Abstract

Background: bariatric surgery is widely employed nowadays. Nutritional complications following malabsorptive bariatric surgery are common. Objectives: to compare protein malnutrition incidence, the amount of protein intake and the influence of various risk factors in patients undergoing Roux-en-Y gastric bypass (RYGB) and biliopancreatic diversion (BPD). Methods: retrospective study comparing the development of hypoalbuminemia in 92 patients undergoing BPD and 121 RYGB, before surgery and 3, 6, 12, 18 and 24 months after it. Protein intake was estimated by serum prealbumin. The influence of prior body mass index (BMI), age and sex was analyzed. Results: hypoprealbuminemia was found in around 40% of patients 3 months after both procedures, decreasing to about 10% after 2 years of surgery. Hypoalbuminemia incidence was close to 20% in the first post-surgery year in BPD, persisting in 10-15% of cases thereafter. After RYGB, hypoalbuminemia incidence was lower (5-9% in all postoperative follow-up measurements). During the first year after surgery, hypoalbuminemia was more frequent after BPD than after RYGB (at the 3rd month (OR:3.9; p=0.006; 95%CI:1.5-10.4), 6th (OR:5.0; p=0.002; 95% CI:1.8-13.8), and at the 12th month (OR:4.4;p=0.007;95%;CI:1.5-12.8)), but not after the first year. A higher preoperative BMI favored it (OR: 1.03; p=0.046; 95% CI:1-1.06), as well as greater age during the first 6 months. Conclusion: Patients with BPD had a higher risk for hypoproteinemia than those undergoing RYGB, especially during the first year post-surgery. Higher preoperative BMI, and age (in the short-term period) could have a significant inverse relation to hypoproteinemia.

Keywords

Obesity, Bariatric surgery, Protein malnutrition, Prealbumin, Serum albumin.