

Insulin dependent diabetics' response to bariatric surgery

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Objective:

To assess the effectiveness of bariatric surgery on insulin dependent patients in terms of weight loss and diabetes remission.

Methods:

Data from the Ontario Bariatric Registry from Jan. 2010 to Feb. 2017 was analyzed, comparing weight loss and remission rates of insulin and non-insulin dependent patients following bariatric surgery. We further compared Roux-en-Y gastric bypass (RYGB) and sleeve gastrectomy (SG).

Results:

The cohort included 3668 (2481 non-insulin and 1187 insulin) diabetic patients; 3090 underwent RYGB and 578 SG. Insulin dependence did not affect weight loss; mean percent weight loss for the insulin group was 30.1% versus 28.3% for non-insulin at three years ($p=0.0673$). Greater percent weight loss was achieved in RYGB than SG ($p < .0001$).

Non-insulin patients experienced more complete remission ($HbA1c \leq 6.0\%$ off diabetes medications for ≥ 1 year) than insulin dependent, with 62.4% vs. 23.1%; 68.8% vs. 24%; 66.5% vs. 18.5% ($p < 0.0001$) at 1, 2, 3 years respectively.

Complete remission for insulin dependent patients was higher in the RYGB group ($p < 0.0001$) 8.5% vs 5.4%, and 24.4% vs. 21.1% at 1 and 2 years but higher in the SG group 30% vs. 17.6% at 3 years ($p < 0.0001$). Partial remission ($HbA1c$ 6.0% to $\leq 6.5\%$ off diabetes medications for ≥ 1 year) was higher in the RYGB group 8.5% vs. 3.8% ($p=0.0076$) at 2 years.

Conclusions: Although weight loss is similar between both groups, non-insulin dependent patients experienced more complete diabetes remission. Bariatric surgery is still effective in improving control of diabetes in patients who are insulin dependent.

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