Outcomes and Re-admissions of Hot Gallbladders in a High-Volume Tertiary Care Hospital

NHS
Oxford University Hospitals
NHS Foundation Trust

Aim

Almost 70,000 cholecystectomies are performed each year in the UK, averaging more than 133 million USD. Approximately 11% of acute surgical admissions are related to gallstone disease with current recommendations in the United Kingdom being to perform a Laparoscopic Cholecystectomy (LC) within 7 days of admission (AUGIS 2016, NICE 2021) or 72 hours from admission (current literature and research). We aimed to assess the efficiency of our service and identify the outcomes of emergency LC during the acute symptomatic phase.

Methodology

A retrospective, cohort study was conducted at The John Radcliffe Hospital in Oxford to include patients that underwent LC's for acute cholecystitis between January 2019 to August 2020. A total of 466 patients were identified. Patients were divided on prognostic variables such as age, co-morbidities and time to operation. The primary outcome measure was grouped as suboptimal treatment (conversion to open, rate of abandonment and rate of subtotal). Secondary outcomes measured were bile leak, postoperative morbidity, re-admission rates and length of postoperative stay.

Results

A total of 466 patients were included in the study and the median admission to operation time was 5 days, however, a quarter of our patients underwent a LC after 7 days (24.7% in <3 days, 50.6% in 3-7 days, and 24.7% in >7 days) as shown in figure 1.0.

High 30-day re-admission rates (11.8%) and prolonged post-operative stay were directly influenced by a greater admission to operation time (p= 0.0351 and p= 0.0169 respectively), shown by figure 2.0

62% of the re-admitted patients were linked to surgeries occurring more than 7 days from their date of admission. Retained stones (21.8%) and intra-abdominal collections (14.5%) were leading causes of re-admission.

About 10% of patients had a suboptimal cholecystectomy predicted by age (p<0.0001) and low albumin (p=0.0034)

17.2% of patients had post-operative morbidity predicted by age (p=0.0201), admission day (p=0.0238), and male gender (p=0.0481).

Re-admissions were predicted by an ASA >3 (p=0.0096), thin-walled gallbladder (p=0.0491) and greater admission to operation time (p=0.0351).

Conclusion

The study demonstrated that our institution had poor compliance to AUGIS and NICE guidance on performing a laparoscopic cholecystectomy within 7-days (24.7% of patients underwent a LC in > 7 days).
This resulted in prolonged in-hospital admission and post-operative stay, higher re-admission rates and complications.
Improvements to our service have been made through dedicated hot gallbladder operative lists alongside introducing the use of laparoscopic transcystic exploration of the CBD using a choledochoscope combined with laser lithotripsy, with the aim to reduce in-hospital stay, complication rates and time window from admission to operation.

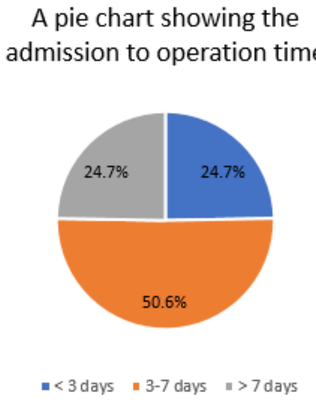


Figure 1.0

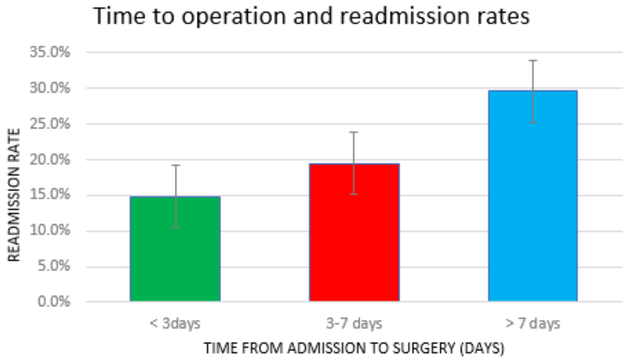


Figure 2.0

Mahul P Patel, Amanda Shabana, Benjamin Samra, Alan Chetwynd, Mikaela Nixon
Giles Bond-Smith, Giovanni D Tebala
Department of General Surgery, The John Radcliffe Hospital, Oxford, UK

SAGES 2023
March 29-April 1, 2023 | Montréal, Canada
INNOVATION FOR THE SAGES