

COMPARISON BETWEEN DAY-CASE LAPAROSCOPIC CHOLECYSTECTOMY PERFORMED UNDER STRICT VERSUS RELAXED CRITERIA: A PROSPECTIVE STUDY

Alaa Hussein Abd El-Razek, Samer Saad Bessa, Tamer Nabil Abdelbaki, Ahmed Amin Talaat Hassan
Hepatobiliarypancreatic unit, Surgery department, Faculty of medicine, Alexandria university

Introduction

Laparoscopic cholecystectomy (LC) is the ‘gold standard’ for treatment of symptomatic cholelithiasis. The potential for laparoscopic cholecystectomy to be performed as a day case surgery was first recognized in 1990. Nowadays laparoscopic cholecystectomy is widely performed on day-case basis in many countries, like United States and United Kingdom. Advantages of day-case laparoscopic cholecystectomy (DCLC) over inpatient LC include early return to the community and work, providing a substantial reduction in hospital costs, avoiding complications associated with hospital stay. Several published studies have testified to the safety and feasibility of DCLC and nearly all of them confirmed that DCLC is safe for most of patients undergoing laparoscopic cholecystectomy under specific inclusion criteria and appropriate postoperative assessment.

Aim of the work

The aim of the present prospective study was to compare between the surgical outcomes of day-case laparoscopic cholecystectomy performed under strict versus relaxed criteria in the Alexandria Main University Hospital (AMUH).

PATIENTS

The present study included 300 patients with symptomatic uncomplicated gallstone disease
Inclusion criteria for day-case laparoscopic cholecystectomy (DCLC):
American society of anesthesiologists (ASA) scores I or II, Age between 16-75 years., Residence within a 50 kilometers range from AMUH, Availability of a responsible care giver for the first 24 hours after surgery, Availability of a residential or cellular phone service, Surgery ends before 2 pm, Uncomplicated gall stone disease, Cholecystectomy completed laparoscopically with no detectable intra-operative complications, No interventions apart from LC were performed,
The study was approved by the ethics committees of the faculty of medicine of , Alexandria University. A written informed consent was obtained from all , participants after explaining the benefits and risks involved.

METHODS

Following preoperative assessment and preparation for surgery eligible participants were assigned to either one of two groups:

ITEM	STRICT GROUP	RELAXED GROPU
Age	Less than 55 years	From 55-70 years
BMI (kgm/m ²)	Less than or equal 40 kgm/m ²	More than 40 kgm/m ²
Associated co-morbidities	Absent	Present

All procedures were performed under general anesthesia with endotracheal intubation and pre-operative administration of ondansetrone 4 mg and dexamethasone 4 mg as antiemetic drugs. A uniform technique of laparoscopic cholecystectomy was applied including the standard four trocar technique. A critical view of safety was attempted in every patient.
Criteria for same day discharge in the present study were:
Homodynamic stability, Visual analogue scale (VAS) less than 6, No Postoperative nausea and vomiting (PONV), Tolerating liquid diet, Ambulatory patient, The patient accepted discharge

Results

The strict group included 170 patients while the relaxed group included 130 patients.
There was no significant difference between the two groups regarding the gender of patients as the strict group included 25 males and 145 females while the relaxed group included 22 males and 108 females (p= 0.601)
The mean age for the strict group was 35.8±9.34 years while the mean age for the strict group was 50.63 ± 12.52 years (p<0.001)
The mean BMI for the strict group was 29.70 ± 5.77kg/m² while the mean BMI for the relaxed group was 35.82 ± 8.21 kg/m² (p<0.001)
Overnight hospital stay was significantly higher in the relaxed group than the strict group (p=0.012)

Table (1):Comparison between the two studied groups according to number and causes of unexpected overnight hospital stays

	Strict (n = 170)		Relaxed (n = 130)		χ^2	P
<u>Hospital stay</u>	No.	%	No.	%	6.241	0.012
Day-case	142	83.5	93	71.5		
Overnight stay	28	16.5	37	28.5		
<u>Reason of postoperative hospital stay</u>						
1-Drain insertion	16	9.4	12	9.2	0.003	0.957
2-Patient refusal	6	3.5	12	8.4	2.390	0.122
3-Operator recommendation	1	0.6	10	7.7	10.525	0.001
4-Bad stormy weather	3	1.8	3	0.8	0.555	0.636
5-Fever	1	0.6	0	0.0	0.767	1.000
6-Hemodynamic instability	1	0.6	0	0.0	0.767	1.000

Conclusion

In conclusion, DCLC is an applicable option in the treatment of symptomatic uncomplicated cholelithiasis in selected patients. Criteria for patient inclusion for DCLC can be extended safely to include elderly patients and patients with high BMI values and patients with associated co-morbidities not exceeding ASA II score. Higher success rates of DCLC can be achieved with wide application of DCLC programs among surgeons in the practice.

