

JUST A LAP CHOLE ?

DIFFICULT GALLBLADDERS AND THEIR COMPLICATIONS

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INTRODUCTION

- A difficult gallbladder is associated with severe inflammation that distorts local anatomy, making dissection difficult.
- The incidence of difficult gallbladders is 16% – 1 in 6. (1)
- Tokyo Guidelines 2018 (TG-18) recommend subtotal cholecystectomy (STC) as a bail out procedure for difficult gallbladders.
- Use of and complications of STC have not been studied in the New Zealand population.
- Timing regarding acute laparoscopic cholecystectomy (LC) is debated in literature.
- TG-18 propose early surgery for acute cholecystitis, regardless of how much time has passed since onset of symptoms.



AIM AND METHOD

Aim:

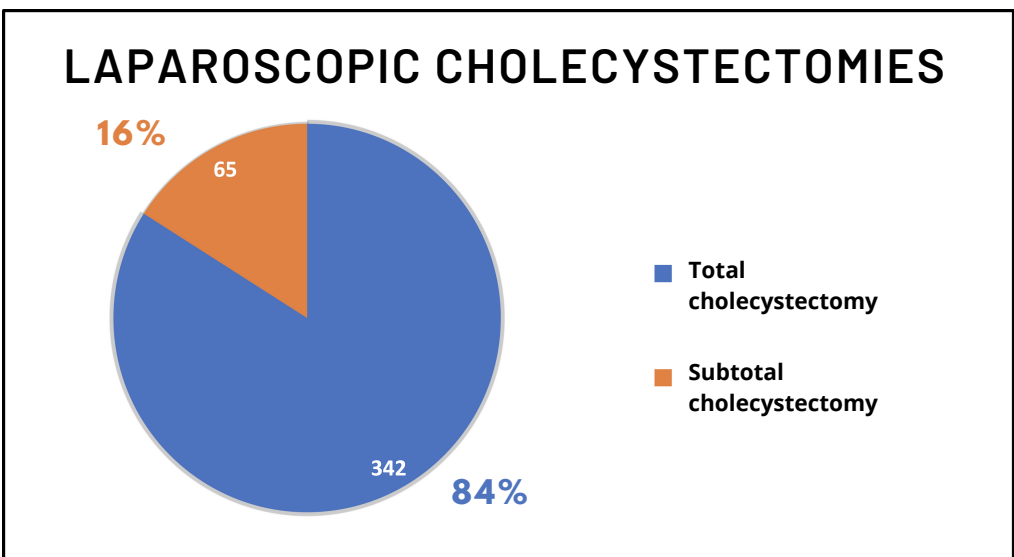
- To determine management of difficult gallbladders, including use of STC, in the New Zealand (NZ) population.
- To determine the rate of complications following STC.
- To identify risk factors for STC, including duration of symptoms.

Method:

- All acute LC performed at Waikato hospital from 1st January 2018 to 31st December 2019 were retrospectively reviewed.
- Operations performed for causes other than gallstone disease were excluded.
- Patient characteristics, operative factors and post operative outcomes were reviewed.

RESULTS

- A total of 414 acute LC were performed for gallstone disease.
- 7 cases were converted to open – 3 subtotal, 3 total and 1 abandoned.



ALL COMPLICATIONS IN STC

RR = 5.2

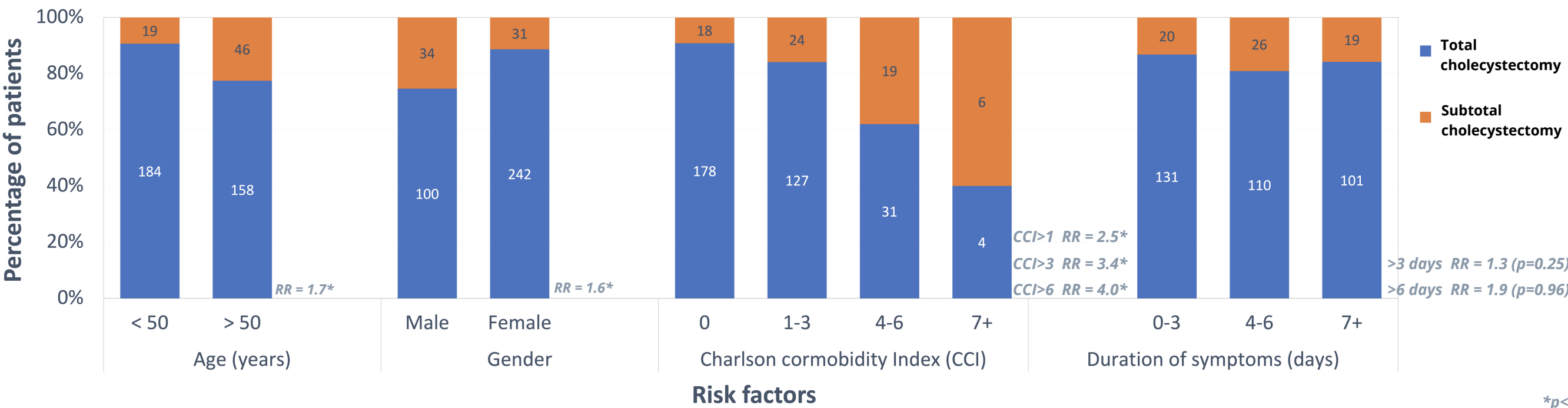
27.5% vs 7.5% (subtotal vs total, $p < 0.0001$)

BILE LEAK IN STC

RR = 10.6

13.0% vs 1.5% (subtotal vs total, $p < 0.0001$).

RISK FACTORS FOR SUBTOTAL CHOLECYSTECTOMY



CONCLUSION

- 1 in 6 acute cholecystectomies resulted in STC and 1 in 59 in open.
- STC patients are 10.6 times more likely to develop a bile leak and 5.2 times more likely to develop any complication comparing to patients undergoing a total cholecystectomy.
- Male gender, age >50 and high CCI are risk factors for STC. This is consistent with international literature.
- STC is a safe bail out procedure in difficult gallbladders in the NZ population.
- Performing cholecystectomy >72 hrs of symptoms is not a risk factor for STC and should be considered in NZ.

SUPPLEMENTARY

	N (%)	Total Cholecystectomies	Subtotal Cholecystectomies	p
Total bile leaks	14 (3.4%)	5 (1.5%)	9 (13.8%)	<.001**
All complications	44 (10.8%)	26 (7.6%)	18 (27.7%)	<.001**
CBD injury	4 (1.0%)	2 (0.6%)	2 (3.1%)	.122
Retained stones	20 (4.9%)	15 (4.4%)	5 (7.7%)	.341
Wound infection	2 (0.5%)	1 (0.3%)	1 (1.5%)	.294
Haemorrhage	4 (1.0%)	4 (1.2%)	0 (0.0%)	1.000

	N (%)	Open Cholecystectomies	Laparoscopic Subtotal Cholecystectomies	Chi-square	df	p
Total bile leaks	9 (12.3%)	0 (0.0%)	9 (13.8%)	1.263	1	.584
All complications	20 (27.4%)	2 (25.0%)	18 (27.7%)	.026	1	1.000
CBD injury	2 (2.7%)	0 (0.0%)	2 (3.1%)	.253	1	1.000
Retained stones	5 (6.8%)	0 (0.0%)	5 (7.7%)	.661	1	1.000
Wound infection	2 (2.7%)	1 (12.5%)	1 (1.3%)	3.212	1	.099
Representation	13 (17.8%)	1 (12.5%)	12 (18.5%)	.173	1	1.000

1. Elshaer, M., Gravante, G., Thomas, K., Sorge, R., Al-Hamali, S., & Ebdewi, H. (2015). Subtotal Cholecystectomy for "Difficult Gallbladders". JAMA Surgery, 150(2), 159-168.

