

Abstract 392

GUT MICROBIOTA PATTERN ASSOCIATION WITH METABOLIC SURGERY OUTCOMES

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Topic: AS24. MBS and Physiology of the Gut-Brain Axis

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Due to the literature data changes in the intestinal microbiota were evaluated depending on the body weight of the subjects. Also the changes in the intestinal microbiota after bariatric interventions were detected, but the effectiveness of surgical obesity treatment depending on the changes in the intestinal microbiota in response to the performed metabolic procedure has not yet been investigated.

Objectives

To study the impact of bariatric interventions on changes in the parameters of the intestinal microbiome.

Methods

112 patients were included in the study. All patients had indications for surgical obesity treatment due to IFSO criteria. All patients were offered surgical treatment; 53 patients consented to the operation formed the study group and underwent bariatric interventions, 59 patients who refused surgical treatment formed the control group. The result of the study was evaluated 12 month after the start of treatment. The control group consisted of 59 obese patients who were treated conservatively. The microbiotic patterns such as FirmicutesBacterioidetes ratio and BacterioidetesFaecalibacterium ratio were detected in both groups with fecal samples PCR.

Results

Evaluating criteria was: %EWL (percentage of excess weight loss), comorbidity regression, life quality improvement. Effective surgical treatment of obesity leads to the positive changes in the intestinal microbiota in 93.3% of cases ($p \leq 0.001$), in contrast to the control group, where microbiota approached the reference values only in 17.7% of cases ($p \geq 0.06$). Patients of the studied group, who had positive dynamics in changes of gut microbiota in 98.1% of cases, had the effectiveness of obesity treatment due to %EWL at the level of 59.21% ($r = 0.717$; $p \leq 0.001$). Firmicutes/Bacterioidetes ratio and Bacterioidetes/ Faecalibacterium ratio can be one of the criteria for evaluating the efficacy of surgical treatment of obesity. In patients of the control group, positive dynamics of changes in gut microbiota composition occurred in 17.7% of cases and the average effectiveness of obesity treatment by %EWL was 9.92% ($r = 0.077$; $p = 0.06$).

Conclusions

Changes in the composition of the intestinal microbiota after surgical treatment of obesity can be attributed to the factors affecting the effectiveness of surgical treatment.