A Culture of Cholangiography: A single institution perspective on the benefits of standardized intraoperative cholangiography

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Background

Intraoperative cholangiography (IOC) provides a mechanism of diagnosing choledocholithiasis, defining biliary anatomy, and preventing bile duct injuries during laparoscopic cholecystectomy[1,2].

We present the impact of instituting routine IOC at a single tertiary academic hospital.

Methods

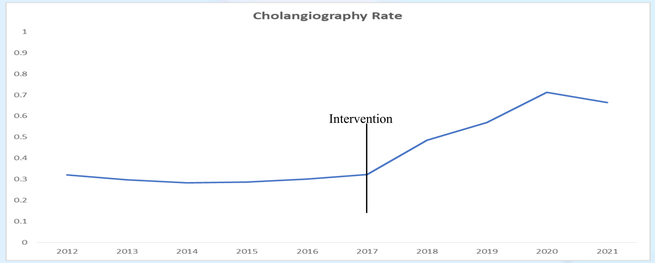
We analyzed retrospective CPT codes from our health system and divided the sample into two groups: 2012-2017 (before instituting routine IOC) and 2017-2022 (after instituting routine IOC).

Our analysis focused on rates of IOC, rates of laparoscopic trans-cystic common bile duct exploration (LTCBDE) as well as success rates of LTCBDE.

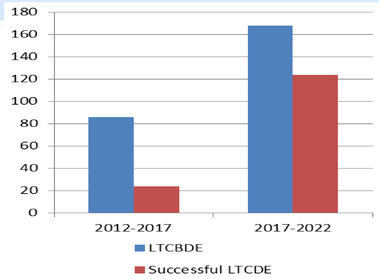
As these are nominal variables we used Chi square tests for all of the above.

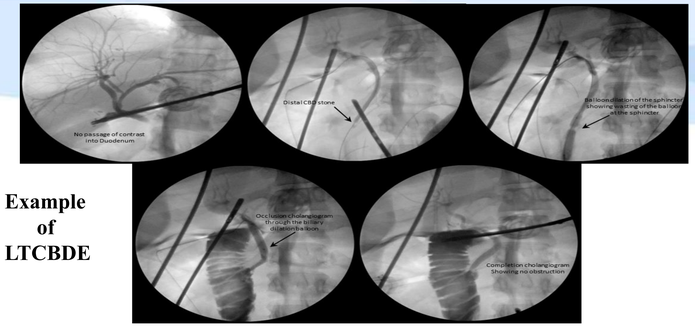
Results

The implementation of routine IOC resulted in an increased rate of cholangiograms from approximately 30 percent of cholecystectomies to over 50 percent in a 5-year period. During this time, we also found a 2.6 times greater success rate at laparoscopic trans-cystic common bile duct exploration (LTCBDE) (27.9% vs. 73.8%, $p < 0.001$) defined as successful clearance of the duct without an endoscopic retrograde cholangiopancreatography within 30 days of the index operation.



	2012-2017	2017-2022	P value (from Chi square test)
Laparoscopic cholecystectomy (47562, 47563, and 47564)	6751	7308	
Laparoscopic cholecystectomy with IOC (47563)	1982 (29.36%)	3739 (51.16%)	< .00001
LTCBDE (47564)	86 (1.27%)	168 (2.23%)	.000014
Successful LTCBDE	24 (27.9%)	124 (73.8%)	.00013





Example of LTCBDE

Conclusions

A culture of routine cholangiography can result in improved outcomes, with the potential for decreased procedural interventions as well as likely reduce the length of stay[3] for patients with choledocholithiasis.

References

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