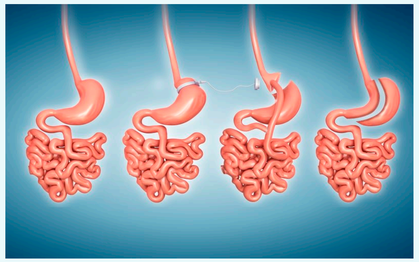
Body Mass Index and Risk of Mortality in Severely Obese Patients Undergoing Bariatric Surgery

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INTRODUCTION

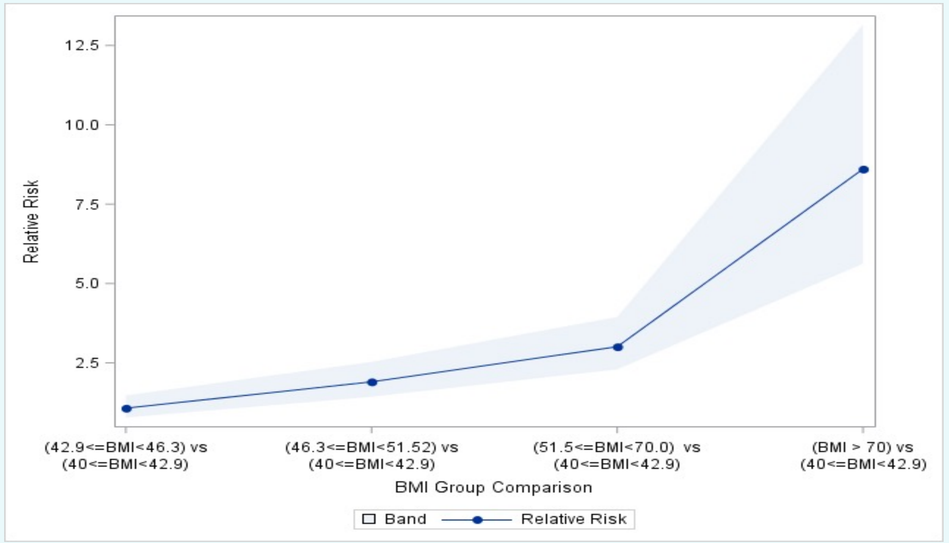
- Bariatric surgery is a safe approach for patients who are severely obese. However, the association between body mass index (BMI) and risk of mortality in these patients has not been fully elucidated.
- *Primary aim of this study* was:
  1. To evaluate the functional relationship between BMI and risk of mortality using data obtained from a national database.
  2. To evaluate potential differences in mortality in super-obese patients (BMI>70) undergoing Roux-en-Y gastric bypass (RYGB) versus sleeve gastrectomy (SG).

MATERIALS AND METHODS

- Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP)
- Severely obese (BMI>40) patients who underwent first-time bariatric surgery between 2015-2018
- Patients <18 yo and patients undergoing revision operation were excluded
- *Primary outcome variable:*
  - ✓ Intra-operative death
  - ✓ Death within 30 days from procedure
- Generalized linear model used to evaluate the **association of BMI with 30-day mortality**, by categorizing BMI into quartiles
- Adjustment for age, gender, race, and diabetes mellitus

RESULTS

- 463,436 patients included in the analysis
- Overall 30-day mortality: 0.11%
- Mean BMI 48.2 (SD 7.3) – 1.5% of patients with BMI>70
- Patients in the highest BMI quartile had a significant **3.3-times higher risk** of 30-day mortality than patients in the lower quartile (RR 3.3, 95% CI 2.5-4.3).
- Patients with BMI>70 had an even more pronounced **8.6-times higher risk** of 30-day mortality (RR 8.6, 95% CI 5.6-13.2).
- Patients with BMI>70 undergoing RNYGB had **2.1-times higher risk** of mortality than patients undergoing SG (RR 2.1, 95% CI 1.1-4.3).



CONCLUSIONS

- **Higher BMI is significantly associated with increased risk of 30-day mortality in patients undergoing bariatric surgery.**
- *This effect is strongly accentuated in super-obese patients with BMI>70, especially those undergoing RNYGB versus SG.*