

Trends in Post-Therapeutic Endoscopic Retrograde Cholangiopancreatography Gastrointestinal Hemorrhage, Perforation and Mortality from 2000 to 2012: A Nationwide Study

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Background/aims: Recent trends in complications following inpatient therapeutic Endoscopic Retrograde Cholangiopancreatography (ERCP) remain poorly defined. We studied trends of gastrointestinal (GI) hemorrhage, perforation, and mortality following inpatient therapeutic ERCPs from 2000 to 2012 with the hypothesis that ERCPs would have down trending complication rates.

Methods: First, we isolated therapeutic ERCPs in patients 18 years or older using the International Classification of Diseases, Ninth Edition in the 2000 to 2012 National Inpatient Sample databases. Procedures complicated by hemorrhage, perforation, and mortality were identified. Multivariate logistic regressions were used to calculate trends in complication rates and secondary variables, including hospital and patient demographics. Time series regressions were then built for each complication to assess for trends from 2000 to 2012.

Results: The mortality rate decreased from 1.77 to 1.24%, a trend that was confirmed by time series regression. Perforation rates increased from 0.07 to 0.10% for therapeutic ERCPs. However, time series regression did not show a significant trend. GI hemorrhage rates increased from 1.36 to 1.57% and this uptrend was confirmed by our time series regression. Conclusion: Therapeutic ERCPs have become safer, as demonstrated by a down trending mortality rate. Over the same time, GI hemorrhage rates trended upwards, while no change was noted in perforation rates.