

Use of Cholecystostomy to Manage Acute Cholecystitis in High-Risk Patients in a Rural Hospital



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Objectives

Percutaneous cholecystostomy (PC) tube drainage plays a vital role for patients deemed high risk for surgical intervention. We aimed to evaluate outcomes after PC in patients with acute cholecystitis in a rural district general hospital.

Methods

Retrospective data collection

Timeframe: Oct 2019 –Jan 2024.

Variables collected:

Demographics, American Society of Anaesthesiologists (ASA) grade, Charlson Comorbidity score (CCI), inflammatory markers, length of hospital stay (LOS), complications, duration of PC, mortality and subsequent management.

Results

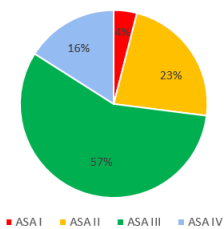
Data were available from 58 patients.

Baseline demographics are summarized in Table 1 and the pie charts below illustrate the distribution of the (ASA) grade and the Charlson Comorbidity Index of our patients.

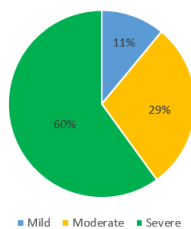
The severity of comorbidity was categorized into three grades: mild, with CCI scores of 1–2; moderate, with CCI scores of 3–4; and severe, with CCI scores ≥ 5 .

Indications for PC as per World Society of Emergency Surgery guidelines: CCI ≥ 6 and/or ASA Score ≥ 3 , failed conservative management after a variable time of 24 to 48 h and who present with strict contraindications for surgery.

Percentage of patients for each ASA grade



Charlson Comorbidity Index (CCI) - Mild, Moderate and Severe



Outcomes are summarized in Table 2 and 3.

Median duration of PC remaining in situ was 37 days (SD=49 days), 11 (19%) had PC in situ for > 80 days.

27 (46.5%) of patients underwent cholecystograms prior to drain removal and 19% were abnormal.

Mean number of readmissions/ care episodes needed following discharge was 2 +/-1.5.

Table 1: Demographics	Mean	Range	SD	
Sex M/F	No: 31/27	-	-	
Age	74	56 - 94	10.5	
CRP on admission	189	4 - 489	132	P-value= 0.012
CRP pre-cholecystostomy	249	15 - 562	129	
WCC on admission	16	6 - 33	6	P-value= 0.79
WCC pre-cholecystostomy	18	5 - 30	7	

Table 2: Outcomes	Number	Percentage
30-days mortality	2	3.5%
1-year mortality	3	5.0%
ICU admission	9	15.5%
Later cholecystectomy		
Yes	17	29.3%
No	41	70.6%

Table 3: Outcomes	Median	Range
Total length of hospital stay (days)	12	2- 159
Length of hospital stay post cholecystostomy (days)	8	1- 90
Days with drain	37	0- 315
Duration between PC and cholecystectomy(days)	28	0- 351

There were 4 complications (6.9%) which included 1 bile leak, 1 drain dislodgement and 2 abdominal wall abscesses.

17 (29.3%) patients had a cholecystectomy following PC removal with 12% (2) converted to open.

Conclusion

Percutaneous cholecystostomy offers a safe alternative to laparoscopic cholecystectomy in managing acute cholecystitis in high-risk patients. Subsequent cholecystectomy has a higher rate of conversion to open.