

Lessons Learned from 208 Laparoscopic Common Bile Duct Explorations in a Public Hospital: Identifying the Optimal Patient Management Protocol and Improving Surgical Resident Education

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INTRODUCTION

There is significant variation in clinical management of patients with choledocholithiasis. Furthermore, surgical residents report minimal (<1) common bile duct explorations (CBDE) annually to the Accreditation Council for Graduate Medical Education (ACGME). We adopted a protocol of concurrent transcystic CBDE during cholecystectomy in order to optimize patient care and enhance the surgical resident educational experience, specifically to teach surgical housestaff the basic tips of transcystic CBDE.

METHODS

A retrospective review was conducted of all CBDE at a public hospital/academic medical center over a 12-year period (2007-2019).

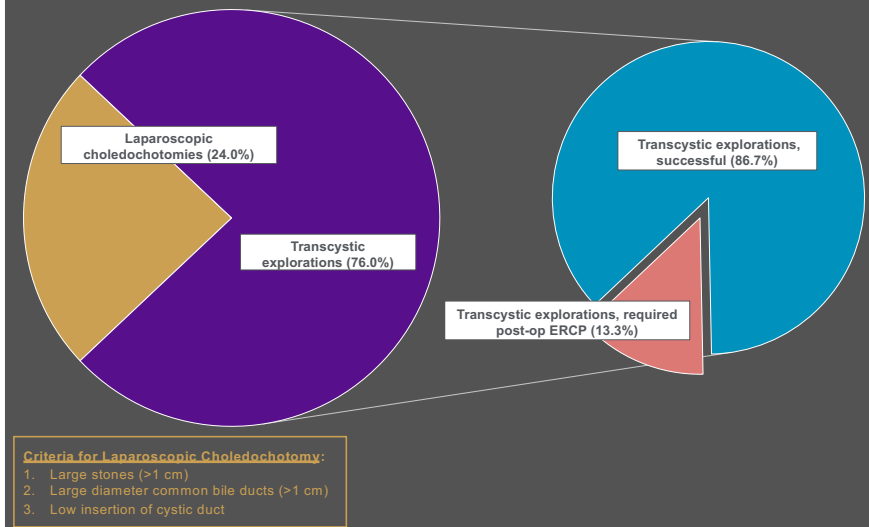
RESULTS

208 CBDE during cholecystectomy were performed, including 158 transcystic explorations and 50 choledochotomies. Cholangiograms were performed in every case. 87% (137/158) of the transcystic explorations were completed successfully without choledochotomy. In the remaining 13% (21/158), laparoscopic choledochotomy was deferred and postoperative ERCP was successful in clearing the duct (100% clearance rate). Laparoscopic choledochotomy (n=50) was reserved for large stones (>1 cm), large diameter common bile ducts (>1 cm), and low insertion of cystic duct. The average number of annual laparoscopic CBDE reported by surgical residents tripled during this timeframe, from n=1.1 (2008) to n=3.2 (2018), while the national average remained the same (0.7).

CONCLUSIONS

The majority (>80%) of patients with choledocholithiasis may be successfully treated with transcystic exploration at the time of cholecystectomy. Laparoscopic choledochotomy may be deferred to select patients. In our experience, a protocol of transcystic CBDE during cholecystectomy (and deferring laparoscopic choledochotomy to select patients) is effective (postoperative ERCP 100% clearance rate) and also significantly improves resident experience.

Common Bile Duct Exploration (CBDE) in Laparoscopic Cholecystectomy N=208



Average Number of CBDE per Resident Compared to National Average (2008 vs. 2018)

