Bariatric surgery in patients with high risk cardiac disease: A feasibility case series study

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Introduction:
Bariatric surgery outcomes in high-risk patients remain poorly understood. Obesity is strongly linked to cardiac disease. Patients with end-stage heart failure (HF) and Body Mass Index (BMI) greater than 35 are precluded from cardiac transplantation. This study aims to explore the safety and outcomes of bariatric surgery in high-risk cardiac disease patients.

Methods:
This is a retrospective case series review of bariatric surgery on patients with high-risk cardiac disease at University Health Network's Bariatric Surgery Program between 2021 and 2024. Intraoperative complications, length of stay, postoperative complications, change in BMI, comorbidities and cardiac function, and candidacy for heart transplantation were assessed.

Results:
Eight patients with high-risk cardiac disease (7 HF, 1 tetralogy of fallot repair, 5 female, median age 54 years, preoperative BMI 40.8kg/m^2) underwent bariatric surgery (7 laparoscopic sleeve gastrectomy, 1 laparoscopic Roux-en-Y gastric bypass). Median postoperative change in BMI was -7.4kg/m^2, with percent excess weight loss of 48.0% at follow-up of 15 months. There were no intraoperative complications. Median length of stay was 2 days. Two patients experienced hypovolemic postoperative complications, managed medically. There was improvement in heart failure function parameters postoperatively (median LVEF +18%). One patient with end-stage HF supported with left ventricular assist device (LVAD) underwent successful cardiac transplantation two years post bariatric surgery.

Conclusion:
In highly selected patients in centres with appropriate multidisciplinary expertise, bariatric surgery is feasible and may be a useful tool in improving outcomes in patients with high-risk cardiac disease.

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