Metabolic outcomes after bariatric surgery for indigenous patients in Ontario.

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Aim: To determine if bariatric surgery is effective in Ontario's indigenous populations.

Introduction: In 2013, 18% of Canadian adults were obese (BMI>30 kg/m^2), compared to 25.7% of Canada's indigenous population. Bariatric surgery is an effective treatment for obesity, but has not been studied in Canadian indigenous populations.

Methods: Prospectively collected data from the Ontario Bariatric Registry included surgical patients from March 2010 to March 1st, 2018. Post-operative outcomes included diabetes, hypertension, GERD, and medication requirements. Demographics, baseline characteristics, and univariate outcomes were assessed using Pearson Chi-Squared test or t-test. Multivariable regression for 6-month and 1-year BMI change was utilized with complete case analysis and multiple imputation.

Results: Of 16,629 patients, 338 self-identified as indigenous, 13,502 as non-indigenous, and 2,789 were excluded for non-identification. Baseline demographics were not statistically different; rates of hypertension (p=0.03) and diabetes (p<0.001) were higher in the indigenous population. Overall follow-up rates were 67.5% at 6-months and 52.0% at 1-year. Univariable analysis showed similar changes in BMI at 1-year (Indigenous: 15.8±6.0 kg/m^2; Non-indigenous: 16.1±5.6 kg/m^2, p=0.362). After adjustment, BMI change for indigenous patients, compared to non-indigenous, was not different at 6-months (Effect Size = 0.07 kg/m^2, 95%CI -0.45 to 0.58, p=0.803) and 1-year (Effect Size = -0.24 kg/m^2, 95%CI -0.93 to 0.45, p=0.489). Rates of diabetes, hypertension, GERD, and medication use were similar at 1-year between populations despite baseline differences.

Conclusions: Weight loss and resolution of relevant comorbidities are similar in Indigenous and non-indigenous patients. Access to surgery, patient selection and long-term results merit further investigation.