

Comparison of the Effect of Gastric Bypass and Sleeve Gastrectomy on Improvement in Depression Score in a Cohort: Tehran Obesity Treatment Study (TOTS)

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Abstract

Background: The Beck Depression Inventory (BDI) has been frequently employed as a measure of depression in studies of obesity, with the majority of studies reporting an improvement in scores following weight loss after bariatric surgery. However, the effects of different bariatric techniques on depression score improvement is uncertain.

Method: The study included 685 obese patients who had undergone laparoscopic sleeve gastrectomy (SG) (n=443) and gastric bypass (GB) (n=238) had completed BDIs at baseline and 1 year after surgery.

Results: Mean age of the patients was 38.7 ± 10.9 (84.8% female), and mean body mass index (BMI) was 45.1 ± 6.0 kg/m². At baseline, 29.9% of patients had BDI scores in the normal range (0–9), 32.4% in the mild depression range (10–18), 28.3% in the moderate depression range (19–29) and 9.3% in the severe depression range (30+). These corresponding values at 1 year were 60.6, 23.2, 11.8 and 4.4%. Overall, BDI scores fell for both surgery groups, SG group at baseline 16.1 ± 10.2 and at 1 year 9.6 ± 8.9 , for the GB group at baseline 17.1 ± 10.5 and at 1 year 11.1 ± 9.6 . While excess weight loss (EWL %) in GB group was significantly more than SG group (65.4 vs 62.8% $P=0.02$), BDI score in SG group was significantly less than GB group at 1 year ($P=0.045$).

Conclusion: In this short-term study with 1-year follow-up, SG showed better results to GB in terms of fell for BDI scores in a large Middle Eastern cohort. Long-term studies are needed to further investigate in this regard.

Keywords: Weight loss, Psychology, Depression, Bariatric Surgery.