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**DOES BARIATRIC SURGERY IMPROVE LIPOPROTEIN PROFILE  
IN MORBIDLY OBESE PATIENTS? FOLLOW-UP STUDY**

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**Relevance.** Obesity is a growing healthcare issue associated with the increased prevalence of cardiovascular and metabolic complications leading to reduced life expectancy. It is estimated that about 20% of the European population is affected by this chronic condition. The most severe type of obesity referred to as morbid obesity is defined as body mass index (BMI) over 40. At this stage, most effective treatment includes bariatric interventions, which in general involve a surgical reduction of stomach volume. As a result, correct gut-hormone levels are restored, leading to lower food intake and consequently a drop in body weight. However, is the expected metabolic correction always achieved?

**Target:** in this study, we wanted to analyze the long-lasting effects of bariatric surgery by assessing changes in lipid profile in the following months after the procedure.

**Materials and methods.** The analysis was performed prospectively on 98 obese patients (36 with type 2 diabetes mellitus) admitted to Surgery Department for partial gastric resection. Before the operation, peripheral blood samples were collected from each patient to assess lipid profile, while body composition was measured in dual-energy X-ray absorptiometry. The procedure was repeated in 1,3 and 6 months after the surgery.

**Results and their discussion.** The results show that patients have been losing weight consequently after the operation. There was a significant weight loss observed in each followup (- 18,19 kg,  $p < 0.0001$ ; - 25,58,  $p < 0.0001$ ; - 33,57,  $p < 0.0001$ , respectively) in comparison to baseline. However, body mass reduction does not go hand in hand with lipid profile improvement. Average cholesterol levels measured in 1 and 3 months after the surgery (- 28,06 mg/dl,  $p < 0.0001$ ; - 17,06 mg/dl,  $p < 0.0017$ , respectively) were significantly lower compared to initial assessment but there was no difference to control after 6 months (- 4,50 mg/dl,  $p = 0,837$ ).

**Conclusions.** Morbid obesity is one of the main public health issues. So, it is highly important to diagnose and treat it efficiently. We indicate that bariatric surgery, which is believed to be an effective treatment method, actually has a significant impact on a drop in body weight itself but does not necessarily improve the metabolic condition of the human organism in the long run.