SAGES 2025 Long Beach, CA

Laparoscopic subtotal cholecystectomy as a safe bailout procedure: 3 year's experience in a tertiary care

Mahesh Kumar Sethi, **Washim Firoz Khan**, Aditya Baksi, Hemanga Kumar Bhattacharjee, Manjunath Pol, Aditya Kumar, Sandeep Aggarwal

Department of Surgical Disciplines , All India Institute of Medical Sciences (AIIMS), New Delhi, INDIA

Introduction

- Laparoscopic subtotal cholecystectomy (LSC) is an important bailout procedure in difficult scenario, reducing bile duct injury risk while preserving patient safety.
- By avoiding critical dissection, LSC offers a safer alternative to total cholecystectomy.
- This study aims to explore its impact on the surgical outcome of patients undergoing difficult cholecystectomy.

Material and Methods

- This retrospective study analysed data of patients undergoing subtotal cholecystectomy (STC) from June 2021 and November 2024 (42 months) at AIIMS New Delhi, a tertiary care teaching hospital in India
- Patients were categorized into lap total (LTC), lap subtotal (STC), and converted to open (LCOC) groups
- Patients undergoing surgery for malignancy or a cholecystectomy as part of a complex procedure were excluded
- Primary outcome was the proportion of patients undergoing LTC, STC and LCOC.
- Secondary outcomes included incidence of bile leak requiring intervention, complication rate, and post-operative length of stay
- Data were analysed using SPSS, with significance set at $p<0.05$.

Results

Parameters	Cholecystectomy n = 872
Age (Mean ±SD) years	43.20 ± 17.55
Sex	
Female	686 (78.6 %)
Male	186 (21.4 %)
Indications	
Chronic cholecystitis	853
Acute cholecystitis	10
Gall stone pancreatitis	7
Sealed GB Perforation	2
Preoperative ERCP stenting	57
Early Cholecystectomy	24
Late Cholecystectomy	33
Type of surgery	
Elective	867
Emergency	5

- Among 872 cholecystectomy patients (mean age 43.2 ± 17.55 years), 78.6% were male.
- Chronic cholecystitis was the most common indication (853 cases). Preoperative ERCP was performed in 57 patients (24 early, 33 late).
- Most surgeries were elective (867), with only 5 emergency cases.

Parameters	LTC (n=805)	STC (n=64)	LCOC (n=3)	P-value
Bile leak	0	3 (4.7)	0 (0)	0.524
Bowel injury	1	1 (1.5)	0 (0)	0.233
Clavien-Dindo				
0	798 (99.1)	52 (81.3)	0 (0)	0.00
I	5 (0.62)	5 (7.8)	3 (100)	0.00
II	1 (0.12)	6 (9.3)	0 (0)	0.00
III	1 (0.12)	0 (0)	0 (0)	-
IV	0 (0)	1 (1.6)	0 (0)	0.00
V	0 (0)	0 (0)	0 (0)	-
SSI	2 (0.24)	2 (3.1)	1 (33.3)	0.003
Re-surgery	0 (0)	1 (1.5)	0 (0)	0.071
Post-op ERCP	0 (0)	1 (1.5)	0 (0)	0.388
Hospital stay (mean ± S.D	1.44 ± 1.7	3.59 ± 6.2	5.3 ± 0.47	<0.001

- Bile leak was seen in 3 patients in STC group however all of them were minor leaks
- One bowel injury each was seen in both LTC and STC group
- Higher Clavien-Dindo complications were noted in STC (3.1%) – Not statistically significance.
- LCOC (33.3%) has higher SSI rate compared to STC (p=0.003).
- Re-surgery and post-op ERCP occurred only in STC (0.071).
- Hospital stays were significantly longer in STC (3.59 days) and LCOC (5.3 days) (p<0.001).

Parameters	LTC	STC	LCOC	P-values
Nassar grade				
1	746	0 (0)	0	-
2	43	12 (18.7%)	0	0.95
3	14	**28 (43.7%)**	1 (33.3%)	1.0
4	2	**24 (37.6%)**	2 (66.6%)	0.68
	18	46 (71.9%)	3 (100%)	0.68

- LTC cases were mostly Nassar grades 1–2, while STC and LCOC had higher grades (3–4).
- Drain placement was more frequent in STC (71.9%) and LCOC (100%) than LTC (p=0.68).

Conclusion

- Laparoscopic subtotal cholecystectomy is a safe bailout procedure
- It is an alternate technique for laparoscopic conversion to open cholecystectomy, without significant increase in morbidity and morbidity