

Short duration of pain onset is related to increased risk of ERCP-related adverse events

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Background/Aims: Acute biliary pancreatitis (ABP) with cholangitis requires endoscopic retrograde cholangiopancreatography (ERCP) within 24 hours to resolve ductal obstruction. However, this recommendation is based on the timing of emergency room (ER) visits. We wanted to determine the optimal timing of ERCP for ABP based on the timing of symptom onset, not the timing of the ER visit.

Methods: We retrospectively reviewed 162 patients with ABP with cholangitis who underwent urgent ERCP (within 24 hours of ER admission) from September 2006 to August 2022. Area under the receiver operating characteristic (ROC) curve (AUC) was analyzed to determine differences in complication rates according to time from symptom onset. A difference in ERCP-related adverse events (AEs) was identified, and Youden's J statistic was used to determine a cutoff time from symptom onset (18 hours). Patients were classified into two groups based on the cutoff value (≤ 18 hours and >18 hours). Groups were compared for mortality and complications.

Results: The mean time from symptom onset to ERCP was 43 hours, and the mean time from ER visit to ERCP was 9 hours. A significant between-group difference in ERCP-related AEs was identified (≤ 18 -hour group: 27.6%, >18 -hour group: 8.7%, $P=0.004$). Significantly higher rates of aspiration pneumonia (odds ratio [OR]: 4.00, 95% confidence interval [CI]: 1.15–13.92, $P=0.021$) and post-ERCP hypotension (OR: 11.9, 95% CI: 1.39–101.33, $P=0.005$) were observed in the ≤ 18 -hour group than in the >18 -hour group.

Conclusions: ERCP in patients within 18 hours of symptom onset is associated with an increased risk of ERCP-related AEs.

Figure 1. Flow diagram of patient selection according to urgent endoscopic retrograde cholangiopancreatography (ERCP; within 24 hours of emergency room admission) in patients with acute biliary pancreatitis with cholangitis.

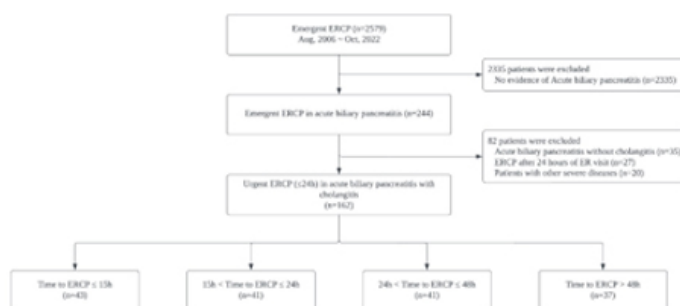


Figure 2. Receiver operating characteristic (ROC) curves of primary outcome relative to time of ERCP. (Top) ROC curves of primary outcome relative to time of ERCP after symptom onset. (Bottom) ROC curves of primary outcome relative to time of ERCP time after ER admission.

