Trauma/Emergency General Surgery Experience With The Choledochoscope At A Rural Tertiary Care Institution

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INTRODUCTION

- Management of choledocholithiasis has traditionally involved an ERCP with GI followed by a laparoscopic cholecystectomy. Technological advancements have introduced the choledochoscope, allowing surgeons to offer one operation that simultaneously removes the gallbladder and clears the common bile duct, bypassing the ERCP.
- The purpose of this study was to determine success rate, time to surgery, length of stay, and post-operative complications in patients with choledocholithiasis who underwent laparoscopic common bile duct exploration
- An initial feasibility study submitted in our abstract found nine patients and a 66% success rate of spyglass. There was one serious complication, death, and an average length of stay of 4.44 days. After reviewing this data, we moved to our next step, comparing these outcomes to patients who have ERCP followed by laparoscopic cholecystectomy.

METHODS AND PROCEDURES

- Approval was obtained from our institutional IRB. Patients with ERCP followed by lap chole or lap chole with spyglass +/- ERCP from 2014-2020 and 2022-2024 were used, respectively. Our institution started using spyglass in 2022. Age, gender, date of admission, admission diagnosis, date/time of operation, length operation, BMI, comorbidities, complications, date/time of discharge, and length of stay were collected. Wilcoxon-rank sum was used to evaluate for statistical significance.

RESULTS

- 166 patients with ERCP followed by lap chole
- 25 patients with spyglass, 20% had unsuccessful spyglass requiring ERCP

Mean time (hrs) +/- SD	ERCP + Lap chole (n=166)	Lap Chole w/IOC and spyglass (n=25)	P-value
Admission to OR	61.8 +/- 33	24.8 +/- 18.8	<0.001
OR to Discharge	45.5 +/- 49.7	55.4 +/- 55.9	0.405
Overall Length of Stay	107.3 +/- 59.3	80.2 +/- 65.6	0.002

CONCLUSIONS

- This study finds that the single-step approach of laparoscopic cholecystectomy using a choledochoscope may reduce the time from admission to definitive surgery as well as overall length of stay in rural tertiary care institutions.
- Lower rates of success compared to the national average (80 vs 90%) suggest our team should increase the number of spyglass procedures we perform to become more proficient.
- Further analysis of this data including complications is ongoing.

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