

### P-EGS21 The impact of COVID-19 on operative difficulty and outcomes of laparoscopic cholecystectomy

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**Background:** The COVID-19 pandemic resulted in substantial delays to surgery among patients with symptomatic gallstones due to cessation of elective surgical procedures. As this exposed patients to a longer period of time during which complications from gallstones could develop, we hypothesised that the operative difficulty and complication rate of laparoscopic cholecystectomy (LC) increased following the first wave of the pandemic.

**Methods:** This was a retrospective cohort study of patients receiving emergency or elective LC at a single NHS trust comprising three sites. We included patients undergoing surgery in the pre-pandemic period (July-September 2019) and after resumption of elective surgical services following the first wave of the pandemic (July-September 2020). We compared data on operative duration, length of hospital stay, complications (bile leak, bile duct injury and mortality) and need for subtotal cholecystectomy. Categorical data are reported as n(%) and were compared with Fisher's exact test. Continuous data are reported as median with interquartile range and compared with Mann-Whitney U Test.

**Results:** 220 patients were included; 106 in the pre-pandemic group and 114 in the pandemic group. There were no significant differences in median operative times between the pre-pandemic (91 (71-121 minutes) and post-first wave (86 (69-114) minutes) groups ( $p=0.48$ ). The proportion of prolonged operations (over two hours) was similar in the pre-pandemic and pandemic groups (50% versus 46%, respectively,  $p=0.59$ ). Median length of hospital stay was 0 days for both groups (pre-pandemic 0 (0-1) days; pandemic 0 (0-1) days,  $p=0.42$ ). There were no significant differences in the rates of bile leak, bile duct injury, mortality, or the conversion to subtotal cholecystectomy.

**Conclusions:** Interruption of elective surgery following the first wave of the COVID-19 pandemic did not result in a discernible change in the technical difficulty or complication rate of LC at our centre. Longer

term studies are required to assess the effect of prolonged delays to surgery and the impact of subsequent waves of the pandemic.