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Laparoscopic Sleeve Gastrectomy Improves Reproductive Hormone Levels in Morbidly Obese Males - A Series of 28 Cases

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Abstract
Background: Obese males frequently present with low androgen levels that may improve after weight loss achieved by bariatric surgery. Laparoscopic sleeve gastrectomy (LSG) has been used often in the last decade as treatment for morbid obesity. The aim of this study was to evaluate modifications in the male reproductive hormone profile after LSG.
Patients and Methods: The prospective study included 28 males with body mass index (BMI) >35 kg/m^2 who underwent LSG. Total Testosterone (TT), Sex Hormone Binding Globulin (SHBG) and Luteinizing hormone (LH), together with biochemical and anthropometric data, were evaluated at baseline and after LSG.
Results: Baseline patients had a mean BMI of 50.10 (±11.19) kg/m2, SHBG 23.37 (±17.47) nmol/L, LH 3.83 (±1.76) mUI/ml and TT 8.31 (±3.24) nmol/L. After LSG, patients showed a mean BMI of 35.87 (±7.02) kg/m2 ($p<0.001$), SHBG 37.81 (±18.95) nmol/L ($p<0.05$), LH 4.76 (±2.49) mUI/ml ($p<0.05$), whereas mean TT was 12.7 (±3.8) nmol/L ($p<0.001$). The percentage of excess body weight loss (%EBL) was 43.07 (±9.56) and metabolic syndrome prevalence decreased significantly from 75% to 25% ($p<0.001$).
Conclusions: Beyond BMI loss, LSG significantly improved reproductive hormone levels in morbidly obese males.
Key words: obesity, weight loss, bariatric surgery, gastric sleeve, testosterone, androgen level

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