

Readmissions following elective laparoscopic cholecystectomy

Oliver Claydon, Ramsha Nabeel, Tamara Babunashvili, Syeda Neelam Batool
East Suffolk and North Essex NHS Foundation Trust

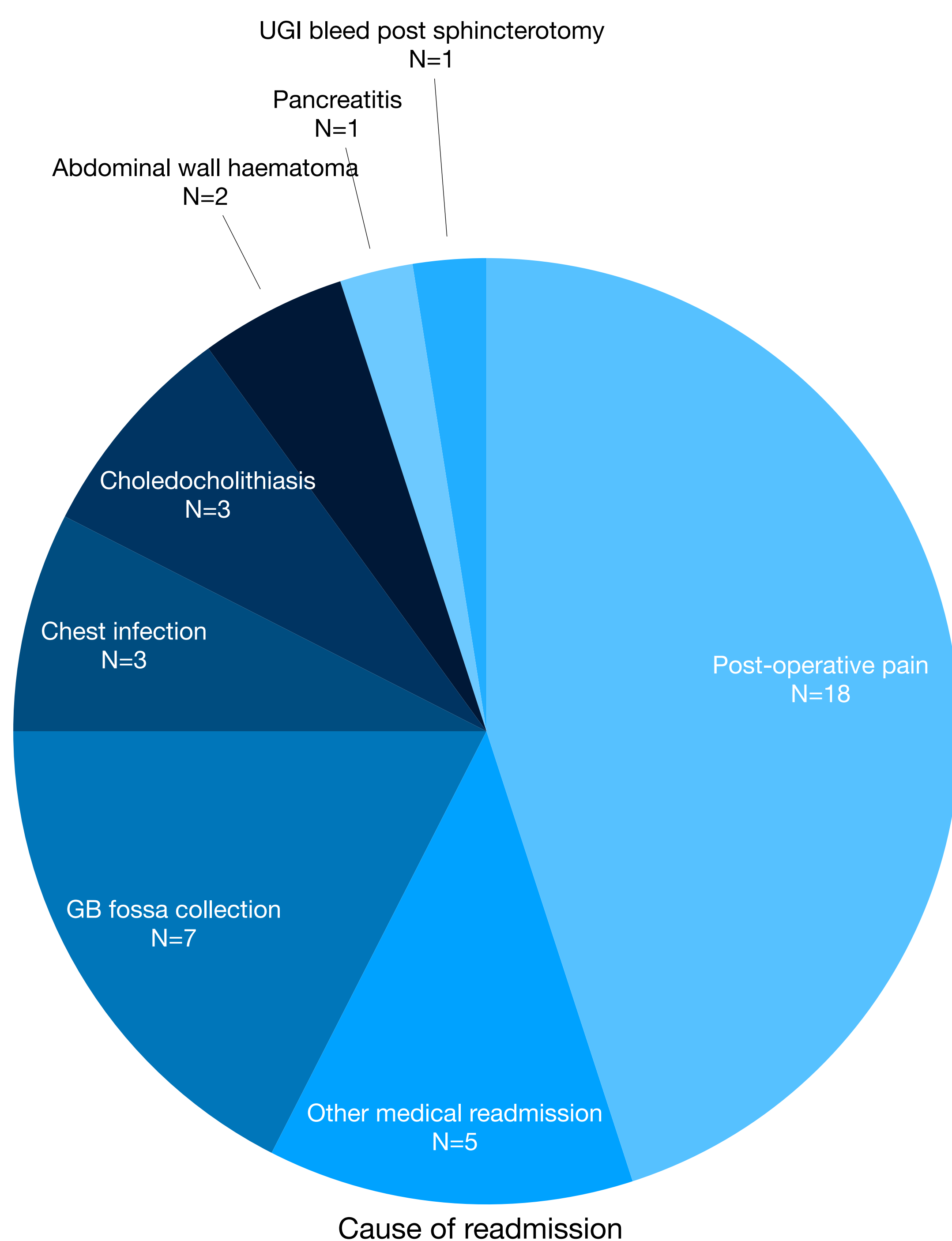
Introduction

Laparoscopic cholecystectomy is one of the most commonly performed general surgical procedures in the UK, with around 60,000 such operations performed in England in 2014/15¹. By far the most common underlying pathology is gallstone disease, which affects 10-15% of the populations and is associated with a 1-2% per year risk of serious complications¹. The CholeS national study of 8909 cholecystectomies demonstrated a 30 day complication rate of 10.8% and readmission rate of 7.1%². This study included elective and emergency laparoscopic cholecystectomies, and a proportion of complications are attributable to the operation being performed as an emergency case. Emergency laparoscopic cholecystectomy has been shown to be associated with post-operative complications and readmission compared to elective cases³.

At our district general hospital, all cholecystectomies are elective, and intraoperative cholangiogram (IOC) is routinely attempted in all cases. We aimed to compare readmission rates for our local elective cohort with national rates.

Methods

The study was a retrospective study of patients who underwent elective cholecystectomy in a single district general hospital from 01/2021 to 12/2022, and who re-presented to hospital as an emergency up to 30 days after initial operation. Planned returns to hospital were excluded. Information was collective from contemporaneous medical notes, discharge letters, operation notes and anaesthetic charts.



Of the 3 patients readmitted with choledocholithiasis, 2 had not had IOC at initial operation and 1 had IOC showing no pathology. No patients who underwent post-op ERCP for CBD stones on initial admission (n=4) were readmitted with choledocholithiasis, although one was readmitted with post-sphincterotomy bleed

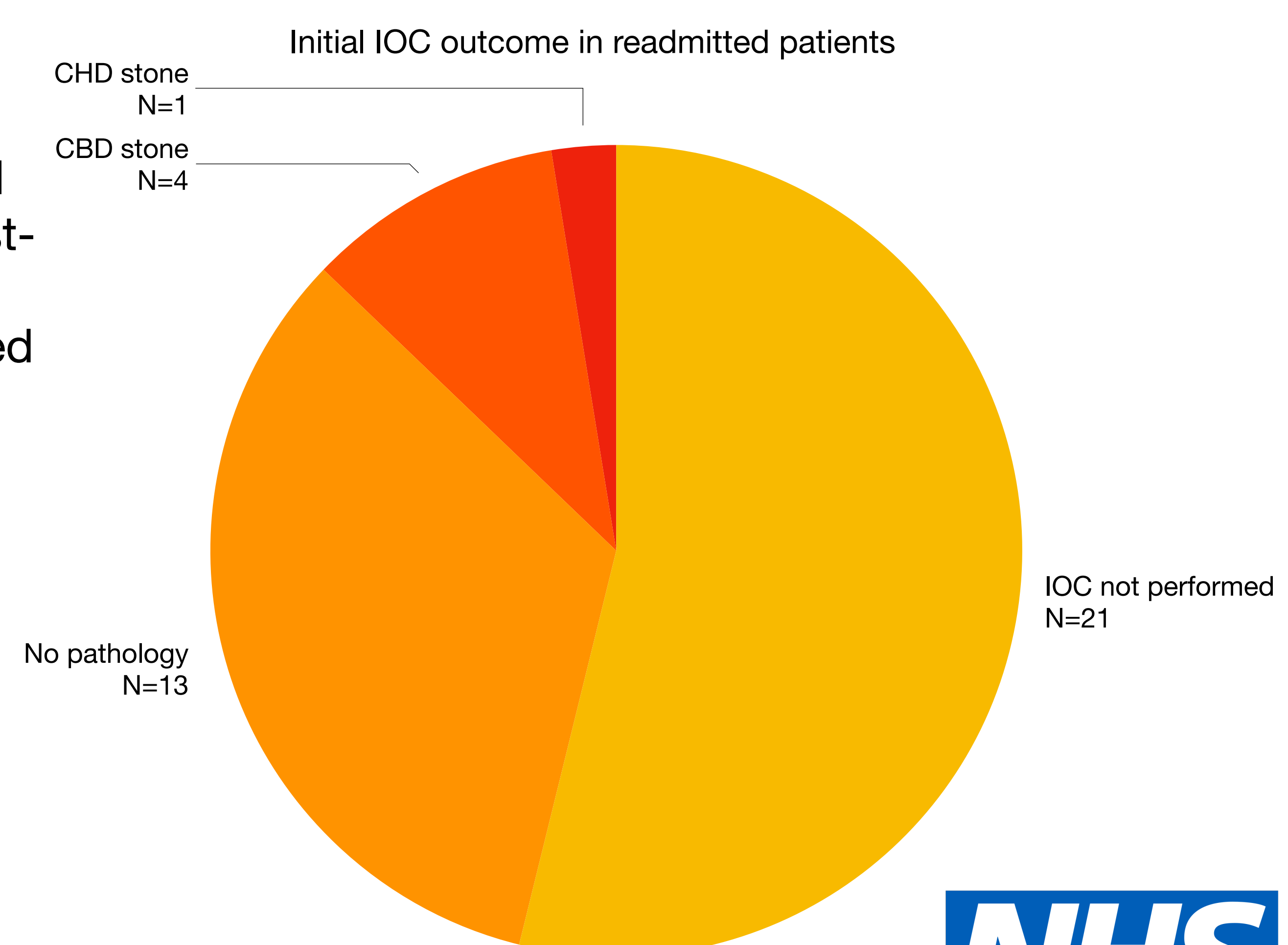
Conclusion

Our study of solely elective laparoscopic cholecystectomies has shown a broadly similar 30 day readmission rate (6%) compared to the CholeS study of elective and emergency procedures (7.1%). Our study supports the routine use of IOC to identify ductal stones during elective laparoscopic cholecystectomy to reduce risk of readmission.

Results

From January 2021 to December 2022, the number of cholecystectomies performed was 668. The number of patients who were readmitted as an emergency within 30 days from discharge was 40 (6%). Of those readmitted, mean age was 57, M:F ratio was 11:29. All readmitted patients underwent initial operation for gallstone pathology, and all were completed laparoscopically. In most (21, 53%), IOC was not successfully performed. Where IOC was successfully performed, 12 showed no pathology, 4 showed CBD stone and 1 showed CHD stone. 1 patient had intra-operative CBD exploration and the rest had successful post-operative ERCP.

There were no returns to theatre or bile duct injuries in readmitted patients. There were 7 readmissions for Clavien-Dindo 3a complications. Reasons for readmission were post-operative pain (n=18); gallbladder fossa collection (n=7; 3 underwent radiological drainage, 4 had antibiotics alone); Choledocholithiasis (n=3; all requiring ERCP); chest infection (n=3); abdominal wall haematoma (n=2); post-sphincterotomy bleed (requiring OGD); cardiogenic syncope; UTI; colitis; delirium; displaced feeding tube; pancreatitis (n=1 each).



1. Association of upper gastrointestinal surgeons of Great Britain and Ireland (2016). *Commissioning guide: Gallstone disease*. Available at: <https://www.augis.org/Portals/0/Guidelines/Gallstone-disease-commissioning-guide-for-REPUBLIC-1.pdf?ver=OKJgTeTNhxWCN5TITerfeQ%3d%3d> (Accessed 31 May 2024)
2. CholeS Study Group, West Midlands Research Collaborative. Population-based cohort study of outcomes following cholecystectomy for benign gallbladder diseases. *Br J Surg*. 2016 Nov;103(12):1704-1715. doi: 10.1002/bjs.10287. Epub 2016 Aug 26. Erratum in: *Br J Surg*. 2018 Aug;105(9):1222. PMID: 27561954.
3. Lucocq J, Radhakishnan G, Scollay J, Patil P. Morbidity following emergency and elective cholecystectomy: a retrospective comparative cohort study. *Surg Endosc*. 2022 Nov;36(11):8451-8457. doi: 10.1007/s00464-022-09103-2. Epub 2022 Feb 24. PMID: 35201423; PMCID: PMC9613569.