

# Gallstensrelaterade symptom och livskvalitet hos patienter som genomgår kolecystektomi the Gothenburg Gallstone Questionnaire (GGQ24)

Akademisk avhandling

som för avläggande av Medicine Doktorsexamen vid Sahlgrenska Akademien,  
Göteborgs Universitet, kommer att offentligen försvaras i Arvid Carlsson,  
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## Avhandlingen baseras på följande delarbeten

- I. *Registration of Health-Related Quality of Life in a Cohort of Patients Undergoing Cholecystectomy* - Simon Pålsson, Ib Rasmussen, Patrik Lundström, Johanna Österberg; ISRN Gastroenterology (2011) ISSN: 2090-4398
- II. *Influence of gender and socioeconomic background on the decision to perform gallstone surgery: a population-based register study* – Simon Pålsson, Gabriel Sandblom; Scandinavian Journal of Gastroenterology (2015) ISSN: 0036-5521
- III. *Outcome after cholecystectomy in the elderly – a population-based register study* – Simon Pålsson, Gabriel Saliba, Gabriel Sandblom; Scandinavian journal of Gastroenterology (2016) ISSN: 0036-5521
- IV. *Risk factors for postoperative myocardial infarct following cholecystectomy: a population-based study* – Simon Pålsson, Cecilia Engström, Lars Enochsson, Erik Österlund, Gabriel Sandblom; HPB (2020) Volume 22, Issue 1, January 2020, Pages 34-40
- V. *The development of a person-centred self-report instrument to investigate quality-of-life aspects of Gallstone surgery: the Gothenburg Gallstone Questionnaire (GGQ24)* – Simon Pålsson, Cecilia Engström, Jenny Skoog, Stefan Redéen, Peder Rogmark, Lars Enochsson, Lise-Lott Prebner, Johanna Österberg, Fredrik Linder, Eva-Lotta Syrén, Gabriel Sandblom, John-Eric Chaplin; (to be submitted spring 2022)

**SAHLGRENKA AKADEMIEN  
INSTITUTIONEN FÖR KLINISKA VETENSKAPER  
AVDELNINGEN FÖR KIRURGI**



# GALLSTONE-RELATED SYMPTOMS AND QUALITY-OF-LIFE IN PATIENTS UNDERGOING GALLSTONE SURGERY

## the Gothenburg Gallstone Questionnaire (GGQ24)

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### Abstract

**Background:** Patients with symptomatic gallstone disease can present with years of intermittent suffering or acute complicated disease. The only definitive cure is surgery. Registering both surgical and patient reported outcome measures may provide a more reliable platform to assess the impact of gallstone surgery and improved decision-making.

**Methods:** Retrospective patient cohorts from Gallriks served as study groups in paper I-IV. National Swedish quality registers as the National Patient Register, Statistics Sweden, Central Death Register and the Swedish Prescribed Drug Register were crosslinked with Gallriks to obtain valid and reliable data. Paper V is a prospective qualitative mixed methods design using guidelines for item-development from the International Society of Pharmacoeconomics and Research (ISPOR) including focus group interviews, expert team reviews, cognitive debriefing and other psychometric analyses.

**Results:** SF36 proved to be a highly responsive tool for measuring HrQoL 6 months after surgery. Cholecystectomy gave a great improvement in QoL (Paper I). Subgroups in the Swedish population with different socioeconomic variables did not show any difference in incidence or outcome of surgery. The presentation of the disease and the timing for surgery differed between the genders (Paper II). The group elderly (>80 yo) needs more careful selection but may have a great improvement of the surgical intervention. Laparoscopic approach showed significantly less mortality than open surgery or conversion, and shorter hospital stay (Paper III). Perioperative myocardial infarction after gallstone surgery is more present among the elderly. A previous MI within 8 weeks before surgery was the most important predictor of a 30-day postoperative MI. The postoperative 30-day risk for MI was 52,8%. After 8 weeks it gradually reached the risk of the background population (Paper IV). 367 items were developed and analysed. After question reduction, statistical and psychometric evaluation, a disease-specific PROM formula with 24 preoperative and 21 postoperative questions was developed – The GGQ24 (Paper V).

**Conclusion:** Gallriks and other Swedish national registers offer high quality data for research. Cholecystectomy do not seem to differ in incidence or outcome between socioeconomic subgroups in Sweden. Gallstone surgery can be performed relatively safe in the elder elderly after careful preoperative selection. NSTEMI independently is the greatest risk factor of a 30-day postoperative MI following cholecystectomy. GGQ24 is a disease specific PROM-instrument that may contribute to decision-making and care of patients undergoing gallstone surgery.

**Keywords:** Key words: Cholecystectomy, Gallstone disease, Laparoscopic surgery, Quality-of-Life, PROM, Cholelithiasis, Vesica Fellea, Bile Stones, Biliary disease, Cholecystolithiasis, Myocardial Infarction