

# Readmissions after laparoscopic cholecystectomy – you cannot change what you cannot measure

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Laparoscopic cholecystectomy is a gold standard in the treatment of symptomatic gallbladder stones [1]. It is a well-established and safe procedure often performed as a day case. However, like any surgical procedure, it carries the risk of adverse events that result in prolonged length of stay or readmissions. The readmission rate is often reported as one of the quality measures of surgical interventions.

A meta-analysis published in the current issue of "Anaesthesiology Intensive Therapy" presents the readmission rate based on a total of over 1.5 million laparoscopic cholecystectomies from 44 original reports [2]. The overall readmission rate of 3.3% with a wide range between 0% and 11.7% is a valuable reference value, which can be used for benchmarking and monitoring of the quality of surgical service. Moreover, it is an important figure for healthcare providers to plan optimal resource utilisation (including ER visits, hospital beds, human resources). The readmission rate seems to greatly depend on several variables, such as complicated cholecystolithiasis, emergency surgery, comorbidities, and, beyond question, the length of index admission. To address the latter, the total length of stay (index admission plus any readmission) seems to be an optimal measure reducing the potential of length of index stay bias [3].

Surgical complications accounted for the majority of readmissions; therefore, detailed, high-quality reporting is required to enable improvements in treatment and adequate resource planning. Surgical complications are often reported with Clavein-

Dindo classification for scientific and healthcare system comparisons [3]. Patient stratification with risk calculators or scoring systems may assist adequate prediction of both prolonged length of index stay and readmissions. Strict adherence to patient safety guidelines is of utmost priority and cannot be compromised for any reason. Because bile duct complications constitute for a significant proportion of surgical readmissions, measures should be undertaken to identify patients at risk and act accordingly without delay. Endoscopic management is feasible and successful in nearly all cases. According to EASL Clinical Practice Guidelines on the prevention, diagnosis, and treatment of gallstones: routine or selective intraoperative cholangiography is not necessary during cholecystectomy in patients at low risk of common bile duct stones [4].

Although the authors qualified nausea and vomiting as a surgical readmission (9%), this can also in part be an anaesthesia-related adverse event (PONV), especially in day cases. Together with the 15% of readmissions reported due to pain, it creates a great potential for improvement in anaesthesia management. Improved pain management and PONV prophylaxis potentially promote patients' experience, but also enable substantial reduction of readmission rates.

In summary, joint efforts should be undertaken to ensure high quality of reporting to define detailed readmission indications. Only once this has been measured can further improvement of results of laparoscopic cholecystectomy be made.

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## REFERENCES

1. Fry DE, Pine M, Nedza S, Locke D, Reband A, Pine G. Hospital outcomes in inpatient laparoscopic cholecystectomy in medicare patients. *Ann Surg* 2017; 265: 178-184. doi: 10.1097/SLA.0000000000001653.
2. McIntyre C, Johnston A, Foley D, et al. Readmission to hospital following laparoscopic cholecystectomy: a meta-analysis. *Anaesthesiol Intensive Ther* 2020; 52: 47-55. doi: <https://doi.org/10.5114/ait.2020.92967>.
3. Bednarski BK, Nickerson TP, You YN, et al. Randomized clinical trial of accelerated enhanced recovery after minimally invasive colorectal cancer surgery (RecoverMI trial). *Br J Surg* 2019; 106: 1311-1318. doi: 10.1002/bjs.11223.
4. European Association for the Study of the Liver (EASL) Clinical Practice Guidelines on the prevention, diagnosis and treatment of gallstones. *J Hepatol* 2016; 65: 146-181. doi: 10.1016/j.jhep.2016.03.005.
5. Dindo D, Demartines N, Clavien PA. Classification of surgical complications: a new proposal with evaluation in a cohort of 6336 patients and results of a survey. *Ann Surg* 2004; 240: 205-213. doi: 10.1097/01.sla.0000133083.54934.ae.