which was evaluated at least six months after the BS. **Results:** At the first visit, body mass index (BMI) was 47.6 ± 6.3 kg/m^{2,} while, close to surgery, the preoperative BMI was 45.6 ± 5.5 kg/m^2. Of the 95 patients enrolled during the preparatory clinical follow-up for BS, 86.31% (n = 82) lost weight, 8.42% (n = 8) maintained it, and 5.27% (n = 5) gained it. At the first visit, we asked about their weight status during the last year, and reports on it showed that 28.42% (n=27) had weight stability, 52.68% (n = 51) were losing weight, and 17.9% (n = 17) were gaining it. Regarding the postoperative period, patients were divided into two groups according to time since surgery: ≥12 months (39 patients) and between six to 12 months (56 patients). Considering %EWL and BMI during the postoperative period, there were no differences concerning the final result on both variables independently of the period analyzed. Our data revealed that preoperative weight loss, before the first appointment or during preparation for BS, was not associated with postoperative weight outcome. **Conclusion:** Patients with obesity before BS, independent of preoperative weight loss, stability, or gain, showed the same %EWL. Our data suggest that losing weight before surgery did not predict weight outcome. **License number of ethics committee:** 42329120900005259.

PT.172 ANALYSIS OF THE PSYCHOLOGICAL PROFILE OF CANDIDATES FOR BARIATRIC SURGERY IN A PUBLIC UNIVERSITY HOSPITAL OF HIGH COMPLEXITY

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Introduction: Obesity has been presenting an exponential growth, putting the world in a state of alert. Due to the complexity of this disease, when conventional approaches do not present lasting results, bariatric surgery may be indicated. However, this surgical procedure does not preclude multidisciplinary monitoring and treatment of psychological issues related to the body and eating habits in the preoperative and postoperative periods. **Objective:** Describe the psychological profile of patients undergoing preoperative of bariatric surgery in a highly complex university hospital in Rio de Janeiro. Methodology: This is a cross-sectional, quantitative, and descriptive study. The data were collected by previously trained and weekly supervised psychologists. Each patient underwent five semi-structured psychological interviews, weekly, online, with 60 minutes each. The collected data were divided into the following categories: Identification, Psychological Disorders (PD), Dysfunctional Eating Behaviors. Data were collected between 2020 and 2022. **Results:** We obtained a total (n) of 142 patients; 82% female and 18% male. The total mean Body Mass Index (BMI) was 49.94 kg/m². In the PD category, 81% reported anxiety, 45% depression and 28% binge eating, and 44% were on psychiatric medication. As for the Dysfunctional Eating Behaviors, 22% of hyperphagia, 59% grazing/ picking, 62% loss of control (LOC) and 54% emotional eating were found. **Discussion:** It is noted, through the results collected, a prevalence in the number of women, which is the public that most seeks treatment for obesity and psychological counseling. Furthermore, there is a high number of disorders related to psychological aspects, even with the use of psychiatric medication. In this category, anxiety disorders stand out, which can directly influence eating patterns and weight gain of patients. The high frequency of preoperative Dysfunctional Eating Behaviors, still little addressed in the literature, may impact the results of surgery, and precede eating disorders in the postoperative period. **Conclusion:** Analyzing the psychological profile of patients in the bariatric preoperative period enables early intervention in conditions related to Psychological Disorders and Dysfunctional Eating Behaviors, which were highly prevalent in this sample, in order to minimize their perpetuation and unfolding in the postoperative period. **License number of ethics committee:** 65372622.1.0000.5257, Universidade Federal do Rio de Janeiro.

PT.173 ANALYSIS OF THE RELATIONSHIP BETWEEN THE TYPE OF BARIATRIC SURGERY AND POSTOPERATIVE SUCCESS

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Introduction: Obesity is a multifactorial, relapsing chronic disease associated with high morbidity and mortality. The pillars of obesity treatment include dietary guidance, physical activity and pharmacological treatment. However, in multiple patients such measures become insufficient, given the severity or difficulty of adherence to therapy. In this context, bariatric surgery is presented as a therapeutic option. **Methods:** This is a retrospective cohort that evaluated patients monitored at a bariatric surgery outpatient clinic in a tertiary hospital. Data were collected through medical records. The type of surgery adopted, weight and BMI before and after surgery, percentage of excess loss at 6 months, 1 year and 2 years after surgery and weight regain in years after surgery were evaluated. The aim of the study is to assess whether there was a correlation between these factors and the type of surgery performed. **Results:** A total of 135 patients were evaluated, 91.9% women and 8.1% men, median age of 50 years (30-73 years), pre-surgery BMI with a median of 45.76 (34.58-69.09), 81.5% submitted to bypass and 18.5% submitted to Sleeve. Among patients undergoing Sleeve surgery, they had a median preoperative BMI of 44.86 (36.11-63.34). Patients who underwent By Pass surgery had a median of 45.42 (34.58-69.09). There was no correlation between preoperative BMI and decision making regarding the type of surgery performed (p:0.558). Two years after surgery, a lower median BMI was observed in patients who underwent the Bypass technique, compared to patients who underwent the Sleeve technique. (p:0.053). We also observed that patients who underwent Bypass had a greater loss of excess in 2 years, compared to patients who underwent the Sleeve technique (p: 0.004). Patients submitted to Sleeve surgery had a higher rate of regain in 2 years postoperatively, compared to the Bypass technique (p: 0.032). **Conclusion:** The definition of the type of surgery was not influenced by preoperative BMI. The Sleeve surgery technique correlated with higher BMI and higher postoperative regain rate. The greatest excess loss at 2 years postoperatively was observed with the Bypass technique. Data from this cohort are in line with those described in the literature.

PT.174 PREOPERATIVE SARCOPENIA-RELATED PARAMETERS EXERT A NEGATIVE EFFECT ON CARDIAC AUTONOMIC FUNCTION IN WOMEN WITH OBESITY FOLLOWING BARIATRIC SURGERY: A ONE-YEAR PROSPECTIVE LONGITUDINAL STUDY

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Introduction: The coexistence of excess adiposity, and low skeletal muscle mass and function can be associated with poor autonomic modulation. Thus, this study aimed to investigate changes in blood pressure (BP) and heart rate variability (HRV) in women with and without sarcopenia-related parameters, low muscle mass and/or strength, who underwent bariatric surgery (BS) during a one-year follow-up. **Patients and methods:** Thirty-four women were allocated into women with obesity (OB, n = 20) and women with obesity displaying sarcopenia-related parameters (SOP, n = 14) and evaluated before BS and, 3, 6, and 12 months after BS. SOP was defined as low handgrip strength (HS) and/or low appendicular skeletal mass adjusted for weight (ASM/wt) in the lowest quartile of the sample. **Results:** There was a reduction in diastolic BP, heart rate (HR), standard deviation of successive RR intervals (SDHR), low-frequency band (LF), and LF/high-frequency band (HF) ratio ($p < 0.05$), and an increase in the HF band in both groups during the follow-up period ($p < 0.05$). SOP women had reduced square root of the mean squared differences of successive RR intervals (RMSSD) and HF band and increased LF band and SD2/SD1 ratio compared to the OB group during the one-year follow-up ($p < 0.05$). ASM was negatively associated with LF band ($r = -0.24$, $p = 0.00$) and positively associated with HF band ($r = 0.22$, $p = 0.01$). Conversely, HS had no association with LF ($r = -0.14$, $p = 0.09$) and HF ($r = 0.11$, $p = 0.19$). ASM and HS were negatively associated with LF/HF ratio ($p < 0.05$). **Discussion:** In the present study, parameters that might reflect parasympathetic modulation (RMSSD and HF power) were increased, and LF power, which reflects the sympathetic tone, and LF:HF ratio, a measure of sympathetic-vagal tone were decreased during the follow-up. There is still an important gap in the association of sarcopenia-related parameters with HRV and the role of muscle in this context has yet to be better elucidated. However, our study was pioneering in suggesting a worse recovery of cardiac autonomic function in the SPO group. **Conclusion:** Women who underwent BS had improved HRV over a one-year follow-up. However, the improvement in heart rate variability (HRV) was less pronounced in women with low muscle mass and/or HS in the follow-up period. **License number of ethics committee:** 80984817.9.0000.5183 (Hospital Universitário Lauro Wanderley).

PT.175 CREATION AND APPLICATION OF A PROTOCOL FOR PSYCHOLOGICAL FOLLOW-UP IN THE PREOPERATIVE PERIOD OF BARIATRIC SURGERY IN A PUBLIC UNIVERSITY HOSPITAL IN RIO DE JANEIRO

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Introduction: This paper is based on the experience of the psychology team in the construction of a bariatric preoperative follow-up protocol for patients at a highly complex public teaching hospital in Rio de Janeiro. The objective is to present the structure of the services, highlighting the essential aspects in the psychological evaluation and preparation prior to this procedure. **Methods:** Qualitative and descriptive study. The protocol is composed of five semi-structured interviews, individual, weekly, online, with 60 minutes each, which were carried out by supervised psychologists and interns. The guiding aspects in the construction of the instrument were divided into the following categories: body history; eating patterns; clinical and psychiatric comorbidities; family and interpersonal relationships; body image and quality of life. **Results:** From July 2020 to December 2022, 109 patients completed the psychological evaluation, of these, 32 underwent surgery, 77 are still waiting and 12 interrupted the appointments due to excessive absences or unavailability for treatment. From each interview, various topics included in the categories mentioned above were deepened. Throughout the study, it was observed: greater reflection on the body and the implication in self-care; increased perception of the relationship with eating and dysfunctional behaviors; discussions about organization and planning; self-knowledge of the clinical condition; awareness of treatment and surgery; engagement with physical activity. **Discussion:** Considering the sociocultural and individual conditions of the program's audience, the creation of a psychological protocol with a psycho-pedagogical and interventional character provided more adequate assistance and reception. It helped in the better management of clinical cases by the entire multidisciplinary team, strengthening the bond, involvement and understanding of the treatment by patients and their families. The limitations observed were socioeconomic, related to the difficulty of accessing the internet, in addition to some psychic resistance in accessing emotional content. **Conclusion:** The study showed that this instrument standardized the psychological preparation for surgery, while prioritizing the subjective individuality and specificity of each case. The categories listed allowed the approach of the most relevant emotional aspects of obesity, facilitating the psychic elaboration of elements related to illness and treatment. **License number of ethics committee:** 653/2622.1.0000.5257, Universidade Federal do Rio de Janeiro.

PT.176 PREOPERATIVE WEIGHT LOSS CLASSIFICATION AND ITS IMPACT ON POSTOPERATIVE WEIGHT IN BARIATRIC SURGERY: A RETROSPECTIVE ANALYSIS

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Introduction: Weight loss in the preoperative period of bariatric surgery is related to several advantages, such as reduced surgical time, lower risk of complications and better weight loss in the postoperative period. A classification proposed by Abeso in 2022 aims to relate weight loss in relation to the highest weight in adult life with the control of comorbidities, which resulted in three categories: controlled, reduced or unchanged obesity. However, reports on the relationship between preoperative weight loss and the impact on postoperative weight are scarce. **Objectives:** To evaluate patients that were submitted to bariatric surgery in a tertiary hospital, retroactively classifying them preoperatively in controlled, reduced or unchanged obesity. to correlate each category with weight loss after 2 years of surgery. **Methods:** The medical records of 63 patients who had undergone bariatric surgery for at least 2 years and with BMI < 50 kg/m² were selected. The percentage difference was made between the maximum preoperative weight and the weight at which the patients underwent surgery, and then classified into controlled, reduced or unchanged obesity. The correlation between the preoperative categories and the 2-year postoperative weight loss were analyzed using the Spearman test. **Results:** The sample has 3 men and 60 women, n = 63. The observed preoperative averages were: maximum weight of 115.66 kg (SD =13.59); overweight of 43.96 kg (SD = 11.07); the total weight loss of 7.025 (SD = 5.57); weight loss (%) of 6.03 (SD = 4.75). Regarding the postoperative averages in 2 years: minimum weight of 75.74 (SD = 12.55); BMI PO 2 years 29.21 (SD = 4.03); excess weight loss (%) of 76.29% (SD = 23.47%). There was no statistical significance in weight loss at the end of two years postoperatively between the controlled, reduced and unchanged groups. The 2-year postoperative minimal weight distribution is the same between the preoperative categories, and the 2-year postoperative excess weight loss distribution also remains the same among the preoperative categories. Maximum preoperative weight correlated inversely with excess weight loss at 2 years postoperatively and positively with BMI and minimum weight at 2 years. **Conclusion:** In this small sample of patients, preoperative weight loss was not correlated with weight after 2 years of surgery.

PT.177 PREVALENCE OF PATIENTS WITH PATHOLOGIES OF THE DIGESTIVE TRACT FOUND IN PREOPERATIVE PATIENTS OF BARIATRIC SURGERY

Silva LF, Rigolon RJ, Batista DO, Karnikowski VS, Zocal MB, Serro KF, Horevicz CS, Fernandes LL, Alves LR, Rebello IAP, Messias ACNV

Introduction: Bariatric surgery is one of the treatment options for obese patients increasingly present in clinical practice. The preoperative preparation goes through a routine investigation of the digestive tract. The prevalence of digestive tract pathologies is increasing in this population, since the prevalence of esophagogastric abnormalities recognized before bariatric procedures and liver and biliary tract pathologies are also of clinical importance, mainly hepatic steatosis and gallstones. **Materials and methods:** We retrospectively evaluated data from the medical records of a cohort of patients in preoperative bariatric surgery in a tertiary hospital. Clinical data and reports of imaging and endoscopic examinations were collected. **Results:** A total of 135 patients were evaluated, 91.1% women and 8.1% men with a median age of 50 years (30-73 years), pre-surgical BMI with a median of 45.76 (34.58-59.09), 81.5% submitted to bypass and 18.5% submitted to Sleeve. Among the patients evaluated in preoperative submitted to sonographic examinations, prevalent alterations were found, such as hepatic steatosis in 101 (74.8%), cholelithiasis 22 (16.3%), nephrolithiasis 3 (2.2%), renal cyst 7 (5.2%). We also observed that patients submitted to endoscopic examinations had prevalence in gastritis 97 (72.9%), hiatal hernia 16 (11.9%), positive Helicobacter pylori 31 (23%), duodenitis 1 (0.8%) with duodenitis and 3 (0.3) other findings such as bulbite, polyps in the cardia and gastric region. **Conclusion:** The prevalence of pathologies in the digestive tract has been evidenced by the performance of endoscopic and ultrasound examinations in obese patients in the preoperative evaluation for bariatric surgery, showing the importance of the performance for the possibility of early intervention in these findings. In this sample, the increased prevalence of hepatic steatosis in the sonographic findings and gastritis in the upper digestive endoscopy was observed.

PT.178 EVALUATION OF NUTRITIONAL DEFICIENCIES AFTER 1 YEAR OF GASTRIC BYPASS IN PATIENTS ASSISTED AT A REFERENCE CENTER IN RIO DE JANEIRO

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Introduction: Bariatric surgery (BS) is recognized as a highly effective therapy for obesity since it accomplishes sustained weight loss, reduction of obesity-related comorbidities and mortality. However, nutrient deficiencies after surgery are common and have multiple causes. **Objective:** In this study, we aimed to determine the incidence of nutritional deficiency (ferritin, vitamin D and B12) 1 year after bariatric surgery. **Methods:** Cross-sectional study involving patients underwent bariatric surgery (Roux-en-Y gastric bypass) between September 2021 and March 2022 and had completed 1 year of post-surgery follow-up. Anthropometric and laboratory data were extracted from the patients' electronic medical records. **Results:** Forty-nine patients (81,6% female), aged 45,4 ± 8,4 years with a prep-operatory BMI of 45,4 ± 5,4 kg/m² were evaluated. Percent excess weight loss (%EWL) was 71,6 ± 17,9% and 91,8% presented more than 50% of %EWL. The most prevalent deficiency was of vitamin D, it was found in 53,1% of patients, despite supplementation. But, ferritin and vitamin B12 were less affected. Only, 14,3% of patients presented vitamin B12 deficiency and 8,2% ferritin deficiency. **Discussion:** A reduced percentage of iron and vitamin B12 deficiency was observed in this group. The low prevalence of vitamin B12 deficiency can be explained by the fact that the protocol of the service has the prescription of B12 intramuscularly every three months, which does not interfere with the reduction in absorption by the gastrointestinal tract. Iron supplementation is only performed in cases of anemia or in women in the fertile period, and is supplemented whenever a reduction in ferritin is identified, it is also emphasized that these patients are under multidisciplinary follow-up in the postoperative period, obligatorily undergoing consultations with doctors endocrinologists and nutritionists with an interval of 15, 30, 90, 180 and 365 days after surgery. It is common to find patients with obesity associated with vitamin D deficiency in the preoperative period, which normally occurs due to the sequestration of vitamin D by the adipose tissue. **Conclusion:** The importance of multidisciplinary postoperative follow-up may be one of the protective factors for low vitamin B12 and iron deficiency. Vitamin D deficiency is still recurrent no even with weekly supplementation, and it is necessary to assess whether a daily dose could be more effective for this population.

PT.179 ASSESSMENT OF GLYCEMIC AND THERAPEUTIC IMPROVEMENTS AMONG PATIENTS WHO HAVE UNDERGONE BARIATRIC SURGERY IN A TERTIARY RIO DE JANEIRO HOSPITAL

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Introduction: Obesity and type 2 diabetes mellitus (DM2) are metabolic conditions characterized by insulin resistance. The current treatment of DM2 consists of improving lifestyle, combined with hypoglycemic agents. Recently, bariatric surgery has been shown to be a good option for obesity and DM2. **Methods:** This is a review of the blood glucose levels, glycated hemoglobin and disease treatment pre and post 6 months, 1 year and 2 years of bariatric surgery. The objective is to evaluate patients with DM2 using oral antidiabetic agents (OAD) and the possible improvements after 6 months, 1 year and 2 years of the surgery. The surgery was performed in a tertiary hospital. **Results:** We evaluated 48 diabetic patients undergoing bariatric surgery. They had a median age of 52 (36-72 years). 86% of them were women and 10.4% were men, in which 93.7% underwent Roux-en-Y Reduction Gastroplasty and 6.3% underwent Sleeve. Of the 48 patients, 45 (93.7%) used only OAD and 16.6% used insulin. After 2 years, it was observed that 37 patients (77.08%) stopped using DM2 medications. In the same period, 11 patients (22.91%) kept using OAD and only 1 patient (2.08%) kept using insulin. It was observed that pre-surgery glycated hemoglobin had a median of 6.65 (4.4-10.9) and after 2 years it had a median of 5.55 (4.7-8.9) with p 0.01. **Discussion:** As seen in the literature, weight loss indeed has an important relationship in the reduction of glycemic indexes and, consequently, the need for the use of oral antidiabetic drugs and insulin. However, there was no statistically significant relationship between the drop in glycated hemoglobin and weight loss. **Conclusion:** The study showed improvement in DM2 based on glycemic levels and a reduction in the need for treatment after bariatric surgery.

PT.180 WEIGHT LOSS EXPECTATIONS AND BODY DISSATISFACTION IN PATIENTS CANDIDATES FOR BARIATRIC SURGERY

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Introduction: Given the increase of prevalence of obesity and demand for bariatric surgery, the objective of this study was to seek the perspective of patients during the preoperative period, by assessing their expectations regarding weight loss and their levels of body dissatisfaction and body image distortion. **Patients and methods:** Candidates for bariatric surgery (N = 85) in a city of Santa Catarina, Brazil, answered the weight they expect to reach 1 year after surgery. Sociodemographic data were collected through interviews, with weight and height measured to obtain the body mass index (BMI) and posterior calculation of the excess weight loss (%EWL) expected. Through the *Body Shape Questionnaire*, we evaluated the level of body dissatisfaction. We also evaluated the presence of body image distortion using a scale of silhouettes figures for Brazilian adults. **Results:** The mean expected of %EWL 1 year after bariatric surgery was 100.3%. 41.1% of patients have moderate to severe body dissatisfaction. We found that the greater the expectation of weight loss, the greater the level of body dissatisfaction ($p = 0.04$). 70.9% of the sample has body image distortion, by perceive themselves to be bigger than they really are. **Discussion:** According to literature the average %EWL expected after 1 year of bariatric surgery is 59.82%. In the present study, we showed that patients have an expectation of weight loss higher than expected, corroborating other authors. These results bring up the need for discussion with patients, since there are still many doubts regarding the consequences of high expectations on %EWL, such as worsening of body dissatisfaction and poor adherence to treatment of obesity. It is known that the patients with obesity often have a negative body image, which can lead to distortion. In this study, it was observed that most patients presented body distortion, corroborating with literature, who showed that higher BMI's are related to the perception of a larger body image. **Conclusion:** According to previous studies, we found unrealistic weight loss expectations, much higher than expected. With this, we conclude that there is a need to establish realistic goals of weight loss for patients, in order to avoid frustration with the result achieved and worsening of body dissatisfaction. **License number of ethics committee:** 3.102.265 emitido pela Universidade do Sul de Santa Catarina – UNISUL. .

PT.181 ASSESSMENT OF CARDIOVASCULAR RISK, HEART RATE VARIABILITY AND FUNCTIONALITY IN THE LATE POSTOPERATIVE PERIOD OF BARIATRIC SURGERY SUBMITTED TO WHOLE-BODY VIBRATION EXERCISE: CASE STUDY

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Currently, there is a high prevalence of risk factors for cardiovascular disease, such as obesity, a sedentary lifestyle, and poor diet among young people. Obesity is a public health problem that directly impacts the economy. In this case study, the authors are using data from a survey of a late postoperative bariatric surgery patient. A 23-year-old male patient, obese since childhood, 186 kg (BMI 61), sedentary, with no other comorbidities. He denies smoking. On 10/30/2019 he underwent Y gastroplasty (Gastric Bypass) with approximately 90% reduction of the stomach. On 09/13/2021 he started an intervention protocol by through the VCI. Cardiovascular risk, heart rate variability, functionality, and quality of life were evaluated in the acute and chronic phases. The training was carried out through 10 interventions with exercises on the vibration platform. The functionality was evaluated by means of the tests: "Timed up and Go", Senta/Levanta, 6-minute walk test, and handgrip strength. A 7.1% gain in functional capacity was observed, with a 37.5% reduction in perceived exertion. In addition, there was a 39% gain in handgrip strength and a reduction in the running time of functional capacity tests. Heart rate variability after the interventions showed that whole-body vibration can reduce cardiovascular risk. In conclusion, the exercise program allowed the reduction of body weight and body mass index and impacted the change in body composition and functionality, resulting in reduced cardiovascular risk. Keywords: Cardiovascular risk, Obesity, heart rate variability, blood glucose. **License number of ethics committee:** Comitê de Ética da Universidade Iguaçu – CAAE: 40309720.1.0000.8044.

PT.182 EVALUATION OF THYROID FUNCTION IN POST-BARIATRIC PATIENTS IN A TERTIARY HOSPITAL IN RIO DE JANEIRO

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Introduction: It is known that thyroid function is associated with the regulation of lipids and glucose and that is an essential part of basal metabolism. Thyroid function and obesity are related to leptin, produced by adipocytes, capable of acting on the hypothalamus by increasing TSH secretion. Furthermore, the expression of TSH receptors in the adipose tissue of obese individuals prove to be reduced compared to non-obese individuals. **Patients and methods:** This is a retrospective cohort with euthyroid patients undergoing bariatric surgery. Data were obtained from medical records and TSH levels were evaluated preoperatively and 6 months, 1 and 2 years after surgery, aiming to evaluate the correlation between weight loss and thyroid function. **Results:** We evaluated 135 patients undergoing bariatric surgery, in which 91.9% were women and 8.1% were men, with a median age of 50 years (30-73 years). Of these, 18.5% underwent sleeve surgery and 81.5% underwent Roux-en-Y gastric bypass. Median weight at surgery was 118 kg (70.3-180.9 kg), BMI 45.36 kg/cm² (34.58 – 69.09 kg/cm²) and overweight at surgery was 53.3 kg (22 -107.5kg).The preoperative TSH had an average of 2.07 (SD ± 0.99), 6 months after surgery it presented a mean of 1.92 (SD ± 1.13), 1 year after 2.09 (SD ± 1.35) and 2 years after 2 .44 (SD ± 3.07).The correlation between preoperative TSH showed a trend towards excess weight at surgery (p 0.069).TSH at 6 months postoperatively showed a tendency to correlate with BMI at 6 months postoperatively (p0.097). The 1-year postoperative TSH was positively correlated with weight in that period (p 0.048). In 2 years there was a correlation between TSH and weight in the period (p0.02) and with the weight regain that the patient presented in 2 years (p0.034).There was no correlation between TSH and excess weight loss at 6 months, 1 year and 2 years postoperatively (p 0.578; p 0.242; p 0.323 respectively). **Discussion:** A possible positive relationship between TSH and weight is observed in the literature. In our study, it was possible to demonstrate this finding with statistical significance. However, there was no significant correlation between the loss of excess weight in patients after surgery and falls in TSH levels. We also observed that there was a correlation between weight regain over a 2-year period and TSH levels over that period. **Conclusion:** We observed that weight regain 2 years after bariatric surgery showed a positive correlation with TSH levels.

PT.183 SARCOPENIA AND GLYCEMIC CONTROL IN OUTPATIENTS WITH TYPE 2 DIABETES

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Introduction: Sarcopenia is a progressive, widespread disorder of skeletal muscle that is associated with an increased likelihood of adverse outcomes. This condition entails high personal, social and economic burdens when left untreated, and is strongly associated with chronic diseases, obesity and aging. Some studies demonstrate a high prevalence of sarcopenia in individuals with type 2 diabetes mellitus (T2DM) and this has been associated with higher mortality. The aim is to assess the prevalence of sarcopenia in T2DM outpatients and its association with glycemic control. **Patients and methods:** Cross-sectional study derived from a randomized clinical trial (NCT05598203). Outpatients with T2DM attending at university hospital underwent clinical, laboratory, and lifestyle evaluation (visit to baseline data). Sarcopenia was assessed according to the EWGSOP2(2018): the Simple Questionnaire To Rapidly Diagnose Sarcopenia (SARC-F) to screening, grip strength to identify low muscle strength, calf circumference adjusted for body mass index (BMI) to evaluate low muscle and 400-m walk test to low physical performance asses. Probable sarcopenia was classified with SARC-F higher than four points and low muscle strength and sarcopenia was considered as low muscle strength plus low muscle mass. Patients were divided into no sarcopenia, probable or with sarcopenia and their characteristics were compared by appropriate tests. $P < 0.05$ (bi-caudal) was considered significant. **Results:** A total of 121 patients were evaluated: 65.5% women, aged 61 (31-75) years, BMI 33.8 ± 6.2 kg/m², 16 (0-47) years of diabetes, and HbA1C 9.1 ± 1.5%. Probable sarcopenia was observed in 10 patients (8.3%) and 12 patients (9.9%) were classified with sarcopenia. The proportion of low muscle strength was 17.4%, low muscle mass was 50.4%, and low physical performance was 43%. No differences in glycemic control (HbA1c) were observed between the groups according to sarcopenia status: no sarcopenia values = 9.2 ± 1.5% vs sarcopenia probable = 8.8 ± 1.2% *vs.* sarcopenia = 8.9 ± 1.4% (P = 0.586). **Conclusion:** In this sample of outpatients with T2DM, we observed that 62.8% of patients presented at least one parameter evaluated low, especially low muscle mass despite 91% of patients being overweight. Obtaining a total sample necessary (n = 278) will confirm these results about control glycemic. **License number of ethics committee:** 60045422.0.0000.5327, Hospital de Clínicas de Porto Alegre.

PT.184 EFFECTS OF CASHEW NUT AND CASHEW OIL ON ADIPOSITY MARKERS IN MEN AND WOMEN WITH OBESITY IN ENERGY-RESTRICTED CONDITION: A RANDOMIZED CONTROLLED TRIAL (BRAZILIAN NUTS STUDY)

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Introduction: Obesity is a growing global pandemic, related to development of other chronic diseases. In turn, evidence have supported the potential benefits of nuts on preventing weight gain, in addition to improve body composition, but its effect in energy-restricted condition is unclear. Thus, this study investigated the effect of cashew nut and cashew oil on adiposity markers in men and women with obesity in energy-restricted condition. **Subjects and methods:** An eight-week, randomized, controlled and energy-restricted intervention was conducted with 65 participants (25 men/40 women, 32.5 ± 4.1 kg/m², 33 ± 8.8y), who were randomly assigned to one of the groups (-500 kcal/d): control (CO, nut-free diet), cashew nut (CN, 30 g/d) or cashew nut oil (OL, 30 mL/d). Body weight, height, circumferences, and DXA were assessed to baseline and endpoint. To compare differences between time points and sex, pairwise tests and test t-Student were performed, using SPSS version 25.0 (p-value < 0.05). **Results:** After 8-wk intervention, both men and women in all groups achieved significant reduction in weight: CO: -3.85 kg and -2,48 kg; CN: -4,53 kg and -3,28; and OL: -4,52 kg and -2,73 for men and women, respectively and hip circumference: CO -3.21 cm and -1.92 cm; CN: -3.38 cm and -2.01 cm; and OL: -3.47 cm and -2.69 cm, for men and women, respectively. Regarding waist circumference, men who consumed cashew nut oil (-5.32 cm), and women who consumed cashew nuts (-3.38 cm) reduced this central adiposity indicator (p < 0.05). Both men (-1.14 cm) and women (-0.77 cm) in cashew nut group reduced neck circumference (p < 0.05). Also, men who consumed cashew nuts (-3.5%), and women who consumed both cashew nuts (-2.3%) or its oil (-2.27) reduced body fat. **Discussion:** In addition to energy restriction, beneficial effects of cashew nut and oil consumption were observed on adiposity markers. The consumption of cashew nuts and cashew oil had similar effects in both men and women, with a slightly greater effect in women, since women who consumed nut still had a reduction in one more central adiposity indicator (waist circumference). **Conclusion:** Cashew nut and cashew oil had additional beneficial effects to the improvement of body composition in both men and women ongoing energy-restricted diet. **Funding:** Capes (code 001), Fapemig (CDS-APQ-01808-22), Embrapa (20.18.03.059.00.00) and CNPq (404770/2021-5). **License number of ethics committee:** Comitê de Ética em Pesquisa com Seres Humanos da Universidade Federal de Viçosa (nº 4.543.541/CEPH). Registro Brasileiro de Ensaios Clínicos (ReBEC parecer:RBR-8xzkyp2).

PT.185 DAILY CONSUMPTION OF CASHEW NUT AND CASHEW OIL ON OXIDATIVE STRESS MARKERS IN ADULTS WITH OBESITY IN AN ENERGY-RESTRICTED DIET: BRAZILIAN NUTS STUDY

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Introduction: Oxidative stress (OS) occurs when antioxidant defenses are not sufficient to neutralize reactive oxygen species, resulting in modifications such as lipid peroxidation and protein damage. In subjects with obesity, OS is more present and associated with metabolic and cardiovascular diseases. Thus, this study investigated the effects of cashew nuts and their oil on OS markers in adults with obesity undergoing energy restriction. **Subjects and methods:** This is an 8-wk parallel randomized controlled clinical trial in adults with obesity (25 men and 40 women; BMI: 32.5 ± 4.1 kg/m², age 33±8.8y), randomized into three energy-restricted diet groups (-500 kcal/d): control group (CO), cashew nut (CN, 30 g/day), and cashew oil (OL, 30 mL/d). On the baseline and endpoint days of the intervention, anthropometry, blood collection and analyzes of superoxide dismutase (SOD) and malondialdehyde (MDA) markers were performed. Statistical analyzes were performed using the SPSS software (version 22.0, USA), using paired tests (paired t test or Wilcoxon) or between groups (Kruskal-Wallis and applied post-hoc Dunn), according to normality (Shapiro-Wilk test). The level of statistical significance used was 5%. **Results:** At the end of the study, 23 individuals in the CN group (-3.7 kg ± 2.9), 17 in the CO group (-3.1 kg ± 2), and 25 in the OL group (-3.3 kg ± 2.3) finished the intervention. MDA decreased after 8-wk intervention for the CN and OL groups, (-4.7 ± 3.1 µM/mL and -4.1 ± 3.9 µM/mL, p = <0.001, respectively), while SOD increased in the group OL (+2.0 ± 3.0 U/mL, p = 0.048). There was an effect between groups for SOD (p = 0.029), but not for MDA. SOD concentrations were lower for the CN group (55 U/mL; 41-117), compared to the OL and CO groups (62 U/mL; 49-147 and 66 U/mL; 44-132, respectively p < 0.005). **Discussion:** Regular consumption of cashew nut or oil seems to have additional beneficial effect to caloric restriction in reducing lipid peroxidation. Lower SOD values only in the CN group suggests the action of bioactive compounds present in cashew nuts, such as phenolics and other antioxidants. **Conclusion:** Daily consumption of cashew nut or its oil has beneficial effects in controlling OS in people with obesity after 8-wk energy-restricted intervention. **Funding:** Capes (code 001), Fapemig (CDS-APQ-01808-22), Embrapa (SEG 20.18.03.059.00.00) and CNPq (404770/2021-5). **License number of ethics committee:** Comitê de Ética em Pesquisa com Seres Humanos da Universidade Federal de Viçosa (nº 4.543.541/CEPH) e Registro Brasileiros de Ensaios Clínicos (ReBEC parecer:RBR-8xzkyp2).

PT.186 EFFECTS OF BARIATRIC SURGERY ON MODULATION OF INFLAMMATORY FACTORS IN THE SHORT TERM

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Introduction: Bariatric surgery has become an alternative for the treatment of obesity, promoting adequate and long-lasting weight loss in cases of individuals who are not responsive to conventional clinical treatments. **Objective**: To analyze the body composition and inflammatory factors present in the blood of patients before and sixty days after bariatric surgery. **Methods:** Observational, longitudinal, prospective study in two waves: preoperative and sixty days postoperative. It was carried out in a public hospital in southeastern Brazil, from November 2021 to March 2023. Data collection was performed directly and privately with patients, through epidemiological, clinical questionnaires and biochemical tests. Data analysis: Shapiro-Wilk test; Unpaired t-test, $p \leq 0.05$. **Results:** The sample consisted of 26 patients, predominantly female (88%), over 20 years old, married (58%), and with completed high school education (50%). Sixty days after surgery, there was a significantly mean reduction of 18.8% in total weight and 26% in fat, 10.4% reduction in lean mass, and 15 cm reduction in abdominal circumference on average. Fasting glucose decreased (-18.2%), as well as C-reactive protein (CRP) levels (-65.2%). On the other hand, there was an increase in AST/TGO levels (+23.3%), ALT/TGP levels (+6.2%), and suggestive monocyte-lymphocyte ratio (+5%) and platelet-lymphocyte ratio (+18%). **Conclusion:** Sixty days after bariatric surgery, patients showed a significant reduction in body weight, fat mass, lean mass, and abdominal circumference, as well as fasting glucose and CRP levels, but there was an increase in AST/TGO, ALT/TGP levels, and suggestive monocyte-lymphocyte and platelet-lymphocyte ratios. **Keywords:** Bariatric surgery; body weight; body composition; inflammation. **License number of ethics committee:** CAAE 515191115.7.0000.5071, Hospital Universitário Cassiano Antônio de Moraes.

PT.187 BARIATRIC SURGERY REDUCES ANTHROPOMETRIC AND BIOCHEMICAL PARAMETERS FOR NUTRITIONAL STATUS EVALUATION

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Introduction: Bariatric surgery is considered the most effective and sustainable treatment for severe obesity, promoting excess weight loss and improving biochemical parameters related to nutritional status. **Objective**: To evaluate body composition and serum biochemical parameters before and two months after bariatric surgery. **Methods:** Observational, longitudinal, and prospective study conducted with patients undergoing bariatric surgery in a public hospital in the southeast of Brazil, from November 2021 to March 2023. Anthropometric and body composition parameters (weight, body mass index, waist circumference, lean mass, and fat mass), serum concentrations of pre-albumin, albumin, total proteins, platelets, hemoglobin, total cholesterol, triglycerides, and ferritin were evaluated. Data were analyzed using the Student's t-test or the Mann-Whitney U test, according to the nature of the data. The significance level adopted was 5%. **Results:** The sample consisted of 26 patients, predominantly female (88%), aged between 30 and 39 years (42.3%), married (58%), with completed high school education (50%) and grade III obesity (81%). Bariatric surgery promoted a significant reduction in weight, BMI, waist circumference, lean mass, and fat mass between the two evaluated moments ($p < 0.05$). After bariatric surgery, there was a significant reduction in hematocrit (40.87 ± 2.66 *vs.* 39.03 ± 3.52%), serum concentrations of pre-albumin (24.00 ± 3.74 *vs.* 19.13 ± 4.41 mg/dL), albumin (4.45 [4.20-4.50] *vs.* 4.20 [4.00-4.40] g/dL), and total proteins (7.42 ± 0.50 *vs.* 6.81 ± 0.46 g/dL) ($p < 0.05$). No significant changes were observed for platelet values, hemoglobin, total cholesterol, triglycerides, and ferritin ($p > 0.05$). **Conclusion:** Bariatric surgery promoted improvement in anthropometric parameters, body composition, and serum proteins indicative of nutritional status after 2 months. **Keywords**: Obesity, bariatric surgery, weight loss, nutritional status. **License number of ethics committee:** CAAE 515191115.7.0000.5071, Hospital Universitário Cassiano Antônio de Moraes.

PT.188 EFFECT OF CASHEW NUTS AND CASHEW OIL OF CONSUMPTION AND WEIGHT-LOSS ON ADIPOCITOKINES IN ADULTS WITH OBESITY ONGOING ENERGY-RESTRICTED INTERVENTION: BRAZILIAN NUTS STUDY

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Introduction: Despite the nutritional properties, that including the increase of satiety and weight control, the cashew nuts are still poorly studied for the obesity treatment including the normalization of adipocytokines release. Thus, we evaluated the effect of cashew nuts and cashew oil intake and weight loss (WL), during an energy-restricted diet, on adipocytokines Leptin (Lep) and Adiponectin (Adipo). **Subjects and methods:** Ninety-five participants with obesity (35 men/60 women, ±32,4y, ±34,0 kgm²), were randomized into three groups to 8-wk energy-restricted (- 500 kcal/d) diet: control (CO), cashew nuts (CN, 30 g/day) and cashew nut oil (OL, 30 ml/day). At the intervention (baseline – Bs and endpoint – Ed) days, weight and plasma Lep and Adipo were analyzed. After 8-wk intervention, the groups were subdivided according to successful WL (< or ≥ 5%). Test t and Anova one-way were performed and significance of $p < 0.05$ was adopted. **Results:** Seventy-one participants completed the intervention. All groups had similar WL (CO: -2.8 ± 2.3; CN: -3.5 ± 3.0; OL: -2,7 ± 2,6 kg) after 8-wk. Plasma Lep had significant reduction only in the CN group (Bs: 48.7 ± 3.4 pg/mL; Ed: 47.1 ± 3.0 pg/mL, $p = 0,007$). When analyze the groups by WL, Lep were significant smaller to CN > 5% (Bs: 47.1 ± 3.0; En: 45.1 ± 1.9 pg/mL, $p = 0.005$) and Lep and Adipo were reduced to O > 5% group (Lep – Bs: 48.7 ± 3.5; En: 46.0 ± 2.2 pg/mL, $p = 0.008$; Adipo – Bs: 64.0 ± 6.5; En: 61.4 ± 2.6 pg/mL, $p = 0.020$). **Discussion:** Lep and Adipo play the role in energy balance signaling and inflammatory control, while energy-restriction and specific dietary compound can modulate them. Some studies point out that the normalization in the release of these adipocytokines are closely related to the magnitude of WL. The reduction in Lep increases its hypothalamic sensitivity and signaling of satiety. The fact that the CO group presented the same WL magnitude and the non-reduction in Lep levels may indicate a possible interaction with the consumption of this nuts. The link at Adipo reduction with oil intake needs more investigation, potential connected to diet glycemic index and glucose metabolism. **Conclusion:** In an energy-restricted condition, daily consumption of cashew nuts and cashew oil resulted in adipocytokines modulation. Moreover, this modulation may be potentiated by a successful WL. **Funding:** Capes (code 001), Fapemig (CDS-APQ-01808-22), Embrapa (SEG 20.18.03.059.00.00) and CNPq (404770/2021-5). **License number of ethics committee:** 4.543.541/CEPH – Universidade Federal de Viçosa.

PT.189 IMPACT OF NUTRITIONAL STRATEGIES ON MEMORY AND NEUROCHEMICAL PARAMETERS IN MICE

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Introduction: Obesity is a chronic non-transmissible disease that has affected a large fraction of the world's population and which considerably impairs public health, as it is associated with the development of a number of other diseases, impacting quality of life. Thus, nutritional strategies are necessary for weight loss, highlighting low carb diets (LC), ketogenic diet (DC) and intermittent fasting (IF). These strategies can lead to metabolic and behavioral adaptations, stimulating different biochemical pathways. This study aimed to evaluate memory, energy metabolism and neuroinflammatory parameters in mice submitted to low carb diet (LC), the ketogenic diet (KD) and intermittent fasting (IF). **Methods:** Eighty 60-day old male mice of the Swiss lineage were divided into 4 groups: control group, LC group, KD group and IF group. The experiment lasted 15 days. Body weight was measured weekly and food intake every 48 hours. After the experimental protocol, the animals were submitted to behavioral test of recognition of objects and then euthanized. Soon, visceral fat was removed and weighed, and the brain was isolated for inflammatory and biochemical analysis. **Results:** The LC and KD strategies resulted in weight gain, accumulation of fat, without significant differences for IF. Regarding memory, all groups showed some decline. In complex I of the striatum, there was an activation in the KD strategy. As for complex II, an increase in activation of this complex can be observed with strategies in all structures. Regarding the inflammatory parameters, there was a reduction of interleukin-1 beta and interleukin- 6 in the LC, KD and IF groups. Regarding oxidative damage, there was an increase in fluorescence of difluorescein and carbonyl, as well as high levels of superoxide dismutase and glutathione in the LC, KD and IF groups. **Discussion:** The LC and KD can cause damage to memory, IF improves the production of adenosine triphosphate (ATP) and the LC, KD and IF strategies do not lead to neuroinflammatory damage, but present damage to the level of oxidative stress. **Conclusion:** Nevertheless, the use of LC, KD and IF strategies show a protective effect on neuroinflammation, since a reduction in inflammatory markers was observed. However, the present study showed oxidative stress damage mainly due to IF, as well as an increase in the levels of antioxidant enzymes, suggesting an attempt to neutralize oxidative damage. **License number of ethics committee:** The use of animals was submitted to and approved by the Ethics Committee on the Use of Animals (CEUA) of the University of the South of Santa Catarina under protocol number 20.013.4.01.IV.

PT.190 DIETARY PATTERN OF ELDERLY PEOPLE LIVING IN THE RURAL AREA OF MORTUGABA (BA), BRAZIL

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Introduction: Globally, chronic diseases account for 71% of deaths and are the leading cause of morbimortality in elderly population. The pooled prevalence of excess weight in Brazilian adults increased from 33.5% in 1974-1990 to 52.5% in 2011-2020. **Aim:** The purpose of this study was to access the metabolic condition and the dietary profile in the studied population. **Methods:** This is a Cross-sectional study conducted in 64 women and 16 men aged > 60 years, in the Primary Care Units in the rural area of Mortugaba (BA). Food frequency questionnaire (Vigitel – Protective and Risk Factors for Chronic Diseases by Telephone Survey) previously validated in Brazilian population was applied. Anthropometric measurements were evaluated; laboratorial data and the presence of chronic diseases were accessed in the medical record. **Results:** The population studied consisted of elderly people (60-88 years), mainly females (80%). Among participants, 84% presented excess weight, of these 52,5% were obese; 35% had Type 2 Diabetes and 54% hypertension. Plasma cholesterol concentration was elevated (221 ± 65 mg/dL), as well as LDL-c (149 ± 16 mg/dL) and triglycerides (157 ± 67 mg/dL); fasting glucose plasma concentration was also high (119,5 ± 38,0 mg/dL). Waist circumference was altered on 32,5% of participants, presenting a positive association with LDL-c. Participants had a regular to high intake of grains, fruit, vegetables, as well as a regular to high intake of sweet beverages and cookies. High frequency of meal replacement with fast-food and pizza were observed, specially at dinner. **Conclusion:** The studied population had a higher prevalence of obesity, type 2 Diabetes, and hypertension, in comparison to the Brazilian population, even with an adequate intake of grains, fruit and vegetables. However, the intake of sweet beverages and cookies (ultra-processed foods), fast-foods and pizza were also elevated, increasing the amount of fat, sugar, and calories, predisposing to weight gain and chronic disease development. **License number of ethics committee:** Hospital Israelita Albert Einstein. CNS 466/2012, sob o protocolo CAAE 52483921.4.0000.0071.

PT.191 COMBINED EFFECTS OF FTO RS9939609 AND MC4R RS17782313 POLYMORPHISMS ON LIPID INTAKE, EATING OCCASION A DAY AND CARDIOVASCULAR RISK IN BRAZILIAN WOMEN WITH OBESITY

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Introduction: FTO (Fat Mass and Obesity Associated [rs9939609]) and MC4R (Melanocortin 4 receptor gene [rs17782313]) polymorphisms have been related with obesity. Few studies have investigated the combined effect of these two variants. This study aimed to investigate their combined effects on lipid intake, eating occasions (EO) and cardiovascular risk (CVR) in obesity. **Patients and methods:** Cross-sectional study including women with obesity divided into three groups according to the presence or absence of the risk allele. Blood sample was collected after a 12-hour fast to carry out genotyping, triglyceride (TG), HDL-c (high-density lipoprotein cholesterol) and glucose levels. The TG/fasting glucose and TG/HDL-c ratios were calculated to assess the CVR. The total lipids and their fractions saturated fatty acid (SFA); monounsaturated fatty acid (MUFA); polyunsaturated fatty acid (PUFA); total cholesterol intake were assessed through three-day food records on non-consecutive days evaluated by DietProClínico®6.1. EO consumed per day were self-reported. Statistical analyzes were performed using the SPSS program, 22.0, considering significant p-value < 0.05. **Results:** Twenty-three women were included, six did not present polymorphism for any gene analyzed (G1), twelve presented one of the variants (MC4R or FTO) (G2), and five presented both variants (G3). The groups showed adequate total lipids (% total energy value [TEV]) and AGPI intake (6-11% TEV), low AGMI intake (<15% TEV), and high cholesterol consumption (>200 mg). Only G3 showed high SFA intake (>10% TEV) and an increased risk for CVR by the TG/fasting glucose ratio (≥4.55). All groups showed values lower than 3.5 in the TG/HDL-c ratio, considered at CVR. No significant difference was observed between groups on the total lipids intake, EO and CVR. **Discussion:** Our study did not provide significant evidence of the possible effects of the rs9939609 and rs17782313 polymorphisms on total lipid intake, EO and CVR. Differently, studies have shown association between the reported genes and complications of increased body adiposity, such as higher TG levels. Therefore, we emphasize the importance of further investigations. **Conclusion:** We found that there was no influence of the combine effect of rs9939609 and rs17782313 on lipid intake, EO and CVR in obesity. Furthermore, the SFA intake, as well as the TG/fasting glucose ratio, were higher than the dietary recommendations in the group with both variants. **License number of ethics committee:** CAAE:37984720.2.0000.5257, Número do Parecer: 4.488.216. Comitê de Ética em Pesquisa do Hospital Universitário Clementino Fraga Filho (HUCFF-UFRJ).

PT.192 ESTIMATING RESTING ENERGY EXPENDITURE FROM BODY COMPOSITION ASSESSMENT METHODS DISAGREES WITH INDIRECT CALORIMETRY: PRELIMINARY DATA FROM A WEIGHT LOSS CLINICAL TRIAL

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Introduction: The resting energy expenditure (REE) is vital to establish energy requirements, which will be used to decide the weight loss-related energy intake goals for people living with obesity (PLO). The REE-associated misestimating, especially using tools not designed for this purpose (e.g., bioelectrical impedance; BI), can lead to under or overestimated energy estimations. As such, we aimed to verify the degree of concordance between the REE of prediction equations from body composition assessment methods and the values derived from the indirect calorimetry (IC) of PLO. **Patients and methods:** The data used was from the baseline evaluation of a clinical trial (CAAE: 57484122100005505). The sample consisted of men (20-35 years old living with obesity; body mass index; BMI ≥30.00-≤39.99 kg/m^2). The IC (K5® Wearable Metabolic System – COSMED; REE_{K5}) was used to quantify the REE. The methods used to assess body composition were: (i) Air displacement plethysmography (BODPOD®; REE_{BP}) and (ii) BI (InBody770®; REE_{In} and Biodynamics450®; REE_{Bio}). Both methods have prediction equations to estimate the REE. The degree of agreement between the methods was assessed using Student's t-test, Pearson correlation, linear regression, and BLAND-ALTMAN (JAMOVI 2.3.22 software). The data are displayed as mean, standard deviation, mean difference (MD), 95% confidence interval (CI), and root mean square error (RMSE). **Results:** Preliminary data included 10 PLO (33.1 ± 5.17 years old; 33.9 ± 2.24 kg/m^2). Mean REE values for K5®, BODPOD®, InBody® and Biodynamics® were, respectively, 2,109 ± 118 kcal; 1,648 ± 606 kcal, 1,828 ± 176 kcal, and 2,307 ± 206 kcal. Considering REE analysis, the REE_{K5} *vs.* REE_{BP} (r = 0.274; R^2: 0.07; RMSE: 108; DM: -293 kcal; 95% CI: -430 to -156 kcal; p < 0.001); REE_{K5} *vs.* REE_{In} (r = 0.480; R^2: 0.23; RMSE: 98.1; DM: -280 kcal; 95% CI: -393.4 to -167 kcal; p < 0.001); REE_{K5} *vs.* REE_{Bio} (r = 0.361; R^2: 0.13; RMSE: 104; DM: 198 kcal; 95% CI: 57.3-339 kcal; p = 0.011) do not showed agreement. Finally, proportion bias was not verified in the comparisons conducted. **Discussion**. REE from body composition devices showed poor agreement with IC, the gold standard analysis method for REE. **Conclusion:** Although the acceptable limits for the REE between the methods are not clear according to the literature, the predictive equations inserted in the body composition tools to estimate the REE do not agree with the IC-REE; hence, they should not be used to estimate the REE and dietary planning for PLO. **License number of ethics committee**: Projeto CEP/Unifesp n: 0309/2022 – Universidade Federal de São Paulo.

PT.193 ASSESSMENT OF FOOD CONSUMPTION ACCORDING TO NOVA CLASSIFICATION SYSTEM IN ADULTS WITH OBESITY AND SYMPTOMS OF BINGE EATING DISORDER

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Introduction: The increase in consumption of ultra-processed foods and the reduction of unprocessed foods contribute to increase the prevalence of obesity and may impact the regulation of eating behavior. **Patients and methods:** It were evaluated 47 volunteers diagnosed with obesity (BMI 40.89 ± 5.92 kg/m^2); 91.5% were female, aged 34 ± 6.89 years. The symptoms of Binge Eating Disorder (BED) were assessed by the *Binge Eating Scale* and the sample was divided into the groups Without BED (n = 22), Moderate BED (n = 17) and Severe BED (n = 8). The food consumption data was collected by the three 24h records and classified the food according to the NOVA classification into unprocessed or minimally processed foods; processed culinary ingredients; processed foods and ultra-processed foods. **Results:** The caloric intake of the sample was 1,724.82 ± 482.46 kcal with 47.3% ± 12.9 consumption of unprocessed and minimally processed foods, 7.2% ± 5.2 of processed culinary ingredients, 10.9% ± 8 of processed foods and 34.5% ± 14.69 of ultra-processed foods. The Severe BED group had higher total caloric intake (2,173 ± 507 kcal) compared to the Without BED group (1,641 ± 416 kcal; p = 0.01) and Moderate BED (1,623 ± 457 kcal; p = 0.01) and lower participation unprocessed and minimally processed foods (37% ± 8.8) compared to the Without BED group (50% ± 14.1; p = 0.04). There was a difference in the consumption of processed culinary ingredients between the Without BED group (5.9% ± 2.5) and Moderate BED (10% ± 7.3, p = 0.03). Considering the consumption of ultra-processed foods, the Severe BED group had higher caloric intake (1059 ± 423 kcal) compared to the Without BED (583 ± 384.3 kcal; p = 0.008) and Moderate BED (528.9 ± 267.7 kcal; p = 0.04) groups, as well as a higher percentage of ultra-processed foods (46% ± 13.7) compared to Moderate BED (31% ± 11; p = 0.04). The lipids percentage and caloric intake from ultra-processed foods was positively associated with the BED symptom score. **Discussion:** Consumption of ultra-processed foods can aggravate eating disorder symptoms in individuals with obesity due to the composition of these foods, such as high sugar and fat content and the presence of food additives that increase palatability and can lead to overconsumption through effects on endocrine and neurobiological pathways that regulate eating behavior. **Conclusion:** Individuals with higher scores on BED symptoms had a higher total caloric intake, lower participation in unprocessed foods and higher consumption of ultra-processed foods. **License number of ethics committee:** 4.356.485/2020.

PT.194 THE INFLUENCE OF SOCIAL MEDIA ON BODY MASS SATISFACTION IN POST-BARIATRIC ADULTS

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Introduction: The bariatric surgery is a procedure that causes a significant weight loss for patients with obesity. Body image can be defined as assimilations, thoughts and feelings of a subject about his body. Body dissatisfaction occurs when perceptions of the body are negative and involve a perceived disagreement between a person's view of their real and ideal body. Both sexes may differ in general use of social networks and body image, the aesthetic pressure imposed by these social networks. This cross-sectional study aimed to analyze body image satisfaction, nutritional status and the social media influence in post-bariatric adults. **Patients and methods:** This cross-sectional study was conducted on 19 adults (24 to 35 years of age). The bariatric surgery procedure, life habits, and the use of social media data were obtained by a self-reported questionnaire. The nutritional status was represented by the body mass index (BMI). The BMI values were obtained by the ratio between body mass (kg) per height (m) square (self-reported values). Lastly, the body satisfaction was assessed by the Silhouette Scale. **Results:** The majority of the sample was female (89,5%/ n = 17) and the mean age was 29 years (DP: 4y). The mean and DP of self-reported weight and BMI were, respectively, 79,2 kg (DP:15,6) and 27,4 kg/m² (DP: 4,5). The time in which bariatric surgery was performed ranged from 6 to 84 months. Regarding body satisfaction, 84% of the sample reported dissatisfaction with the result of the surgery, and 79% wanted to have a smaller silhouette. As for recognition through published photos, 79% said they recognized the image as their own, but 74% said they had already made or used image editing software. The analysis also proved that social networks directly influence the body satisfaction of participating users, with 42% reporting being positively influenced. **Conclusion:** In conclusion, even after the bariatric surgery, most individuals reported dissatisfaction with their body image, and did not recognize their own silhouettes. These results were associated with the influence of social media. **License number of ethics committee:** CAAE número: 62828722.3.0000.0107.

PT.195 MC4R POLYMORPHISM RS17782313 SEEMS TO INFLUENCE FASTING BLOOD GLUCOSE LEVELS IN BRAZILIAN WOMEN WITH OBESITY

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Introduction: *Melanocortin-4 receptor gene (MC4R)* variants have been associated with obesity due to their effect on eating intake and energy homeostasis. The rs17782313 (T>C) variant, for instance, seems to influence dietary intake and glucose homeostasis. Hence, the present study aimed to investigate the effects of the *MC4R* variant rs17782313 on carbohydrates and total fiber intake, glycemic control, and serum triglyceride levels in Brazilian women with obesity. **Patients and methods:** This is a cross-sectional study including Brazilian women with obesity (BMI > 30 kg/m²) aged between ≥19 and ≤45 years old. Participants were divided into two groups based on rs17782113 genotype and all of them were assessed for blood parameters (genotyping, fasting glucose, insulin, and triglycerides levels). The homeostasis model assessment of insulin resistance (HOMA-IR) and the Homeostasis model assessment of β-cell function (HOMA-β) were calculated. The average intake of carbohydrates and total fiber were assessed through three-day food records on non-consecutive days, two typical days, and one atypical day by DietProClínico®6.1. Statistical analysis was performed by Statistical Package for Social Science (version 22.0), considering p-value < 0.05 as significant. **Results:** A total of twenty-two women were included in the study, of which sixteen did not have the risk genotypes, while six had the polymorphism (CT+CC). There was no significant difference between the presence or absence of the risk genotypes on the intake of carbohydrates and total fibers and triglyceride levels. On the other hand, the variant carrier group showed that the blood glucose level (77.00 (12.25) mg/dL) was lower than the group with no carrier (84.00 (11.25) mg/dL) (p = 0,04).**Discussion:** Our study provided evidence of the possible effects of *MC4R* rs17782313 polymorphism on the intake of carbohydrates, glycemic indices and cardiovascular risk. Studies have shown that rs17782313 can be associated with obesity complications such as glucose intolerance and higher triglyceride levels, but those outcomes remain controversial. In a present study, we observed lower blood glucose levels in women with the polymorphism. Nevertheless, further studies are required to assess these findings. **Conclusion:** *MC4R* rs17782313 polymorphism did not influence carbohydrates, total fiber intake, and triglyceride levels. However, Brazilian women with obesity and the risk genotypes had lower blood fasting glucose levels. **License number of ethics committee:** CAAE:37984720.2.0000.5257, Número do Parecer: 4.488.216. Comitê de Ética em Pesquisa do Hospital Universitário Clementino Fraga Filho (HUCFF-UFRJ).

PT.196 PHYSICAL ACTIVITY LEVEL PLAYS A PROTECTIVE ROLE AGAINST DEPRESSION INCIDENCE IN BRAZILIAN ADULTS: A PROSPECTIVE STUDY (CUME STUDY

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Introduction: Depression is considered one of the most disabling illnesses among adults, while regular physical activity level (PAL) can reduce the risk of developing the chronic diseases. Thus, we evaluated whether PE provided a protective role against depression incidence. **Participants and methods:** The study evaluated 2,572 participants of Cohort of Universities of Minas Gerais (CUME), who completed baseline questionnaires and were followed for 4 years. Participants reported whether they were diagnosed with depression by a physician. PAL was classified based on the weekly time spent exercising, as recommended by the World Health Organization (WHO): inactive (0 minutes), insufficiently active (1-149 minutes), and active (≥150 minutes). The association between PAL and depression incidence was analyzed using Cox proportional hazards model, adjusting for sex, age, total energy intake, and hours of sleep per night. **Results:** The sample consisted of 36.4% men and 63.6% women with a mean age of 36.1 years (SD = 9.6), and 56% were physically active. Over 4 years, 246 incident cases of depression were identified. Compared to inactive participants, those who exercised as recommended (≥150 minutes) had a 32% lower risk of developing depression (HR 0.68, 95% CI = 0.51-0.91). A non-significant association was observed among participants who were classified as insufficiently active (HR 0.77, 95% CI = 0.54-1.11). **Discussion:** The results of this study are in agreement with other prospective researches, showing that regular PAL is protective against the development of depression, because there is a modification in the hypothalamic-pituitary axis (HPA) modulating the response to stress. While the mechanisms of action are not fully understood, some action pathways would be PAL can lead to resistance to the action of cortisol, an increase in the synthesis of dopamine and serotonin, and an increase in the permanence time of these neurotransmitters in the synaptic cleft. **Conclusion:** Regular PAL performed according to the WHO recommendation provides protection against depression incidence in Brazilian adults with high scholarity. The inclusion of PAL in daily routines can bring important benefits to mental health and prevent a substantial number of new cases of depression. Funding: CAPES (code 001), and CNPq. **License number of ethics committee:** 4483415.5.1001.5149 – UFV.

PT.197 WORST FAT QUALITY SCORE IS ASSOCIATED WITH A HIGHER INCIDENCE OF OBESITY: 4-YEAR FOLLOW-UP (CUME STUDY)

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Introduction: To control obesity and its metabolic consequences, reducing the consumption of saturated and trans fats has been encouraged. Thus, our objective was to analyze the relationship between the dietary fat quality and the incidence of obesity in Brazilians with a high scholarity. **Participants and methods:** This is a longitudinal analysis with 1,205 participants from the Cohort of Universities of Minas Gerais (CUME Study). Data were collected online every 2 years (2016 -2020). Obesity was determined by the BMI when ≥ 30.0 kg/m². A frequency questionnaire with 144 food items validated in this population was used to estimate dietary intake of fat. The Fat Quality Index (FQI) was evaluated in quintiles and calculated by the ratio: (monounsaturated + polyunsaturated)/(saturated + trans fatty acid). Cox proportional hazards analysis was used and the model was adjusted using the theoretical method, with the variables sex, age, marital status, energy consumption, physical activity, alcohol, smoking, and sleep identified as confounding factors by a DAG. This study was approved by the Human Research Ethics Committee and all participants signed the Informed Consent Form. **Results:** Eighty-nine incident cases of obesity were observed. The average daily intake of monounsaturated (41.1 ± 2.3 mg, $p < 0.001$), polyunsaturated (22.4 ± 1.2 mg, $p = 0.0003$), and saturated (39.0 ± 2.0 mg, $p < 0.001$) fatty acids was higher among the cases incidents, compared to non-incidents. Participants in Q2 of the IQG had a 105% higher risk of obesity when compared to the last quintile (Q2 = HR:2.05 CI95%: 1.00-4.20 *vs.* Q5 = HR: 1.26 CI95%:0.58-2.75; p-trend = 0.829). **Discussion:** Our results corroborate other findings in the literature, in which the worst quality of fat (lower FQI) is indicative of higher consumption of pro-inflammatory fatty acids (saturated and trans fatty acids) than anti-inflammatory ones (monounsaturated, polyunsaturated). These fats can activate inflammatory pathways, contribute to metabolic changes, and increase body fat. **Conclusion:** Worst fat quality was associated with a higher incidence of obesity in this cohort, suggesting a different role of fat types in the occurrence of this outcome. **Funding:** Capes (code 001), and CNPq. **License number of ethics committee:** 4483415.5.1001.5149 – UFV.

PT.198 DIET QUALITY OF INDIVIDUALS TREATED AT A SECONDARY HEALTHCARE UNIT BASED ON HEALTHY AND UNHEALTHY FOOD MARKERS

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Introduction: Adequate and healthy food is a fundamental right inherent in human learning. The Food Guide for the Brazilian Population (GAPB) states that food provides the intake of important nutrients for maintaining health, and stresses that cultural and social issues must be considered (Brasil, 2014). Unhealthy eating habits represent a risk factor related to the global burden of disease, hopefully reducing life expectancy (Bortolini, 2020). In this sense, the healthy eating marker form was created, whose objective is to implement GAPB in primary health care, providing relevant information to assess the individual's eating pattern. From the results of the form, it is possible to outline strategies and changes in order to improve the eating habits of the Brazilian population. **Patients and methods:** This is a cross-sectional study conducted with individuals who were referred to the service between January 2015 and February 2020. Food consumption was obtained using a single 24-hour dietary recall. To assess the quality of the diet, we adopted the healthy and unhealthy food markers, from the Food and Nutritional Surveillance System (Sisvan). All analyzes were performed in SPSS version 21 (5% α level). **Results:** The sample included 990 subjects, mostly male (54.8%). Regarding healthy food markers, 91.5%, 85.3%, and 48.7% of participants reported consuming beans, greens and/or vegetables, and fresh fruits, respectively. For unhealthy food markers, the sample consisted of 11.4% consuming hamburgers and/or sausages, 30.5% consuming instant noodles, packaged snacks or crackers and 2.4% consuming cookies, sweets or treats. **Discussion:** The data show how the individuals assisted in this unit maintain their eating habits. So that, despite the change in the dietary pattern of the general population, most individuals still maintain *in natura* foods as the basis of their diet. **Conclusion:** The frequency of consumption of healthy foods is high for the bean group and for the greens and/or vegetables group, while fresh fruits had the lowest frequency. Despite the positive results, further studies are still needed to assess the amount consumed of these foods, since it was considered for this work only whether or not the food groups included in the Sisvan form had been consumed. **Financial support:** Capes (Code 001), Pibic/CNPq-UFV 2022-2023, CNPq fellowships (151832/2022-6 and 308772/2017-2), and CNPq/MS/SAPS/DEPROS grant (442317/2020-4). **License number of ethics committee:** 50015621.4.0000.5153 – UFV.

PT.199 GLYCEMIC PROFILE, MICROBIAL RICHNESS AND DIVERSITY IN OBESITY: AN ASSOCIATION STUDY

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Introduction: Obesity is a chronic disease, which has become a growing public health problem. The imbalance in the composition of the gut microbiota (GM) plays a relevant role in the onset and development of metabolic disorders. Despite this, studies suggest that there is no association between the predominance of certain bacterial phyla and altered glycemic indicators, and a lack of specific pattern is identified concerning the bacterial diversities found. The relationship between obesity, changes in GM composition, and glycemic indicators have not been fully elucidated. Thus, the aim of this study was to evaluate the association between the glycemic profile, richness and diversity of GM in women with obesity. **Patients and methods:** Observational study, with 42 adult women with obesity. For assessment of blood glucose, insulin and glycated hemoglobin (HbA1c), blood was collected after twelve hours of overnight fasting. The insulin resistance (IR) was estimated by assessing insulin resistance homeostasis (HOMA-IR), calculated based on fasting blood glucose and insulin values. GM was assessed by the 16S ribosomal sequencing method. SPSS 22.0 program was used for statistical analyses, considering p-value < 0.05. The data were expressed as median and interquartile range. **Results:** The participants had a BMI of 46.93 (12.06) kg/m² and 112 (29) mg/dL blood glucose, 25.30 (18.8) IU/mL insulin, 6.0% (0.9) HbA1c and 6.83 (7.42) HOMA-IR. There was no correlation between the richness and diversity of phyla and genders with any of the glycidic indicators evaluated. **Discussion:** This study demonstrated a similar result to that of Lambeth et al. (2015), in which no association was found between the abundance and diversity of bacteria with diseases such as pre-diabetes (pre-DM), Type 2 Diabetes Mellitus, and HbA1C. Differently, the study by Allin *et al.* (2018) demonstrated that adults with pre-DM and IR showed an increase in Ruminococcus, which has a positive relationship with HOMA-IR, HbA1c and blood glucose. **Conclusion:** The richness and diversity at both the level of genera and phyla does not seem to be associated with changes in the glycemic profile of study participants with obesity. **License number of ethics committee:** Parecer: 3.475.044 – Hospital Universitário Clementino Fraga Filho – Universidade Federal do Rio de Janeiro.

PT.200 APPLICATION OF THE GLOBAL DIET QUALITY SCORE AT THE NUTRITIONIST HEALTH STUDY – NUTRIHS

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Introduction: The Global Diet Quality Score (GDQS) was developed and validated to be a simple, yet robust diet metric, to surveillance nutritional deficiencies and chronic non-communicable diseases (NCD)-risk across a diverse set of food cultures. The aim of the present study to describe the GDQS of nutritionists participating in the multicenter Nutritionist Health Study (NutriHS) and its variation across sociodemographic stratus. **Methods:** NutriHS is a cross-sectional multicenter study, conducted with undergraduates in nutrition and nutritionists in three Brazilian cities: Sao Paulo, Campinas, and Fortaleza. Sociodemographic and food consumption information were collected through an online questionnaire. The GDQS was calculated from a quantitative 101-item food frequency questionnaire (FFQ). The GDQS is composed of 25 food groups, and scored from 0-49 points, given that higher scores indicate better diet quality. Descriptive statistics are presented as mean (SD) or absolute (relative) frequencies. To compare means, the Mann-Whitney test and the Kruskal-Wallis test were used, and, to access trend, a linear regression model was applied. **Results:** After excluding participants with incomplete FFQ data, the final sample included 714 individuals (97 men and 617 women), with an average age of 25 years (17y-76y). The distribution of participants across centers was unequal, being 446 (62%), 66 (9%), and 202 (28%), from Sao Paulo, Campinas, and Fortaleza, respectively. Most participants, 91%, were undergraduate students, and 57% had an income of 1 to 5 minimum wages. The mean GDQS was 21.6 (0.2), being higher in woman, compared to men (mean [SD] = 22 [5]; 20 [6]; $p = 0.0113$); lower in Fortaleza, compared to the other two centers (mean [SD] = 22 [5]; 22 [5]; 20 [5]; $p < 0.001$ in Sao Paulo, Campinas and Fortaleza, respectively); and higher in higher educational and income stratus (p-trend < 0.001). **Discussion:** Higher GDQS was found in the NutriHS sample than those observed in a representative study of the Brazilian population, possibly due to better knowledge in diet quality and food affordability, as well as the use of the FFQ for diet assessment, which lowers false zero consumption of rarely consumed foods. **Conclusion:** The GDQS, in nutritionists and nutrition students, was higher than in general population, being higher in Sao Paulo and Campinas, compared to Fortaleza center and higher in individuals with higher education and income status. (Process Fapesp n. 17/10185-9 e 15/10045-7). **License number of ethics committee:** CAAE Unicamp: 79775817.4.1001.5404.

PT.201 ASSOCIATION OF DIETARY INFLAMMATORY INDEX AND LIVER PARAMETERS AFTER BLACK TEA KOMBUCHA CONSUMPTION

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Introduction: fermented foods rich in bioactive compounds have been suggested as adjuvants in the treatment and prevention of excess adipose tissue and its complications. Among them, there is kombucha, obtained by infusion of *Camellia sinensis* and sugar, fermented by a symbiotic culture of bacteria and yeasts (SCOBY). Health benefits associated with kombucha have been evidenced, especially in the improvement of liver enzymes, however so far there are only studies in animals/in vitro. This study aimed to evaluate the association between the Dietary Inflammatory Index (DII®) and liver parameters in individuals who consumed kombucha. **Patients and methods:** Men and women aged 18-45 years were instructed to drink 200 mL/day of black tea kombucha and maintain their usual diet for eight weeks. Food Frequency Questionnaire, body composition, and biochemical markers were performed. The DII and Liver Fat Index (FLI) were also calculated. The paired t-test/Wilcoxon was applied to compare differences between pre-/post-intervention. Liver parameters that showed significant differences between pre-/post-intervention were considered for the construction of a multiple linear regression model to analyze their association with the DII variation. The adjustment was made for body fat, age, and sex ($\alpha = 0.05$). **Results:** 36 subjects completed the study, 23 women and 13 men with a mean age of 30.4 years (SD = 6.7). Participants showed a statistically significant increase in alkaline phosphatase (AP) ($p = 0.04$) and DII ($p = 0.01$) after the intervention. The other liver enzymes and FLI did not show statistical significance differences. There was a statistically significant association between AP and variations in the DII. This association remained even after adjusting for gender, age, and body fat, indicating that a 1-unit increase in DII variation after the intervention led to an 11.76 U/L increase in AP. **Discussion:** Although black tea kombucha has been associated with improvement in liver enzymes in animals, it was not effective in improving liver parameters in this study. However, when evaluating participants' diet quality, the highest DII at the end of the intervention indicates that, despite being instructed to maintain the dietary pattern, they showed changes in food consumption, which may explain the increase in AP. **Conclusion:** To enjoy the possible beneficial effects of black tea kombucha may be necessary to combine it with a healthy anti-inflammatory eating pattern. **License number of ethics committee:** CAAE: 25880819.3.0000.5153; Número do Parecer: 3.948.033; Universidade Federal de Viçosa/Conep.

PT.202 EFFECTS OF A NUT-ENRICHED ENERGY-RESTRICTED DIET ON PLASMA TELOMERASE LEVELS AND ITS RELATIONSHIP WITH WEIGHT LOSS VARIATION IN WOMEN AT CARDIOMETABOLIC RISK: A RANDOMIZED CONTROLLED TRIAL (BRAZILIAN NUTS STUDY)

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Weight loss, energy restriction, and the consumption of foods with functional claims have been the focus of recent studies in the field of longevity. We aimed to evaluate the effects of consuming an energy-restricted diet with or without nuts on telomerase levels. In addition, we evaluated the relationship between the variation in telomerase levels and the percentage of weight change. This is an eight-week, randomized, controlled nutritional intervention study with women at cardiometabolic risk. The women were randomized into two groups: A) the control group that received an energy-restricted diet (-500 kcal/d) without nuts (n = 19) and B) the nut group that received an energy-restricted diet (-500 kcal/d) with 45 g of nuts (15 g of Brazil nut + 30 g of cashew nuts) (n = 21). At the beginning and in the last eight weeks of the intervention, body weight and plasma telomerase levels were evaluated. Fifteen and thirteen adult women (31.8 ± 8.9 years) from the control and nut groups completed the study, respectively. Weight was reduced in both groups compared to baseline, but weight loss was similar between groups ($p > 0.05$). Telomerase levels decreased in the control group compared to baseline, while changes were similar between groups. A total of 39.3% of the participants had weight loss ≥ 5% of the initial weight. Women with ≥ 5% weight loss had increased telomerase levels compared with those with < 5%. The telomerase enzyme is responsible for the elongation of telomere length, which in attrition is related to the development of non-communicable chronic conditions. Clinical and observational studies suggest an association between weight loss and longer telomeres. Although we did not assess telomere length in this study, we can suggest a potential role for nuts in the relationship between telomerase and weight loss. Although the increase in telomerase is a compensation mechanism in the face of telomere shortening, the presence of minerals and fats with antioxidant and potential anti-inflammatory present in nuts may contribute to the increase and activation of telomerase and consequent elongation or maintenance of telomeres. Decreased oxidative stress and inflammation are some of the mechanisms behind telomere lengthening or maintenance. In conclusion, the consumption of nuts combined with an energy-restricted diet maintained telomerase levels, while higher levels of the enzyme were observed in those with weight reduction ≥ 5%. **License number of ethics committee:** CAAE: 92004818.0.0000.5153; N: 2.832.601/2018; Universidade Federal de Viçosa.

PT.203 ASSOCIATION BETWEEN HYPERTRIGLYCERIDEMIC WAIST PHENOTYPE AND METABOLIC PARAMETERS IN THE ELDERLY

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Introduction: The hypertriglyceridemic waist phenotype (CHTG) is characterized by elevated waist circumference (WC) and hypertriglyceridemia simultaneously. This phenotype can identify individuals with cardiometabolic risk. Cardiovascular diseases (CVD) represent significant prevalence rates in the elderly. **Objective**: To identify the prevalence of the CHTG phenotype and evaluate its association with metabolic parameters in the elderly. **Methods:** This is a cross-sectional study. 159 individuals aged ≥ 60 years, of both sexes, participated. Anthropometric and health data were obtained using a specific form and biochemical tests were collected from medical records. Participants were classified according to the presence of the CHTG phenotype when waist circumference ≥ 88 cm and ≥ 102 cm in women and men, respectively, and hypertriglyceridemia ≥ 150 mg/dL. **Results:** Regarding the components of the CHTG phenotype, it was found that 46.5% of the elderly had high WC and 42.8% had hypertriglyceridemia. The CHTG phenotype was present in 25.8% of the individuals. It was found that 97.6% of the elderly classified with the CHTG phenotype had ≥ 4 cardiovascular risk factors. **Conclusion:** The prevalence of the CHTG phenotype was significantly associated with biochemical parameters. It is an accessible parameter that can be used in clinical practice for triage in situations of cardiometabolic risk. **License number of ethics committee:** Foi submetido e aprovado pelo Comitê de Ética em Pesquisa da Universidade Federal de Sergipe, estando em acordo com a Resolução nº 466/2013, sob parecer nº 559.936.

PT.204 MOTIVATION FOR MODIFYING EATING HABITS IN INDIVIDUALS IN FOLLOW-UP IN A NUTRITION OUTPATIENT CLINIC

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Introduction: The change in eating habits, observed with the nutritional transition, is associated with a significant increase in the prevalence of health risks. In this scenario, changing these habits as a therapeutic measure becomes important. However, low adherence to nutritional guidelines is observed, often related to the difficulty in changing behaviors and because it requires favorable levels of motivation. This research aimed to investigate the level of motivation for modifying eating habits and associated factors of individuals undergoing nutritional monitoring at a nutrition outpatient clinic. **Patients and methods:** The study included adult patients, of both genders. Data regarding the patients' motivation were collected through interviews, in which the URICA/Eating habits questionnaire was applied. In addition, data were collected from medical records regarding clinical history, life habits, nutritional status and sociodemographic information. **Results:** The study included 22 of 37 patients receiving care at the nutrition clinic during the study period. It was observed that the majority were female (86.4%), with a mean age of 38 ± 14 years and married (55.6%). The main reason for the consultation reported was weight loss (72.7%). Regarding lifestyle variables, less than half performed physical activity (45.5%) and 72.7% reported consuming alcohol. According to the motivation assessment, it was observed that 54.5% were classified as motivated, according to the score in the questionnaire. Furthermore, when the motivational stages were evaluated, most patients were in pre-contemplation and none in the action stage. In terms of nutritional assessment parameters, the mean BMI was 32.2 ± 8.3 kg/m² and most patients were classified as overweight. Regarding eating habits, the majority had a frequent consumption of sugar (85.7%) and fried foods (61.9%). When comparing the motivated and non-motivated groups, in terms of food consumption, nutritional status and lifestyle, no statistically significant differences were found ($p > 0.05$). **Conclusion:** At the end of the study, it was possible to observe that just over half of the patients were motivated and a large part of this sample was classified in the pre-contemplation motivational stage, suggesting that the motivational situation of these individuals corroborated the initiative to carry out nutritional follow-up, however with permanence of unhealthy habits. **License number of ethics committee:** 5.032.145.

PT.205 SUGAR-SWEETENED BEVERAGES AND PEDIATRIC FREE SUGAR INTAKE – COMPARATIVE LABEL ANALYSIS

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Introduction: Sugar-sweetened beverages (SSB) include many food products considered a source of high amounts of sugar. The intake of high-calorie liquids is regular in young children on a hypercaloric diet that affects the energy balance to increase body weight. A potential effect of this pediatric consumption of free sugars is the increased prevalence of obesity in children and its implications for health indicators. This study aimed to observe data on sweetened beverages and compare the recommended daily value of sugar intake with the amount present in 200 mL servings. **Patient and methods:** In this cross-sectional observational study with a quantitative and analytical approach, we considered the value of the Recommended Daily Intake RDI for sugar directed at the pediatric population aged 4-7 years. Options for orange-flavored SSB available in the Brazilian market were researched and, subsequently, the information on the labels was analyzed. These data estimated the amount of sugar ingested after consuming a portion (pre-established value of 200 ml) of each beverage. Then, this amount was classified as high, moderate, or low, through a ratio with IDR. **Results:** Data from 5 SSB (A, B, C, D, and E) orange-flavored were analyzed. Concerning classification, the most frequent category was high sugar level (>50% of the recommended amount of sugar) representing 60% of the range of analyzed products, followed by moderate sugar level (25%-50% of the amount of sugar recommended) with 40% of the total. The studied sample did not present caloric liquids with a low level of sugar (<25% of the recommended amount of sugar). **Discussion:** The intake of free sugars via excessive consumption of SSB is a relevant issue in the debate on pediatric problems resulting from an unhealthy diet. Impacts on children mainly include weight gain, overweight, and obesity, in addition to changes in glycemic levels. To mitigate the damage against anthropometric indices of child health, the importance of regulating the child's diet, especially caloric liquids, is considered. **Conclusion:** This study shows that SSB may contain potentially alarming amounts of free sugars, considering safe intake limits for children. Thus, it is estimated that the unregulated introduction of these products into the diet has effects on metabolism, such as pediatric obesity.

PT.206 SELENIUM INTAKE IN OBESITY THROUGH BIOMONITORING OF BIOLOGICAL FLUIDS

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Introduction: Obesity is a chronic disease of global distribution, with consequences in several nutritional aspects and also on the nutritional status of mineral nutrients. Metabolic disorders due to obesity are connected to inadequate intake of mineral nutrients. Research with biomarkers of mineral nutrients in obese individuals may contribute to a better diagnosis when assessing the nutritional status. Thus, we aimed to evaluate the Selenium concentration in different biological fluids in eutrophic and obese nutritional status. **Patients and methods:** We selected 28 adults of both sexes and distributed them in Obesity groups (GO, 50%) with BMI ≥ 30.0 kg/m² and Control (CG, 50%) of BMI between 18.5-24.9 kg/m². We analyzed Selenium intake through 5 different biological fluids (plasma, erythrocyte, saliva, urine and tear), these analyses were performed by the Inductively Coupled Plasma Mass Spectrometry (ICP-MS) method. Anthropometry, body composition, biochemical tests and habitual food intake were also evaluated. For data analysis the t-Student or Mann-Whitney statistical tests were applied according to the distribution of the samples, for the correlation between the variables, Spearman's correlation coefficient was used. It was considered 5% significance ($p \leq 0.05$). **Resultados:** Plasma Se values were lowest in GO, 18.4 ± 10.3 ($p < 0.05$). The GO also showed low urinary Se concentrations when compared to the CG, 1.7 ± 0.6 ($p < 0.05$). Se intake showed a negative correlation with the measurements WC, body weight and BMI in the GO ($p < 0.05$). In the CG we found positive correlations between Se intake and urinary concentration. Positive correlations were found in GO between lacrimal and urinary, salivary and erythrocyte Se fluids. In CG this correlation was found between saliva and plasma. **Discussion:** Previous literature reviews indicating lower plasma Se in obese subjects are in agreement with our findings. The lower plasma concentration of Se could influence anti-inflammatory processes that would benefit the improvement of the obese state, since it is an essential mineral with free radical fighting functions. **Conclusion:** The obesity group presented lower concentrations of Selenium in plasma and urine compared to the control group. Positive correlations were found in GO between lacrimal and urinary, salivary and erythrocyte fluids. **License number of ethics committee:** 23996619600005440, FMRP-USP.

PT.207 BODY DISSATISFACTION AND OVERWEIGHT OF USERS ASSISTED IN A PSYCHOSOCIAL CARE CENTER

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Introduction: Body image dissatisfaction occurs when the perceived image of the body is not compatible with that idealized and may generate stress and suffering, influence mood, health behaviors (especially in eating habits and physical activity), and mental health, and may be associated with body weight gain. **Objective:** To evaluate body dissatisfaction and overweight in users of a Psychosocial Care Center (PCC). **Patients and methods:** A cross-sectional study was conducted with adults and elderly in weekly care in a PCC in Itaqui/Rio Grande do Sul between March and April 2016. For data collection, a form with sociodemographic questions was applied. Body dissatisfaction was assessed through the silhouette scale, an instrument validated for the Brazilian population. Body dissatisfaction was analyzed by comparing the perceived body image with the image desired by the participants. Weight and height data were used to calculate the Body Mass Index, with a subsequent classification of nutritional status, according to cutoff points established for adults and older adults. Data were analyzed using descriptive analysis: mean, standard deviation, and relative frequency. **Results:** Of the 98 users interviewed, 70.4% were female, with a mean age of 44.9 ± 9.90 years old, mostly between 40-59 years old (71.5%) and white (70.4%). Regarding dissatisfaction with body image, 19.6% were dissatisfied regarding thinness, considering their silhouette smaller than they would like. Only 17.5% were satisfied, while 62.9% reported dissatisfaction related to excess weight, i.e., they considered their silhouette bigger than they would like. Additionally, a high prevalence of overweight was verified, with 26.5% being overweight and 45.0% obese. **Conclusions:** A high percentage of PCC users with a nutritional diagnosis of being overweight and dissatisfaction regarding their current body image was observed. It reinforces the need for specific nutritional attention for this population to control overweight, which may reflect body image satisfaction and quality of life. **License number of ethics committee:** CAAE: 51505715.5.0000.5323/Parecer nº 1.880.374/Universidade Federal do Pampa.

PT.208 EVALUATION OF OXIDATIVE DAMAGE AND ANTIOXIDANT DEFENSE IN THE BRAIN OF MICE SUBMITTED TO DIFFERENT NUTRITIONAL STRATEGIES

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Introduction: Obesity is considered an epidemic. Thus, nutritional strategies are used for the purpose of weight loss, highlighting low carb diets (LC), ketogenic diet (DC) and intermittent fasting (IF). These strategies can lead to metabolic adaptations, stimulating different biochemical pathways. **Objective:** To evaluate the oxidative damage and antioxidant defense in the brain of mice submitted to LC, DC and JI diet. **Methods:** Male Swiss mice, 60 days old, were divided into 4 groups: control group, LC group, DC group and JI group. The experiment lasted 15 days. Body weight was measured weekly and food consumption every 48 hours. After the death of the animals, the brain was removed and isolated for analysis of antioxidant defense by the enzyme SOD and glutathione (GSH) and oxidative damage with fluorescence of difluorescein (DCF) and carbonyl. **Results:** There was greater activity of the antioxidant enzyme SOD by the JI strategy in the hypothalamus and prefrontal cortex, with no significant differences by the other strategies. It also increased GSH in the hypothalamus and reduced it in the prefrontal cortex by the JI strategy. Even so, high levels of GSH were observed in the hippocampus in the use of DC. When evaluating oxidative damage, our findings showed elevated levels of DCF compared to the control group in the hypothalamus, hippocampus and striatum, regarding LC, DC and JI strategies. As for the parameters of protein damage, it was possible to observe high levels of protein carbonylation especially by the LC and JI strategies in the hypothalamus and JI in the prefrontal cortex. **Discussion:** The LC and DC groups were submitted to a higher consumption of long-chain fatty acids, when compared to the control. As such, these non-esterified long-chain fatty acids or their activated forms are understood to exert a wide variety of harmful side effects on mitochondria, such as increasing ROS generation and therefore potentially increasing oxidative stress. And it is suggested that the increase in antioxidant defense, mainly in the IF, was due to the stress generated by the lack of food. **Conclusion:** It increased the levels of antioxidant enzymes suggesting an attempt to neutralize oxidative damage, and there was an increase in DCF and carbonyl, showing damage by oxidative stress. **License number of ethics committee:** 20.013.4.01.IV.

PT.209 HIGH-LIPID DIET WITH CARBOHYDRATE AND LOW-PROTEIN RESTRICTION LEADS TO THE DEVELOPMENT OF HEPATIC STEATOSIS AND INCREASE OF ADIPOSITY IN PREGNANT *WISTAR* RATS

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Introduction: Inadequate diets during the gestational period can generate morphofunctional changes and, as a consequence, diseases. **Objective:** To evaluate the effect of protein concentration present in a high-fat and carbohydrate-restricted diet offered during pregnancy and lactation of *Wistar* rats on body mass and histological parameters of the liver and adipose tissue. **Methods:** 19 adult *Wistar* rats were allocated into three groups according to the diet received: control group with commercial diet for rats (C; n = 8); carbohydrate-restricted, high-fat, normoprotein diet (E1, n = 5); carbohydrate-restricted, high-fat, low-protein diet (E2, n = 6). Body mass was monitored weekly. After euthanasia, liver and adipose tissue were analyzed after a routine histological procedure, stained with Hematoxylin-Eosin. **Results:** There was no difference in initial body mass, nor in weight evolution during pregnancy ($p > 0.05$). On the other hand, there was a reduction in the postpartum body mass of the rats that received the E2 diet compared to the control group (275.95 ± 27.42 g in C, 243.71 ± 40.71 g in E2, $p < 0.05$). The adipose tissue weight of group E2 (4.92 ± 0.46 g) was higher when compared to group C (1.93 ± 0.63g, $p < 0.01$). There was an increase in the adipocyte area of the E2 group when compared to the other groups (2214.00 µm² (502.01-8851.35) in E2, 1935.00 µm2 (318.72-5335.22) in E1, 2057,00 µm² (253.13-7026.96) in C; $p < 0.001$). Rats E1 and E2 developed hepatic steatosis to a greater degree when compared to the control group (80%; 83.33% and 12.5%, respectively). **Discussion:** The reduction in postpartum body mass in the E2 group indicates that the energy reserves of animals treated with this diet are lower. The adequate protein supply (E1) associated with the high concentration of fat supplies the demand for carbohydrates during the gestational period. Hepatic steatosis seems to occur due to the high lipid content and not the protein concentration. **Conclusion:** Carbohydrate-restricted, high-fat and low-protein diet reduced postpartum body mass and increased adipocyte area in female rats, in addition to increasing the number of animals with hepatic steatosis. **License number of ethics committee:** 015/2010, Universidade de Uberaba.

PT.210 PROBIOTIC-ENRICHED YOGURT (LACTOBACILLUS ACIDOPHILUS LA-5) IMPROVES BONE MINERAL COMPOSITION IN 5/6 NEPHRECTOMIZED RATS

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Introduction: Obesity is characterized by changes in body composition and is associated with the development of chronic kidney disease (CKD). Moreover, changes in body composition, such as adipose tissue accumulation, contribute to gut dysbiosis, which further aggravates CKD progression. Probiotics are a promising alternative to modulate gut microbiota, but its isolated use in CKD is still controversial. Thus, the association of probiotics to a food matrix may represent a better alternative in modulating body composition in CKD. **Objective:** The present study evaluated the effects of probiotic-enriched yogurt on body composition of 5/6 Nephrectomy rats. **Methods:** Ethics Committee approval (2304150818). Male *Wistar* rats were subjected to 5/6 nephrectomy (Nx) and a control group (n = 6) went through the surgical stress only (Sham). After 4 weeks, Nx groups were divided into 4 groups (n = 6) for 4 mL daily supplementation by oral gavage as follows: sterile saline solution (Nx), conventional yogurt (NxY), yogurt + *Lactobacillus acidophilus* LA-5 probiotic (NxYP) and isolated *Lactobacillus acidophilus* LA-5 probiotic (NxP). The probiotic concentration in each probiotic group was around 10^9 colony-forming units. At the end of 8 weeks, rats were submitted to dual-energy absorptiometry (DXA) to evaluate body composition. Then, the rats were euthanized, and the epididymal adipose tissue was removed and weighed. Plasma and serum were extracted for biochemical analysis and Glomerular filtration rate (GFR) calculation. **Results:** GFR was significantly lower in Nx, NxY, NxYP, and, NxP when compared to Sham, respectively (1.2 ± 0.3 *vs.* 2.6 ± 0.2; $p < 0.0001$; 1.0 ± 0.2 *vs.* 2.6 ± 0.2; $p < 0.0001$; 1.3 ± 0.1 *vs.* 2.6 ± 0.2; $p < 0.0001$; 1.2 ± 0.3 *vs.* 2.6 ± 0.2; $p < 0.0001$). DXA results showed significant differences between NxY and NxYP with respect to bone mineral density (0.168 ± 0.003 *vs.* 0.178 ± 0.005; $p = 0.0125$) and bone mineral content (11.2 ± 0.3 *vs.* 12.5 ± 0.9; $p = 0.0495$). There were no significant differences between Nx groups in the fat and lean mass, percentage of adipose tissue and bone area, as well as the biochemical analysis. **Discussion:** Probiotic-enriched yogurt supplementation probably influenced positively the bone health of CKD rats. **Conclusion:** The results suggest that probiotics provided benefits for bone parameters due to increased bone density and mineral composition. **License number of ethics committee:** 2304150818.

PT.211 FOOD SELECTIVITY AND WEIGHT STATUS: THE IMPACT OF EATING BEHAVIOR ON THE NUTRITIONAL STATUS OF CHILDREN

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Eating behavior involves physiological, environmental and social factors, considering individual and collective aspects. In childhood, dietary changes are prevalent, but it is also at this point in life that behavioral changes become susceptible. Among the problems related to food in childhood, food selectivity (FS) stands out, due to the greater chance of inadequate nutrient intake and repercussions on nutritional status. There is concern about a diet that is limited in variety, with a high consumption of ultra-processed foods and a predisposition to the onset of chronic diseases. This is a cross-sectional study consisting of children with or without a diagnosis of autism spectrum disorder (ASD) with reports of FS. Variables such as weight, age and gender were used to assess nutritional status, classified according to WHO growth curves. Eating behavior was evaluated using the Child Eating Behavior Questionnaire (CEBQ). Subscale scores were expressed as means and standard deviations. Statistical significance as considered when $p < 0.05$. The study was approved by the Ethics Committee. Of the 19 participants, 73.7% (n = 14) were male. The mean age was 7 (±2.8) years. In the group of children without ASD (n = 8) 37.5% were overweight and 25% obese. However, in the group with ASD (n = 11) it was seen that 54% had obesity or severe obesity. We performed a correlation between the CEBQ subscales and children classified as overweight (overweight, obese, severely obese) and non-overweight. In the subscales related to lack of interest in food, such as slow intake (SE) and food selectivity (FF), similar means were found between the two groups. Surprisingly, the non-overweight group showed higher means for subscales that represent greater interest in food, while overweight children exhibited higher means for subscales that show no interest in food. These averages reinforce the avoidance characteristics to the food, consistent with food selectivity profile presented with a delay in eating meals, regardless of nutritional status. The prevalence of excess weight found in the studied population is worrying. Lower prevalence was found in other studies. Collectively, our results can help individual or collective interventions in children with food selectivity, who seek improvements in eating behavior and food quality, achieving positive repercussions both in nutritional status and in health promotion. **License number of ethics committee:** CAAE: 64174422.7.0000.5259/Hospital Universitário Pedro Ernesto – Universidade do Estado do Rio de Janeiro.

PT.212 DEVELOPING A APP AS FOOD GUIDE FOR THE BRAZILIAN POPULATION AS NUTRITIONAL EDUCATION STRATEGY FOR HEALTH PROFESSIONALS AND STUDENTS

Kobi RSS, Kobi BVA, Paixao MPCP

With technological advances, new nutritional guidance tools have been used by several health professionals. Among these, there are health-related mobile applications that have several features and can help the user to maintain a healthy diet. In this context, the study aimed to assess the level of knowledge of students and health professionals about the food guide for the Brazilian population (2016) and from there develop an application on the Food Guide for the Brazilian population for cell phones with Android system. This work is a cross-sectional research that was built from the assessment of the knowledge of students and health professionals about the food guide for the Brazilian population (2016). A survey was carried out with health professionals through a digital questionnaire with students and health professionals, to provide a basis for the development of the application called Guia Alimentar BR, made up of 51 screens, which passes the content of Food Guide in a playful way. for the Brazilian population. The data were described using descriptive statistics. The results that have been presented demonstrate that health professionals and students have difficulty explaining questions that require great knowledge about food classifications and their characteristics, since only 43% answered these questions adequately. To assist in the nutritional education of health professionals and students, the application allows the user to enter each of the 10 steps and take a test at each step to analyze what he understood about the information, in addition to having a menu with the classification of foods, and also contain a glossary of words related to nutrition. The Brazilian food guide is a strategy to reduce the prevalence of chronic non-communicable diseases and must be understood by the entire population. It is concluded from this study that this application can be a strategy of continuing education, about food and nutrition to expand the knowledge of students and health professionals. Also, it is an adequate proposal for this condition, since it is easily accessible and can be modified as the training with the professionals occurs.

PT.213 MENU PROJECT – CULINARY MEDICINE AND NUTRITION: COOKING SKILLS IN ADULTS WITH DIFFERENT CARDIOMETABOLIC HEALTH PHENOTYPES

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Introduction: Higher consumption of homemade food has been associated with a healthy eating pattern, better adiposity profile, and cardiometabolic health. Low cooking skills (CS) are among the factors limiting the consumption of homemade food. There are no studies comparing CS in individuals with normal metabolically healthy weight (NWMH), metabolically healthy obese (MHO) and metabolically unhealthy obese (MUO) phenotypes. The objective of this study was to compare domestic CS among adults with MHNO, MHO, and MUO phenotypes and to associate CS with cardiometabolic health. **Patients and methods:** This is an ongoing cross-sectional study with 59 participants (19-54 years old) and 46 women, with a BMI of 19-52 kg/m². Participants were considered metabolically healthy if they did not had alterations in blood pressure and glucose, HDL cholesterol and fasting triglycerides levels; and as healthy weight BMI < 25.0 kg/m² and obesity BMI □ 30.0 kg/m². Waist circumference, body composition (dual-energy X-ray absorptiometry), and plasma glycemic and lipid profiles were evaluated. CS was assessed using the Primary Health Care Home Cooking Skills scale (EHAPs), which ranges from 0 to 116 points. CS was classified as low (0-29), moderately low (30-58), moderately high (59-87) and high (88-116). Analysis of variance (ANOVA) and Kruskal-Wallis, Pearson, and Spearman correlation tests were performed, with $p < 0.05$. **Results:** The mean age was 33 □ 7 years; 19 patients had the MHNO phenotype, 15 had MHO, and 22 had MUO. The mean CS score was 66 □ 19; 53% had moderately high CS, 27% moderately low, 13% high, and 7% low. There was no difference ($p = 0.81$) in the distribution of the CS score among the MHNO (64 ± 19), MHO (69 ± 21), and MUO (67 ± 20) phenotypes. There was no correlation ($p > 0.05$) between CS and body adiposity variables (BMI, waist circumference, % total body fat, and visceral fat mass) or cardiometabolic health (lipid, glycemic, and blood pressure profiles). **Discussion:** Although the preliminary results do not confirm the hypothesis that low CS is associated with dysmetabolism, which could be due to a diet rich in ultra-processed foods, it is understood that the hypothesis still deserves to be explored in a larger sample. **Conclusion:** Domestic CS did not differ between the MHNO, MHO, and MUO phenotypes and was not associated with the cardiometabolic health variables studied. **License number of ethics committee:** 39037120.0.0000.5404.

PT.214 EVALUATION OF FOOD CONSUMPTION, SERUM LEVELS OF VITAMIN D AND THE BSMI POLYMORPHISM OF THE VDR GENE IN OVERWEIGHT INDIVIDUALS IN THE WEST FRONTIER-RS

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Introduction: Hypovitaminosis D has been considered a public health problem, due to its implications in the development of several diseases, including overweight. Vitamin D has several functions, such as modulating the metabolism of some cellular tissues, including adipose tissue, and consequently, obese individuals may have hypovitaminosis D. **Objective:** To assess food intake, serum levels of vitamin D and the BSMI polymorphism of the gene VDR in overweight/obese individuals. **Patients and methods:** This was a crossectional analytical study. Individuals in the community were invited to participate in the research and, after signing the informed consent, a structured questionnaire was applied containing identification data, and nutritional data (24 hour reminder); afterwards, blood was collected for biochemical analysis, vitamin D was measured by Chemiluminescence and RT-PCR was used to evaluate the BsmI polymorphism of the VDR gene. Data was analyzed using a statistical program (SPSS 20.0) and differences between groups using $p < 0.05$. The research project was submitted for consideration by the Ethics Committee of the Unipampa and was approved under protocol number 977827. **Results:** 111 participants with a mean age of 30.5 ± 10.6 years, both genders, were included and divided into 3 groups according to nutritional status. A comparison was made between the means, serum vitamin D levels in the eutrophic (18.5 ± 4 ng/dL) overweight (19 ± 5 ng/dL) obese (19.5 ± 5 ng/dL) group, with no statistical difference between the groups ($p = 0.73$). The obese had higher measures of WC, HC, AC and % of fat when compared to the other groups ($p = 0.00$). CHO consumption was higher among the obese ($p = 0.02$), and vitamin D consumption was lower among the overweight group ($p = 0.14$). The genotypes studied were not related to vitamin D intake ($p = 0.13$) or serum levels ($p = 0.69$). **Discussion:** Most obese individuals are deficient in vitamins and minerals, among them vitamin D, which is directly related to obesity through mechanisms that regulate the formation and differentiation of adipose cells, and its low concentrations imply in the stimulation of inflammatory mediators, contributing to weight gain. **Conclusion:** All samples are in hypovitaminosis D, and have a low dietary intake of vitamin D, which raises concern. Therefore, the continuation of studies involving other mechanisms that may influence its serum levels becomes relevant. **License number of ethics committee:** 977827 – Unipampa.

PT.215 COMPARISON BETWEEN RICHNESS AND DIVERSITY OF PHYLA AND GENERA OF THE GUT MICROBIOTA AND DIFFERENT OBESITY CUTPOINTS IN ADULT WOMEN

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Introduction: Obesity is a chronic disease and has a multifactorial etiology. Considered a public health problem, the prevalence of women with high degrees of body mass index (BMI) has been increasing. Currently, it has been described that in obesity there seems to be a reduction in the richness and diversity of bacteria in the gut microbiota (GM), which may contribute to the progression and development of cardiometabolic diseases. However, there are few investigations in the literature about severe obesity in humans and whether the richness and diversity of phyla and gender decrease according to the degree of adiposity. **Patients and methods:** Cross-sectional observational study, including 42 adult women with BMI ≥ 35 kg/m². Body mass and height were measured to calculate the BMI and, subsequently, the population was divided according to the degree of obesity: degree II (35-39.99 kg/m²); degree III (40-50 kg/m²) and degrees IV and V (>50 kg/m²). GM was evaluated by the sequencing method of the 16S rRNA gene with the amplification of the V3/V4 regions. For statistical analyses, the SPSS 22.0 program was used, considering p-value < 0.05 and the Kruskal-Wallis test was performed to compare the samples. **Results:** It was observed that there was no statistically significant difference between the richness of phyla ($p = 0.920$) and genera ($p = 0.105$), the diversity of phyla ($p = 0.305$) and genera ($p = 0.100$) and the different points of obesity cutoff analyzed: degree II ($n = 8$), degree III ($n = 20$) and degrees IV and V ($n = 14$). **Discussion:** Crovesy *et al.* (2020) reported that in individuals with obesity there seems to be lower proportions of the amount and variability of GM phyla and gender in different degrees of BMI, but the studies are contradictory. Bagheri *et al.* (2022), in turn, reinforces that the amount of adipose tissue can lead to an increase in the inflammatory state and, consequently, to greater susceptibility to dysbiosis. Unlike what has been reported, this study indicates that even though there may be a greater inflammatory state in high BMI degrees, no significant changes were observed in GM richness and diversity. **Conclusion:** The findings suggest that there is no difference in the GM profile of richness and diversity, at the taxonomic level of phyla and gender, in women with different obesity cutoff points, which makes this work unprecedented and of clinical and epidemiological relevance. **Keywords:** Obesity; gut microbiota; dysbiosis; metabolism. **License number of ethics committee:** Número do Parecer de aprovação no Comitê de Ética: 3.475.044 Instituição que emitiu: Hospital Universitário Clementino Fraga Filho – Universidade Federal do Rio de Janeiro.

PT.216 NUTRITIONAL STATUS AND PHYSICAL ACTIVITY LEVEL OF ADMINISTRATIVE COLLABORATORS IN A PRIVATE HIGH EDUCATION INSTITUTION

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Introduction: Low level of physical activity as well as overweight/obesity are associated with cardiovascular disease, which is the predominant cause of mortality, especially in developing countries. **Objective:** The aim of this study was to evaluate the nutritional status and the physical activity level of administrative collaborators in a private high education institution. **Methods:** A cross-sectional study was performed between February and March 2023 in administrative collaborators of an university located in Niteroi, RJ. Collected data: personal information and health data (questionnaire), weight and height for nutrition status ("adequate body weight or overweight/obese" according to body mass index) and physical activity level ("low or adequate") according to international questionnaire (IPAQ, short version). Statistical analysis: The continuous variable means, standard deviation, categorical variables frequencies and their respective 95% confidence interval (CI) were calculated. The continuous variable means were analyzed through the T Test for independent samples. To evaluate the nutritional status and its association with the level of physical activity, the Chi-square and Fisher's exact tests were used. The statistical significance was considered if $p < 0.05$ (Statistical Program SPSS, version 21, Chicago, IL). **Results:** A total of 46 administrative collaborators (female 71.7%), with means: 37.5 (10.9) years old, weight 79.0 (22.7) kg, body mass index 28.7 (6.4) kg/m², with no statistical difference in age by sex ($p = 0.95$) and higher body mass index in men ($p = 0.048$) compared to women. Overweight/obesity was observed in 63% (n = 29) (CI: 47.6; 76.8%) of the sample. Low physical activity level in 39,1% (n = 18) (CI: 25.1; 54.6%) and adequate in 60.9% (n = 28) (CI: 45.4; 74.9%) of the administrative collaborators, with no statistical difference by nutritional status ($p = 0.34$). **Discussion:** A high prevalence of overweight/obesity was observed in the study population, as well as low level of physical activity, regardless of the presence of weight alterations. The data corroborate the literature on the subject. **Conclusion:** It is necessary the development of actions to promote regular physical activity practices among administrative collaborators, including institutional programs for this purpose. Those actions might minimize the risk of obesity/overweight and cardiovascular diseases. **License number of ethics committee:** 5.870.021.

PT.217 THE MODERATION ROLE OF CARDIORESPIRATORY FITNESS IN THE RELATIONSHIP BETWEEN FAT PERCENTAGE AND TRIGLYCERIDE LEVELS

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Objective: To verify the moderating role of cardiorespiratory fitness (APCR) in the relationship between body fat percentage (%F) and triglyceride levels. Method: Cross-sectional study with 1468 children and adolescents of both sexes, aged between six and 17 years. APCR assessments were performed using the 6-minute running and walking test, %F was assessed by the sum of skinfolds and triglyceride levels were analyzed after blood collection after a 12-hour fast. Information regarding sex, age, sexual maturation and weekly physical activity were obtained by self-reported questionnaire. Moderation was tested using an SPSS program extension, v. 23.0 using multiple linear regression adjusted for gender, age, sexual maturation and weekly physical activity. In case of significant interaction, the Johnson-Neymann technique was applied to prove moderation in the relationship between %F and triglycerides according to different levels of APCR. **Results:** Moderation analyzes showed a significant interaction term (%BF x APCR) in the regression for predicting triglyceride levels ($\beta = -0.0013$; 95%CI = -0.0026; -0.0001; $p = 0.0396$; r2change = 0.0026), indicating that APCR moderates the relationship between %F and triglyceride levels. Using the Johnson-Neymann technique, it was possible to verify that the strength of association between %F and triglycerides varied according to different levels of APCR, being attenuated as the levels of APCR increased. However, at low levels (16th percentile; $\beta = 1.0289$; 95%CI = 0.7017; 1.3562; $p < 0.001$), medium (50th percentile; $\beta = 0.8285$; 95%CI = 0.5470; 1.1101; $p < 0.001$) and high (84th percentile); $\beta = 0.5212$; 95%CI= 0.0992; 0.9433; $p = 0.0155$) of the APCR, positive relationships were found between %F and triglycerides. **Conclusion:** APCR moderates the relationship between %F and triglycerides, indicating that the strength of association varies with different levels of APCR. However, even though it minimizes the deleterious effects of %F on triglycerides, the relationship remains positive even if the subject has good levels of APCR. Thus, the importance of monitoring body adiposity since childhood is highlighted. **Keywords:** Physical aptitude; body adiposity; school. **License number of ethics committee:** 714.216 – Universidade de Santa Cruz do Sul.

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