Outcomes of Primary LCBDE Vs. LCBDE Following Failed ERCP in Patients with CBD Stones: A Prospective Study

Virinder Kumar Bansal, Asuri Krishna, Om Prakash Prajapati, Jasmine Dhal, Subodh Kumar, Soumya Jagannath, Rashmi Ramachandran, Pramod Garg, MC Misra
Department of Surgical Disciplines, Anesthesiology and Gastroenterology, All India Institute of Medical Sciences, New Delhi, India *(drvkbansal@gmail.com)*

Background

- CBD stones
  - Single-stage Primary laparoscopic common bile duct exploration (LCBDE)
  - Two-stage ERCP followed by laparoscopic cholecystectomy (LC)
- Multiple RCTs and meta-analyses: efficacy of single-stage LCBDE
- Primary laparoscopic common bile duct exploration (LCBDE) is preferred in patients with
  - Large CBD stones
  - Dilated CBD
  - Not in cholangitis

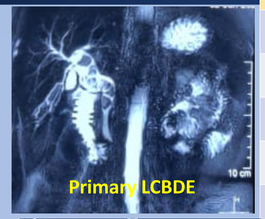
Aim

To compare the perioperative outcomes

between primary LCBDE and LCBDE following failed ERCP

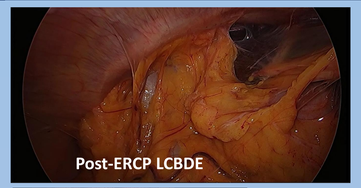
Methodology

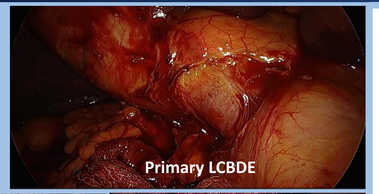
- ❑ January 2006 – December 2022
- ❑ Parameters studied
  - ❑ Preoperative
    - ❑ Demographics
    - ❑ History of jaundice/ cholangitis/ pancreatitis
    - ❑ Imaging (MRCP)
  - ❑ Intraoperative
    - ❑ Successful CBD clearance rates
    - ❑ Operative time and difficulty
    - ❑ Choledochotomy closure types (use of stents)
  - ❑ Postoperative

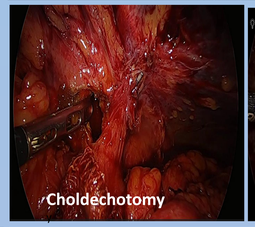


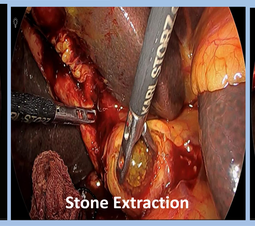


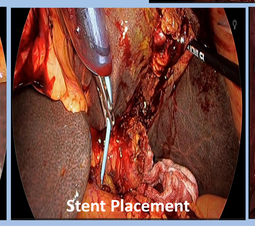
Operative Technique

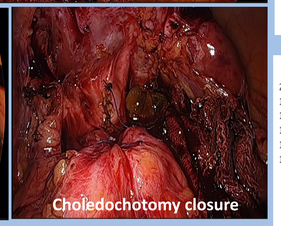








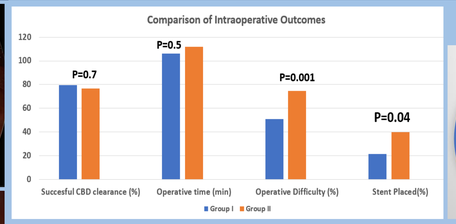


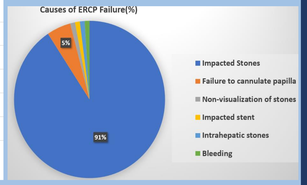


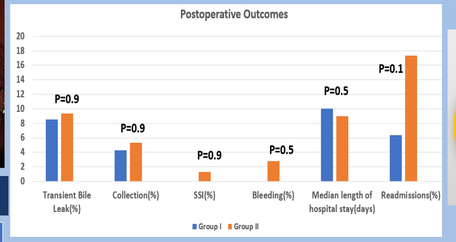
Results

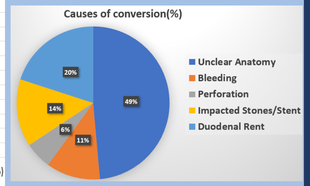
Parameter	Group I (Primary LCBDE)	Group II (post-ERCP LCBDE)	p-value
Number of Patients (n=428)	237 (55.4)	191 (44.6)	
Successful CBD clearance (%)	189 (79.7)	146 (76.4)	0.6
Conversions (%)	48 (20.3)	45 (23.5)	0.6
History of Jaundice (%)	101 (42.6)	150 (78.5)	<0.01
History of Cholangitis (%)	50 (21.1)	112 (58.6)	<0.01
Operative Time (minutes)	106 ± 3.8	112 ± 3.2	0.2
Operative Difficulty (%)	121 (51)	143 (74.8)	0.001
Stent Placed (%)	50 (21.2)	76 (40)	0.04
Transient Bile Leak (%)	20 (8.4)	18 (9.4)	0.9
Collection (%)	10 (4.2)	10 (5.3)	0.9
SSI (%)	0	2 (1)	0.9
Hospital Stay (days)	9.7 ± 4.3	11.1 ± 6.3	0.4

Results









Conclusion

1. Comparable clearance rates noted in primary LCBDE and post-ERCP LCBDE
2. Post-ERCP LCBDE is technically more difficult
3. A primary LCBDE should be preferred in large CBD stones, not in cholangitis

References

1. *Mohseni S, Bass GA, Forssten MP, et al. Common bile duct stones management: A network meta-analysis. The Journal of Trauma and Acute Care Surgery. 2022 Nov;93(5):e155-e165.*
1. *Asuri K, Bansal VK, et al. Long-term Outcomes Following Primary Closure of Common Bile Duct Following Laparoscopic Common Bile Duct (CBD) Exploration: Experience of 355 Cases at a Tertiary Care Center. Surg Laparosc Endosc Percutan Tech. 2020 Dec;30(6):504-507.*
2. *Bansal VK, Misra MC, et al. Single-stage laparoscopic common bile duct exploration and cholecystectomy versus two-stage endoscopic stone extraction followed by laparoscopic cholecystectomy for patients with concomitant gallbladder stones and common bile duct stones: a randomized controlled trial. Surg Endosc. 2014 Mar;28(3):875-85.*