

BACKGROUND

In patients presenting with acute cholecystitis (AC), ERCP-guided gallbladder drainage (ERGD) is an alternative to percutaneous cholecystostomy (PTC) as select patients may not be candidates for index cholecystectomy. We intended to compare the outcomes of ERGD to PTC in inpatient US population.

METHODS

- Retrospectively analyzed AC patients using the National Inpatient Sample database between 2016 and 2019.
- The primary outcome was the length of stay (LOS), mean inpatient cost (MIC), and mortality between the two groups.
- Secondary outcomes included the open cholecystectomy risk and complication rate.
- Exclusion criteria included cholecystectomy within the first three days of admission, no cholecystectomy, gallbladder perforation, hepatic abscess, or pregnancy.
- Patients were excluded if they underwent ERCP but no stenting or transpapillary gallbladder drainage was performed (Figure 1).

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FIGURES

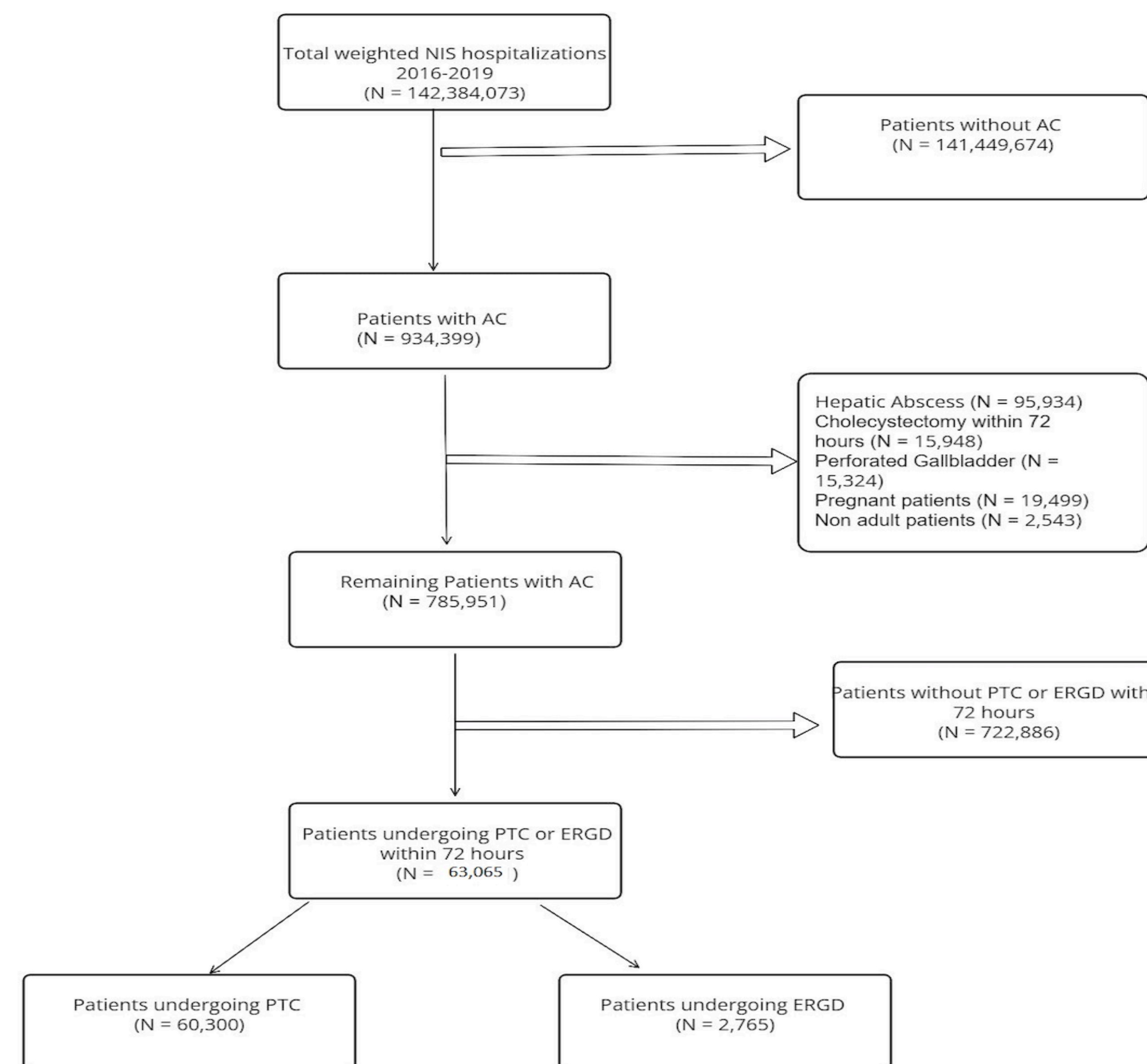


Figure 1. Flowsheet demonstrating process of data collection for the study

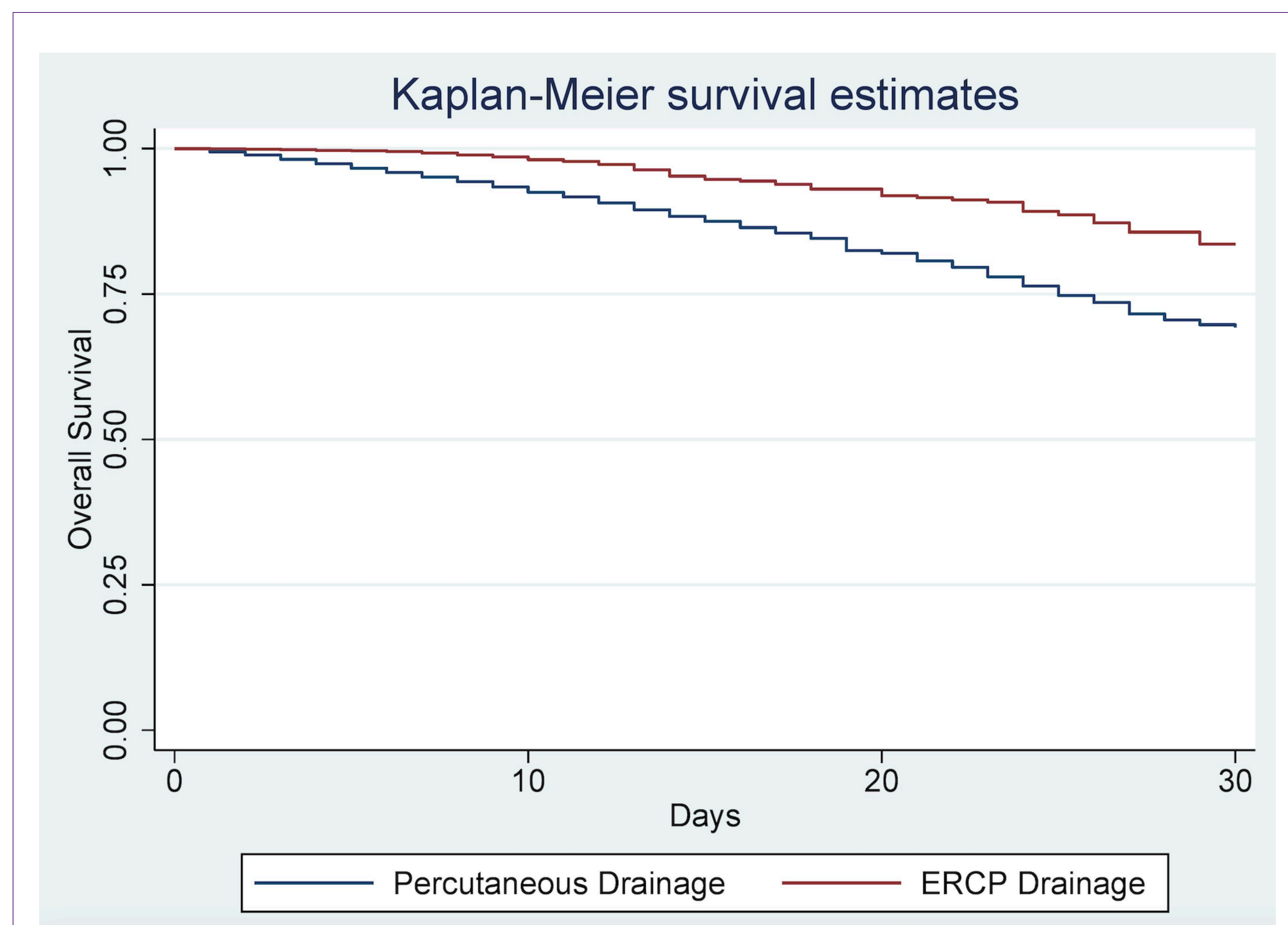


Figure 2. Kaplan-Meier Curve showing the survival estimates for patients undergoing percutaneous drainage versus those that underwent ERCP drainage

RESULTS

- Out of 63,065 hospitalizations, 95.6% underwent PTC, and 4.4% underwent ERGD.
- Mean LOS in those who underwent PTC was 7.63 ± 0.07 days, while the LOS in patients who underwent ERGD was 5.89 ± 0.11 days ($P < 0.001$).
- The MIC of patients with PTC was $\$89982 \pm 1170$ and in ERGD was $\$91131 \pm 1190$ ($P < 0.001$).
- In patients who underwent ERGD compared to PTC there was 88% decrease in all-cause 30-day mortality ($P < 0.001$).
- There was a 87% decreased association with conversion to open cholecystectomy in patients who underwent ERGD ($P < 0.001$).
- There was a lower association of blood transfusion ($P < 0.001$), AHRF ($P < 0.001$), ARF ($P < 0.001$) and hypovolemia ($P < 0.001$).
- Higher association of Choleperitonitis with ERGD compared to PTC ($P < 0.05$).
- No significant association between ileus, shock, SBO, and LGIB with ERGD or PTC.

CONCLUSION

ERGD is a safer alternative to PTC in patients with AC awaiting cholecystectomy. The mortality and risk of complications are lower in ERGD compared to PC, with a lower risk of conversion to open cholecystectomy as well.

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