

# The audit of timing of laparoscopic cholecystectomy for gallstone pancreatitis in a district general hospital

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## Introduction

The British Society of Gastroenterology recommends performing laparoscopic cholecystectomy (LC) for acute gallstone pancreatitis (GSP) on the index admission or within two weeks of the diagnosis to prevent further attacks of GSP and readmission with biliary complications. A systematic review found an 18% readmission rate for recurrent biliary events within a medium of 6 weeks after index admission for mild gallstone pancreatitis by Mark van Baal et al \*.

## Aim

The aim of the audit is to audit the current management of patients suffering with GSP in a district general hospital.

## Methods

The retrospective data collection was conducted for all patients treated for GSP from 01/01/2019 to 31/12/2019. All patients with confirmed diagnosis of GSP were included. The primary objective was the number of LC performed within 2 weeks of admission with GSP. The secondary objectives were median length of time in days from diagnosis of GSP to cholecystectomy and number of readmissions with gallstone-related disease prior to definitive management. Statistical analysis was performed using JASP software.

## Results

There were 124 patients admitted with acute pancreatitis, 55 of which were due to gallstones (34 female). 35 (64%) patients had LC performed. However only 14 had it done within 2 weeks of admission whereas 21 were delayed LC. 20 (36%) patients didn’t have LC, however of those only 6 were fit to undergo it on index admission. Median wait for LC in the entire group was 32 days (I-300) IQR-120.5, however is was only 3.5 days (I-14) IQR 6.5 in non-delayed group and 119 days (20-300) IQR-129 in delayed group (plot 1).

There were 3 patients who had one readmission and 4 patients who had two readmissions whilst waiting for LC. Most readmissions occurred in delayed LC group (table 1).

### Frequencies for Number of Re-admissions before lap chole

Delayed LC (>14)	Number of Re-admissions before lap chole	Frequency	Percent
no	0	14	100.000
	1	0	0.000
	2	0	0.000
	n/a	0	0.000
	Missing	0	0.000
	Total	14	100.000
yes	0	15	71.429
	1	3	14.286
	2	3	14.286
	n/a	0	0.000
	Missing	0	0.000
	Total	21	100.000

Table 1

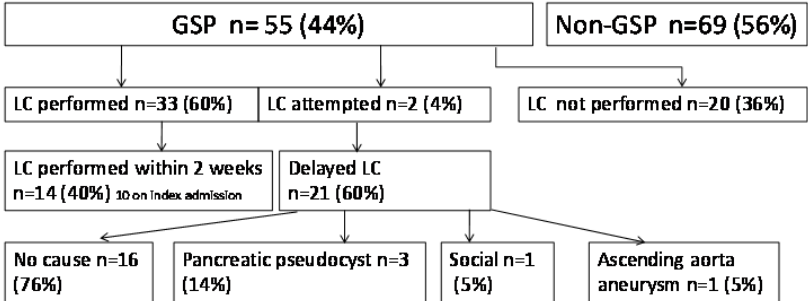
Only 2 patients who were readmitted had pancreatic pseudocyst as a cause of delayed LC. The rest of readmissions were in delayed LC group without obvious cause of delay.

### Timing of LC depending on severity of pancreatitis

Frequencies for LC within 2 weeks			Frequencies for Delayed LC (>14)		
Severity of pancreatitis	LC within 2 weeks	Frequency	Severity of pancreatitis	Delayed LC (>14)	Frequency
mild	no	25	mild	no	9
	yes	9		yes	15
	Missing	0		Missing	10
	Total	34		Total	34
moderate	no	8	moderate	no	5
	yes	5		yes	2
	Missing	0		Missing	6
	Total	13		Total	13
severe	no	8	severe	no	0
	yes	0		yes	4
	Missing	0		Missing	4
	Total	8		Total	8

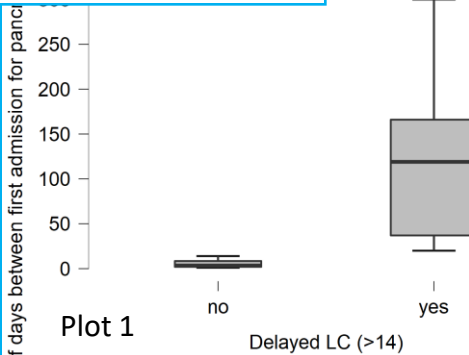
Total number of patient admitted with acute pancreatitis in 2019  
n=124

Study flowchart



Causes of LC not performed (n=20)

- Deceased- 3 (5%)
- Obesity- 2 (4%)
- Pancreatic pseudocyst- 2 (4%)
- Patient refused- 1(2%)
- Unfit for LC- 6 (11%)
- Still awaiting LC- 6 (11%)



### Complications and mortality of pancreatitis

- MOF- 1 (2%)
- Pancreatic pseudocyst 5 (9%)
- Deceased of MOF- 4 (7%)
- HDU/ICU admission- 3 (5%)

### Conclusions

- 25% of patients admitted with GSP had LC within 2 weeks of admission
- 38 % of the patients with GSP had delayed LC
- Most of readmission happened in delayed LC group
- 32 days- median number of days between GSP and LC, however substantially higher (119 days) in delayed group

### Reference

\*Timing of Cholecystectomy After Mild Biliary Pancreatitis: A Systematic Review. Mark van Baal et al. Annals of Surgery. 255(5):860–866, MAY 2012.