

Project title: Predictors of weight loss and use of acid-reducing medication after laparoscopic sleeve gastrectomy.

Project period: 15.07.2020 – 01.01.2026.

Ethical approval: Reference number 106172 (REK Vest, Norway).

Project summary: Data from different national registries can be compared if variables, and the definitions of variables are equal or comparable. In a previous joint project between the Dutch Audit for Treatment of Obesity (DATO) and the Scandinavian Obesity Surgery Registry (SOReg) we found comparable definitions of several variables in these registries (1).

When comparing outcome we found a considerable variation in weight loss one year after laparoscopic sleeve gastrectomy (LSG) between institutions (2). This finding deviated from that of Roux-en-y Gastric Bypass which had less variation in weight loss outcome. This might reflect different characteristics of the patient groups operated with LSG, differences in surgical technique, or other confounding factors related to comparison of outcome. In this project we will explore patient and surgery related factors that might contribute to differences in weight loss between institutions.

Furthermore, gastro-oesophageal reflux is a reported side-effect of LSG with potential implications including symptoms of erosive oesophagitis and epithelial dysplasia. In this project we will also compare the rate of postoperative reflux between institutions and explore factors that may contribute to these findings. As a proxy for reflux we will use whether patients are using acid-reducing medication or not.

References:

1. Poelmeijer YQM, Liem RSL, Vage V, Mala T, Sundbom M, Ottosson J, et al. Perioperative Outcomes of Primary Bariatric Surgery in North-Western Europe: a Pooled Multinational Registry Analysis. *Obes Surg.* 2018 Jul 19. PubMed PMID: 30027332.
2. Poelmeijer YQM, Liem RSL, Vage V, Mala T, Sundbom M, Ottosson J, et al. Gastric Bypass Versus Sleeve Gastrectomy: Patient Selection and Short-term Outcome of 47,101 Primary Operations from the Swedish, Norwegian, and Dutch National Quality Registries. *Ann Surg.* 2019 Mar 20. PubMed PMID: 30921054.