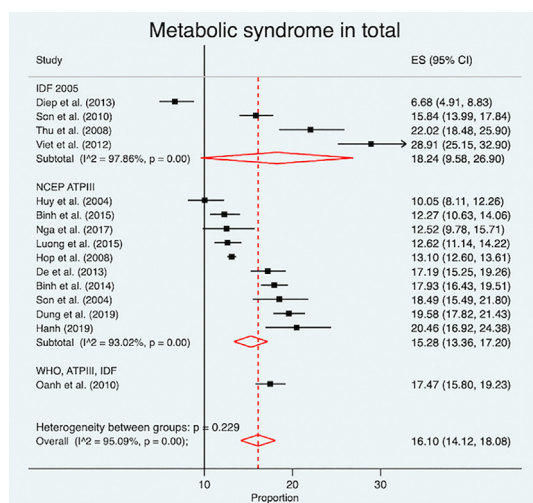


Image:



Conclusion: MetS was common in the Vietnamese population. Low HDL-C should be considered as an early detectable indicator for MetS screening programs at the population level. Appropriate interventions should be conducted for high-risk groups such as females, those living in urban areas, and obesity.

Disclosure of Interest: None declared

P262-T

3-MONTH POST-OPERATIVE INCREASE IN FGF21 IS PREDICTIVE OF ONE-YEAR WEIGHT LOSS AFTER BARIATRIC SURGERY

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Rationale: The association between bariatric surgery outcome and blood levels of FGF21 remains controversial. Many patients displayed stable or decreased FGF21 one year after bariatric surgery. Nevertheless, there is often an early increase FGF21 concentration in the post-surgery period. The aim of this study was to investigate the relationship between 3-month FGF21 response and percentage total weight loss at one year after bariatric surgery.

Methods: In this prospective monocentric study, a total of 144 patients with severe obesity were included; 61% of them underwent a sleeve gastrectomy and 39% a Roux-en-Y gastric bypass. Data analysis was carried out to determine the relation between 3-month plasma FGF21 response and weight loss one year after bariatric surgery. Multiple adjustments were done including degree of weight loss after 3 months.

Results: FGF21 significantly increased between baseline and Month 3 ($n=144$, $p<10^{-3}$), then decreased between Month 3 and Month 6 ($n=142$, $p=0.047$) and was not different from baseline at Month 12 ($n=142$, $p=0.86$). The 3-month-FGF21 response adjusted to body weight loss was not different between types of bariatric surgery. The 3-month-FGF21 response was associated to body weight loss at Month 6 ($r=-0.27$, $p<10^{-3}$) and Month 12 ($r=-0.3$, $p<10^{-3}$). After multiple regression analysis, only Month 12 body weight loss remained associated to 3-month FGF21 response ($r=-0.3$, $p=0.02$).

Conclusion: This study showed that the magnitude of changes in FGF21 at 3 months after bariatric surgery emerged as an independent predictor of one-year body weight loss irrespective of the type of surgery.

Disclosure of Interest: None declared

P263-T

SUCCESS OF A STRUCTURED ONE-YEAR WEIGHT-LOSS PROGRAM IS LINKED TO GUT MICROBIOME- AND SERUM METABOLOME- ASSOCIATED PARAMETERS

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Rationale: The effectiveness of weight loss programs is highly individualized, with some persons achieving rapid and sustainable weight reduction while others do not. Our objective is to identify metabolic and gut microbiome-associated parameters which are related to weight loss success.

Methods: We assessed data from 50 obese individuals ($BMI 42 \pm 7 \text{ kg/m}^2$) who participated in a one-year multidisciplinary weight loss program (Optifast®52, Nestlé Health Science) which consists of two main phases: first, an initial 6-month phase ('6M') including a very low caloric formula diet (800 kcal/day) for 3 months, followed by a 3-months switch phase from formula to a healthy diet. Second, an appending 6-months healthy-diet maintenance phase ('12M'). We assessed clinical parameters, gut barrier integrity, fecal short-chain fatty acids, gut microbiota, and targeted serum metabolomics.

Results: There was a substantial decrease in mean BMI (baseline to 6M, $-21 \pm 6\%$; baseline to 12M, $-17 \pm 8\%$), body fat mass, waist circumference, c-reactive protein, and HbA1c (all $p<0.001$; linear mixed models), yet with high inter-individual variation. Major responders (BMI reduction $> 20\%$ in the first 6 months) showed distinctive shifts in metabolic and gut microbiome-associated patterns, different from minor responders (BMI reduction $\leq 20\%$). For example, we saw differences in microbial β -diversity at 12M (PERMANOVA, $p=0.037$). Also, major responders showed a decrease in the levels of α -amino adipic acid, a potential predictor of diabetes mellitus (all $p<0.01$), and regained less weight between 6M and 12M ($BMI +1.2$ vs. $+2.2 \text{ kg/m}^2$, $p<0.01$, Mann Whitney test).

Conclusion: Our data allow investigating mechanistic associations between weight loss-responsive metabolites and bacterial taxa. Assessment of selected metabolic and gut microbiome-associated parameters might allow prediction of weight loss success in the future.

Disclosure of Interest: None declared

P266-T

A COMPARISON OF SERUM VITAMIN D LEVELS AND INSULIN RESISTANCE INDICES IN YOUNG ADULTS ACCORDING TO VISCERAL FAT AREA

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Rationale: A higher area of visceral adipose tissue (VAT) may play a role in low concentrations of vitamin D (VD). In addition, VD deficiency can contribute to insulin resistance (IR); however, inconsistent results have been reported. Therefore, the aim of the study was to evaluate and compare serum VD levels and insulin resistance indices in adults with different areas of VAT independent of body mass index (BMI).

Methods: A cross-sectional study was conducted with 68 healthy adults aged 20–40 years and with normal weight and overweight. Clinical, dietary, anthropometric and body composition data was collected. The participants were divided into two study groups according to their VAT