AB105. 39. Readmission to hospital following laparoscopic cholecystectomy—a meta-analysis

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Background: Laparoscopic cholecystectomy is one of the most commonly performed surgical procedures. Despite this, the pattern of readmission to hospital following laparoscopic cholecystectomy is not well defined. This meta-analysis aimed to determine rates and predictors of readmission.

Methods: An ethically approved PROSPERO-registered meta-analysis was undertaken searching PubMed, Scopus, Web of Science and Cochrane Library databases from January 2013–June 2018 and followed the preferred reporting items for systematic reviews and meta-analyses (PRISMA) flow diagram format. Published literature potentially suitable for data analysis was graded using methodological index for non-randomised studies (MINORS) criteria; papers scoring ≥16/24 were included. The odds ratio (OR) using random-effects, Mantel-Haenszel method with 95% confidence intervals (CI) were computed for each potential risk factors using RevMan5.

Results: Three thousand six hundred and thirty-two articles were reduced to 44 studies qualifying for a final analysis of 1,573,715 laparoscopic cholecystectomies from 25 countries. Overall readmission rate was 3.3% (range, 0.0–11.7%); 52,628 readmissions out of 1,573,715 laparoscopic cholecystectomies performed. Surgical complications accounted for 76% of reported reasons for readmission, predominantly bile duct complications (33%), wound infection (17%) and nausea and vomiting (9%). Pain (15%) and cardiorespiratory complications (8%) account for the remainder. Obesity, single port laparoscopic cholecystectomy and day case laparoscopic cholecystectomy did not increase rates of readmission.

Conclusions: Surgical complications are the most common causes for readmission, however causes are inconsistently reported. No statistically significant risk factors were identified. The mean readmission rate of 3.3% may act as a quality benchmark for improving laparoscopic cholecystectomies and clearer reporting of reasons for readmission may aid in their reduction.

Keywords: Laparoscopic cholecystectomy; readmission; surgical outcome; quality care

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