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The Impact of Bariatric Surgery on Thyroid Function and Medication Use in Patients with Hypothyroidism.

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Abstract

BACKGROUND: Bariatric surgery (BS) is effective in treating obesity and its associated comorbidities. However, there is a paucity of data on the effect of BS on thyroid function in hypothyroid patients, specifically in those treated with thyroid hormone replacement therapy (THR). The aim of this study was to assess the effect of BS on thyroid function and on THR dosage in patients with hypothyroidism.

METHODS: A retrospective analysis of prospectively collected data of all hypothyroid patients who underwent BS between 2010 and 2014 was performed. Data collected included demographic and anthropometric measurements, as well as changes in thyroid hormone levels and THR dosage up to a year from surgery.

RESULTS: During the study period, 93 hypothyroid patients (85 females, 91%), 83 of which treated with replacement thyroid hormone, underwent BS. Laparoscopic sleeve gastrectomy was performed in 77 (82.8%) and Roux-en-Y gastric bypass in 16 patients. Average age and body mass index (BMI) were 46.6 ± 11.2 years and 43.7 ± 6.4 kg/m^2, respectively. Mean BMI and thyroid-stimulating hormone (TSH) significantly deceased after 6 and 12 months following surgery whereas mean free T4 levels remained stable. TSH decrease was directly correlated to baseline TSH but not to BMI reduction. One year after surgery, 11 patients (13.2%) did not require THR, while the rest required a significantly lower average dose (P < 0.02).

CONCLUSIONS: There is a favorable effect of BS on the hypothyroid bariatric population. This includes improvement of thyroid function and reduction of thyroid medication dosages. Further studies are required to evaluate an influence of THR absorption and compare different types of bariatric surgeries.