

Abstract:

Introduction: Bariatric procedures belong to modern methods of therapy of obesity, especially in patients with higher degree of obesity. Currently, different procedures are performed, among those gastric banding, sleeve gastrectomy and gastric bypass. Our research investigated the effect of various bariatric procedures on the weight loss and some other metabolic values in the treatment of obesity.

Methods: The data collection for quantitative research was carried out at the 3rd medical department of 1st faculty of medicine of Charles University and General Faculty Hospital in Prague, partially retrospectively and mainly prospectively. We monitored the change of weight and compensation of type 2 diabetes mellitus in the first year after operation in group of 54 patients of which 32 patients had a two-year monitoring as well. For monitoring changes of weight throughout a particular period of time after operation, the conversion on % EWL a % EBMIL was used. The data was evaluated by basic statistical methods.

Results 1: In our reference group (n=54) average value of EWL was found 37,58 % in the first year after the surgery. The value of EWL for sleeve gastrectomy was 47,52 %. The value of EWL for gastric bypass was 39,82 %. The value of EWL for gastric banding was 23,28 %.

Results 2: In the subset of patients (n=32), average value of EWL changed from 35,78 % (1st year) to 32,97 % (2nd year). Increase of the value EWL from 47,69 % (1st year) to 49,16 % (2nd year) was found after sleeve gastrectomy. The value of EWL for gastric bypass increased from 44,29 % (1st year) to 46,64 % (2nd year). The value of EWL decreased from 21,92 % (1st year) to 13,24 % (2nd year) only in gastric banding.

Greatest impact on compensation of type 2 diabetes mellitus in obese diabetic patients was documented in mixed procedures, i.e. gastric bypass (glycated hemoglobin before the intervention 7,4 % , 1st year from the operation 5,5 %, 2nd year from the operation 5,28 %).

Conclusion: Our research confirms the notion that bariatric surgery significantly helps in the treatment of obesity and provides long-term weight loss. The most significant weight reduction was registered by sleeve gastrectomy in the first and second year after the operation. Lately it was shown, that bariatric surgery helps in therapy of certain metabolic conditions (such as type 2 diabetes), which was proven by our research.

Key words: bariatric surgery, diabetes, gastric banding, gastric bypass, obesity, sleeve gastrectomy, weight loss.