

### P-EGS22 Emergency cholecystectomy: A comparative study of patient outcomes during COVID-19 pandemic with pre-COVID-19 period

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**Background:** Emergency cholecystectomy is recommended for all acute admissions with symptomatic gall stones. The Royal College of Surgeons and AUGIS on 25th March 2020 recommended that all laparoscopic procedures should be avoided during the COVID-19 pandemic with the view to minimise the risk of virus transmission from aerosol-generating procedures. This retrospective study compares the outcomes of patients undergoing emergency cholecystectomy during the COVID-19 period with the pre-COVID-19 period.

**Methods:** All patients who underwent emergency cholecystectomy (EC) from March 2019 to March 2021 were included. 'Pre-COVID-19' period was defined as 25th March 2019 to 24th March 2020, whereas the 'COVID-19' period was from 25th March 2020 to 24th March 2021. Mortality was considered as the primary outcome. Secondary outcomes include the 30-day postoperative complications based on the Calvien-Dindo classification (CDC) and the length of stay (LOS). Mortality and postoperative complications were assessed using the Chi-squared test, whilst LOS was studied using the Mann-Whitney U test. A p-value of < 0.05 was considered statistically significant.

**Results:** A total of 143 patients underwent EC during the 24-month study period (75 patients pre-COVID-19 and 68 patients during COVID-19). The 30-day mortality was nil. 9 patients (12% in pre-COVID-19 period and 11 patients (16% in COVID-19 period) underwent conversion to open cholecystectomy ( $p=0.47$ ). 18 patients (24% from pre-COVID-19 and 19 patients (27.9% from COVID-19 periods) developed postoperative complications ( $p=0.59$ ). Grade-2-CDC complications were seen in 12 patients (17.6% during COVID-19 period and 5 patients (6.7% in pre-COVID-19 period ( $p=0.0043$ ). However, grade-3,4 CDC complications requiring intervention ( $p=0.39$ ), and ICU-admission ( $p=0.62$ ) were comparable in both periods. 1 patient developed COVID-19 infection but made a full recovery. Mean LOS was 6-days in both periods, with no statistical difference ( $p=0.28$ ).

**Conclusions:** This study demonstrated no significant difference in patient outcomes who underwent emergency cholecystectomy during the COVID-19 pandemic compared to the pre-COVID-19 period. Emergency cholecystectomy should be offered to all surgically fit patients with symptomatic gall stones.