

**Protein-calorie malnutrition requiring revisional surgery after mini/one-anastomosis gastric bypass: Tehran Obesity Treatment Study (TOTS)**

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**Introduction:** Mini/one-anastomosis gastric bypass (MGB-OAGB) is the second popular gastric bypass procedure with remarkable weight loss results and resolution rates of obesity-related comorbidities. However, some concerns remain regarding its postoperative complications including protein-calorie malnutrition (PCM). We hereby report our experience with seven patients who returned with severe PCM after MGB-OAGB.

**Methods:** Patients with severe obesity presenting to our referral bariatric center underwent MGB-OAGB surgery using a bilio-pancreatic limb (BPL) of 200cm by a single surgical team at three university hospitals from March 2014 to February 2016.

**Results:** From 189 patients undergoing MGB-OAGB, seven patients (3.7%), all female, with mean age of  $46.4 \pm 8.2$  years and initial body mass index (BMI) of  $44.2 \pm 4.7 \text{ kg/m}^2$ , were readmitted for signs of PCM at an average of  $11.7 \pm 4.5$  months after surgery. Hypoalbuminemia was detected in all cases, anemia in three, and pancytopenia in one. Revisional surgery was performed at a mean  $19 \pm 9.7$  months postoperatively because of deteriorating clinical condition. Mean BMI at the time of revision was  $22.5 \pm 2.6 \text{ kg/m}^2$  with an excess weight loss of  $109.2 \pm 22.1\%$ . After revisional surgery, one patient developed profound liver failure and expired. Another patient developed severe steatohepatitis but ultimately recovered. In the remaining five, edema and weakness completely resolved at one month and hypoalbuminemia and anemia normalized at two months.

**Conclusion:** MGB-OAGB is a safe and effective procedure. A BPL length of 200cm may result in PCM in a subset of patients with shorter total bowel lengths since it would create a too-short alimentary limb. An individualized approach can prevent this complication.