



ORIGINAL ARTICLE

Psychological and sociodemographic factors for delayed patient discharge after daycare laparoscopic cholecystectomy.

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Article Citation: Altaf HN, Baig M, Tareen A, Khalil ur Rehman, Imran M, Gondal A, Najamul Haq. Psychological and sociodemographic factors for delayed patient discharge after daycare laparoscopic cholecystectomy. Professional Med J 2023; 30(05):575-580. <https://doi.org/10.29309/TPMJ/2023.30.05.7472>

ABSTRACT... Objective: To estimate the psychological and sociodemographic correlates of delayed discharge of patients undergoing Elective Laparoscopic Cholecystectomy. **Study Design:** Retrospective Cross-sectional Descriptive study. **Setting:** Department of Surgery, Fauji Foundation Hospital. **Period:** July 2019 and June 2022. **Material & Methods:** The study comprised reviewing medical records of 160 patients who underwent daycare cholecystectomy. It was noticed from patients' medical records that patients were carefully selected for daycare surgery. Patients with comorbidities, previous upper intra-abdominal surgery, ultrasound findings of thickened gallbladder wall > 5mm were not offered day care surgery. For data collection a Performa was designed based on literature review. To assess psychological state, we applied Hospital anxiety and depression scale in Urdu. Descriptive statistics were calculated for the sociodemographic variables, mean and standard deviation was found for continuous variables and frequency percentages for categorical variables. **Results:** One hundred and thirty-one 131 (81.8 percent) of the 160 cholecystectomies could be sent home within 24 hours, whereas 29 (18 percent) required a lengthier hospital stay. One hundred and thirty-one 131 (81.8 percent) of the 160 cholecystectomies could be sent home within 24 hours, whereas 29 (18 percent) required a lengthier hospital stay. In LS group, the postoperative stay range was 2 –19. Observation of postoperative fever (n = 3), surgery-related causes postoperative pain (n= 6), delayed oral diet = 1, retained abdominal drain = 4, and postoperative complications (n= 3). Bowel injury (n = 2) and septicemia (n = 1) were serious postoperative consequences resulting in more prolonged hospital stay. PONV (n = 2), medical causes (n = 3), and patient preference (n = 7) were among the reasons for the prolonged hospital stay. **Conclusion:** While our study has a few limitations; it is a retrospective review with nonrandomized patient selection and a smaller sample size, we have established safety of day case laparoscopic cholecystectomy in select group of patients. Patients' personal satisfaction was the most common reason for their overnight admission after day case LC which was because of number of sociodemographic factors.

Key words: Day Care Surgery, Gall Bladder, Laparoscopic Cholecystectomy, Pain, Postoperative Complication.

INTRODUCTION

As the awareness about health problems and good clinical practices is increasing more people are coming to tertiary care centers for better health care services.¹ Pakistan is a low socioeconomic country where primary health care is scarcely available.² Primary health care units, where present, often lack the proper health care facilities specially for management of older patients with multiple co-morbidities. Therefore, tertiary care hospitals are getting a high influx of patients requiring specialized care.² Many of these patients require admission with extended hospital

stay on account of their medical problems. This situation is further complicated by their social and economic concerns.²

Unfortunately, most of the Public and Private sectors hospitals often fail to provide sufficient room for all patients requiring inpatient services.³ Higher number of patients at tertiary care Hospitals because of poor primary health care facilities has its adverse effects on patient care and their overall satisfaction.⁴ Because of Prolonged stay many new patients cannot get admitted leading to their dissatisfaction in health

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Article received on: 02/02/2023
Accepted for publication: 04/04/2023

care facilities. Elective admissions are often postponed to because emergency cases are given priority. Patients requiring specialized care are often unable to get it because the units are full and have no room for further admissions.⁵ One of the leading causes of this problem is delayed patient discharges already admitted patients.⁵ One of the ways to improve this situation is day care surgery. Day care surgical procedures do not require post-operative stay of patients for more than 24 hours.⁶ Since the enormous success and worldwide acceptance of laparoscopic cholecystectomy over open cholecystectomy for symptomatic gall bladder disorders most surgeons are now moving towards day-surgery laparoscopic cholecystectomy.⁷ Multiple studies have demonstrated safety, efficacy and cost-effectiveness of day care laparoscopic cholecystectomy.⁸

Day care laparoscopic surgery has still not gained sufficient acceptability in medical fraternity to become routine practice in Pakistan. Besides requiring careful planning and preoperative evaluation of cases, patients' psychological and social problems have been implicated for lack of popularity of day care laparoscopic cholecystectomy. This Study aims to estimate the psychological and sociodemographic correlates of delayed discharge of patients undergoing elective Laparoscopic Cholecystectomy. This study will help in identifying the causes that lead to delayed discharges and thus improving the quality of health care provision in Pakistan.

OBJECTIVE

The objective of the study was to identify psychological and sociodemographic quality of patients who underwent elective daycare laparoscopic cholecystectomy.

MATERIAL & METHODS

The ethics committee of Fauji foundation hospital, Faculty of Medicine authorized the current research. One hundred and sixty patients who had elective cholecystectomy at Fauji foundation Hospital between July 2019 and June 2022 were included in this retrospective descriptive analysis. The analysis comprised reviewing medical

records of all 160 daycare cholecystectomies. The patients' medical records were evaluated in a methodical manner Sample size was calculated using Raosoft® Sample Size Calculator.¹³

Medical records were used to document variables. A total of 34 variables were identified. Data was collected using consecutive non-probability sampling. The study sample was selected by non-randomized convenient sampling technique. There were 20 patient variables in total: : age, gender, risk classification, comorbid conditions (including diabetes, hypertension, dyslipidemia, cirrhosis, cardiovascular disease, chronic kidney disease, thalassemia, and other factors such as asthma, COPD, and thyroid diseases), body mass index, previous upper intra-abdominal surgery, indications for surgery, and patients taking warfarin as an anticoagulant; operative time, operative findings of thickened gallbladder wall, presence of adhesions, incidental gallbladder perforation, and use of abdominal drain; and six postoperative variables: surgeons' status, type of procedure, use of preemptive analgesia, intraoperative antiemetic drugs, intraoperative cholangiogram, operative time, operative findings of thickened gallbladder wall, presence of adhesions, incidental gallbladder perforation. It was noticed from patients' medical records that patients were carefully selected for daycare surgery. Patients with comorbidities, previous upper intra-abdominal surgery, ultrasound findings of thickened gallbladder wall > 5mm were not offered day care surgery. For data collection a Performa was designed based on literature review. To assess psychological state, we applied Hospital anxiety and depression scale in Urdu.

All of the patients were operated under general anesthesia. All patients underwent standard four port laparoscopic cholecystectomy. Each patient got an IV antiemetic medicine at the conclusion of the procedure, which was a combination of dexamethasone 8 mg and metoclopramide 10 mg. Intravenous Ondansetron 10 mg was administered as a rescue treatment in the event of nausea and vomiting. The postoperative pain score was calculated using a numeric rating

scale (NRS) (0–10). A staff nurse gave the patient 0.5 to 2 mg/ kg of tramadol intravenously as a rescue analgesic if the NRS was more than 6. Oral analgesic was used to treat pain 2 hours postoperatively if the NRS was 3–5. In case of slight discomfort, use 1-2 paracetamol with tramadol (15 mg) tablets and repeat every 4–6 hours. In addition, some patients were given etoricoxib 120 mg orally two hours before surgery on the ward as a preemptive analgesic. Descriptive statistics were calculated for the sociodemographic variables, mean and standard deviation was found for continuous variables and frequency percentages for categorical variables.

RESULTS

A total 160 patients who consented for the participation in the study were included.

One hundred and thirty-one 131 (81.8 percent) of the 160 cholecystectomies could be sent home within 24 hours, whereas 29 (18 percent) required a lengthier hospital stay. In LS group, the postoperative stay range was 2 –19. Observation of postoperative fever (n = 3), surgery-related causes postoperative pain (n= 6), delayed oral diet = 1, retained abdominal drain = 4, and postoperative complications (n= 3). Bowel injury (n = 2) and septicemia (n = 1) were serious postoperative consequences resulting in more prolonged hospital stay. PONV (n = 2), medical causes (n = 3), and patient preference (n = 7) were among the reasons for the prolonged hospital stay. Patients who remained in the hospital for surveillance of postoperative fever were released without incident (Table-II).

DISCUSSION & CONCLUSION

During early times after introduction of daycare laparoscopic cholecystectomy many patients had to be retained overnight or longer for observation.⁹ Recent studies have shown a decrease in frequency of these unexpected overnight admissions after daycare laparoscopic cholecystectomies.¹⁰ Day care laparoscopic cholecystectomy requires careful evaluation of possible causes for deferred discharge.¹¹

Sr. #	Variable	Mean	Standard Deviation	Frequency (Percentages)
1.	Age 15-25 years 26-40 years 40-55 years 56 years and above	38.5	2	10(6.2%) 45(28.1%) 70(43.7%) 35(21.8%)
2.	Marital Status Unmarried Divorced Married	15 (9.3%) 25 (15.6%) 120 (75%)		
3.	Household income	30487 PKR	1685	
4.	No. of children 0-1 2-4 More than 4	4 17(10.6%) 125(78.1%) 18(11.2%)		
5.	Waiting time before surgery in months	8.5	3	
6.	Respiratory illness	5 (3.1%)		
7.	Diabetic, hypertensive or other comorbids	10(6.2%)		
8.	HADS Score of more than 8	9 (5.6%)		
9.	Had past mental illness	5 (3.1)		
10.	Time of operation in minutes	95	15	
11.	Delayed discharge	29 (18.1%)		

Table-I. The sociodemographic variables of patients

Sr. #	Reasons for long hospital stay	Frequency
1	Surgery related causes	
1.1	Postoperative pain	6
1.2	Delayed oral diet	1
1.3	Retained abdominal drain	4
2	Observation of postoperative fever	4
3	Postoperative nausea or vomiting	2
4	Medical causes	3
5	Postoperative complications	
5.1	Bowel injury	2
5.2	Septicemia	1
6	Patient preference	7

Table-II. Reasons for long hospital stay (n=29 patients)

Literature has presented a wide range of incidence for delayed discharge (4.6% to 37%) and a number of reasons have been suggested for this delay. These ranged from technically challenging cholecystectomies in difficult cases with per operative complications to postoperative problems like pain, nausea, vomiting to as simple a reason as patients' personal satisfaction.¹² In our study postoperative pain and patient satisfaction were the two main factors responsible for delayed discharge after LC.

While day care LC has been widely accepted as a safe procedure most surgical units keep it reserved for young healthy patients with no comorbidities. Most surgeons implement strict exclusion criteria when selecting patients for day care LC. Patients with obesity, diabetes, hypertension and falling into ASA 3 category for any of the comorbidities are not offered day care surgery. Therefore, number of factual day care cases is indeed still quite low.¹⁴ This approach ultimately has implications on cost of treatment with increased hospital stay. Day case LC has been shown to be safe, effective, and highly economical. The Cochrane review of six trials comparing day care LC with overnight admission cases, published in 2013 demonstrated similar results for both groups for postoperative pain scores on visual analogue scale, major complications, hospital readmission rate. However, patient related factors such as resuming normal daily activity or earlier return to work were unchanged in daycare LC. The review established that day care LC is as effective and safe as overnight stay LC.¹⁵

In their multivariate analysis Solodky et al, observed that patients who were older than 50 years, were operated in evening, had a longer procedure time, and patients sent to day care floors from operation theatre recovery room after 18:30 had a higher likelihood for unanticipated overnight admission after day case LC.¹⁶ In our study mean age of patients was 38.5 with 43.7% patients in age group 45 to 55. Patients with overnight admission after day case LC for pain and personal satisfaction were all in this age group.

Use of drain after LC is another reason for overnight admission after day care LC. Most centers have abandoned routine use of drain and it has been limited to challenging procedures with some intraoperative difficulty or complications. Patients are generally in hospital stay with while the drain is in place because of pain caused by the drain and reluctance to move with drain either due to pain or fear of dislodgement of drain.¹⁶⁻¹⁹ A recent meta-analysis of 12 randomized controlled trials involving 1939 patients randomized to drain (960) versus no drain (979) demonstrated lower morbidity in the no drain group (OR 1.97 (95% CI 1.26-3.10); P=0.003), lower wound infection (OR 2.35 (95% CI 1.22-4.51); P=0.010), and reduced pain 24 hours' post-surgery (Standardized Mean Difference 2.30 (95% CI 1.27-3.34); P<0.0001). However, they did not show any difference in the intra-abdominal collections and hospital stay.²⁰

CONCLUSION

While our study has a few limitations; it is a retrospective review with nonrandomized patient selection and a smaller sample size, we have established safety of day case laparoscopic cholecystectomy in select group of patients. Patients' personal satisfaction was the most common reason for their overnight admission after day case LC which was because of number of sociodemographic factors. While all these patients were ASA category I they required overnight stay because of non-availability of medical and community resources in their residential areas.

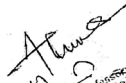

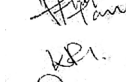

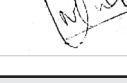
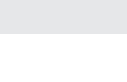
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