



Preventing complications in bariatric surgery

av

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Akademisk avhandling

Avhandling för medicine doktorsexamen i Medicinsk vetenskap
med inriktning mot kirurgi,
som kommer att försvaras offentligt
fredagen den 7 oktober 2016 kl. 09.00,
Hörsal C1, Campus USÖ

Opponent: Prof. Ralph Peterli
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Abstract

Erik Stenberg (2016): Preventing Complications in Bariatric Surgery. Örebro Studies in Medicine 147.

Obesity is a major public health problem. Bariatric surgery is currently the only available treatment that offers sufficient weight-loss and metabolic benefits over time. Although bariatric surgery is considered safe now, serious complications still occur. The aim of this thesis was to identify factors associated with an increased risk for postoperative complication after laparoscopic gastric bypass surgery.

Study I included patients operated with laparoscopic gastric bypass surgery in Sweden from May 2007 until September 2012. The risk for serious complication was low (3.4%). Suffering an intraoperative adverse event or conversion of the operation to open surgery were the strongest risk factors for postoperative complication. The annual operative volume and experience of the procedure at the institution were also important risk factors. Patient-specific risk factors appeared to be less important although age was associated with an increased risk. In Study II, a raised glycated haemoglobin A1c (HbA1c) was evaluated as a risk factor for serious postoperative complications in non-diabetics. A higher incidence of serious postoperative complications was seen with elevated HbA1c values, even at levels classified as “pre-diabetic”.

Study III was a multicentre, randomised clinical trial (RCT). 2507 patients planned for laparoscopic gastric bypass surgery were randomised to either mesenteric defects closure or non-closure. Closure of the mesenteric defects reduced the rate of reoperation for small bowel obstruction from 10.2% to 5.5% at 3 years after surgery. A small increase in the rate of serious postoperative complication within the first 30 days was seen with mesenteric defects closure. This relatively small increase in risk was however outweighed by the marked reduction of later reoperations for small bowel obstruction.

Study IV was a comparison between study III and an observational study on the same population under the same period of time. Although the observational study reached the same conclusion as the RCT, the efficacy of mesenteric defects closure was less pronounced. Observational studies may thus be an alternative to RCTs under situations when RCTs are not feasible. The efficacy may however be underestimated.

Keywords: : postoperative complications; bariatric surgery; morbid obesity; risk factor; randomised clinical trial; haemoglobin A1c; prevention

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