

# “A Study To Assess The Effectiveness Of Structured Teaching Programme On Knowledge Regarding Early Ambulation On Laparoscopic Cholecystectomy Patients In Apollo Speciality Hospitals, Jayanagar, Bangalore (India).”

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## **Abstract:**

Laparoscopic cholecystectomy is the treatment of choice for gall bladder stone disease. Difficult cholecystectomy is associated with serious complications and a high conversion rate. The aim of this study was to review the current strategies to manage difficult cholecystectomy.

Bile duct injuries were analysed in a prospective study of 1,250 cases of laparoscopic cholecystectomy. The aim of the study was to identify the incidence and causes of bile duct injuries in the course of laparoscopic cholecystectomy, and to recommend the possible ways to avoid this serious complication. All injuries were attributed to distortion of Calot's triangle and failure to clearly identify the anatomy. A recent history of acute cholecystitis, a history of jaundice, pancreatitis and repeated or technically difficult endoscopic retrograde cholangio-pancreatography (ERCP) were associated with local inflammatory changes that had possibly contributed to the distorted anatomy at Calot's triangle and consequently to the injury. All injuries were detected during surgery and immediately repaired. Major bile duct injuries were repaired by choledocho-enterotomy, while minor injuries were treated by simple sutures around the T tube in the common bile duct. All patients were asymptomatic with normal liver function tests on follow-up for a period up to 3 years after surgery. **Conclusions:** The incidence of bile duct injuries in laparoscopic cholecystectomy is comparable to open surgery. Patients with a clinical history of acute cholecystitis, or a recent history of jaundice and repeated ERCP should be considered for operative cholangiography in order to help reduce the chances of bile duct injuries.

## **Materials and Methods:**

A Pre-experimental and one group pretest and posttest design was used to assess the knowledge on early ambulation of 50 patients on Laparoscopic Cholecystectomy. A structured questionnaire was developed to assess the knowledge of the patients. The study started with the pretest followed by structured teaching program and posttest.

## **Results:**

The post test showed a significant improvement in the knowledge regarding Early Ambulation of laparoscopic Cholecystectomy patients. In the pretest 20 patients had good level of knowledge and 30 had average level of knowledge. The post test revealed that 40 patients had Very good knowledge and 10 had good level of knowledge. Paired t-test value of knowledge and practice was 2.06 and 1.47 respectively, which was higher than the table value 2.66\* at  $p < 0.05$  hence the structured teaching program was found to be effective in improving the knowledge of the patients.

**Conclusion:** Patients acquired knowledge laparoscopic cholecystectomy. Also have an improvement in diet, exercise to prevent other complications.

**Keywords:** Structured Teaching material

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## **I. Introduction**

Laparoscopic cholecystectomy was first introduced by Muhe in 1986, and has now evolved to the point where it has replaced the open technique in many medical centres around the world. Today, laparoscopic cholecystectomy, rather than the open technique, is considered as the treatment of choice for gallstone disease<sup>1</sup>.

Cholecystectomy is the most common intra-abdominal surgical procedure performed in the United States. Laparoscopic removal is now the procedure of choice when cholecystectomy is indicated. However, newer, less invasive techniques, such as natural orifice transluminal endoscopic surgery (NOTES) and single incision laparoscopic cholecystectomy (SILC), are currently being investigated as alternatives to the traditional 4-port laparoscopic removal. Safety data and definitive benefits of these less invasive procedures are lacking. This report presents the outcomes of 1000 consecutive cholecystectomies with an emphasis on operative complications. Results similar to those presented in this report should be the goal in any large series of patients when cholecystectomy is performed using one of these newer techniques<sup>2</sup>.

Perceived advantages of laparoscopic cholecystectomy, compared with the open technique, include earlier return of bowel motility, less post-operative pain, better cosmetic result and shorter hospital stay resulting in equal or lower hospital costs, as documented by various randomized control trials<sup>3</sup>.

At the university hospital of Patras, we performed our first laparoscopic cholecystectomy on September 1992. Since then, a total of 1220 laparoscopic cholecystectomies have been performed. As our surgeons are increasingly familiar with it, laparoscopic cholecystectomy has become the most common operation in our daily practice<sup>4</sup>.

Bile duct injuries were analysed in a prospective study of 1,250 cases of laparoscopic cholecystectomy. The aim of the study was to identify the incidence and causes of bile duct injuries in the course of laparoscopic cholecystectomy, and to recommend the possible ways to avoid this serious complication<sup>5</sup>.

#### **Objectives Of The Study:**

- To assess the pre-test knowledge regarding early ambulation on laparoscopic cholecystectomy.
- To assess the post-test knowledge regarding early ambulation on laparoscopic cholecystectomy.
- To evaluate the pre-test and post-test knowledge on early ambulation on laparoscopic cholecystectomy.

#### **Hypothesis Of The Study:**

- H1 - There will be a significant difference in pre-test and post-test knowledge scores early ambulation on laparoscopic cholecystectomy
- H2- There will be a significant difference in post-test knowledge scores early ambulation on laparoscopic cholecystectomy
- H3 – There will be a significant association between pre-test and post-test knowledge score.

#### **Need For The Study:**

Most gallstones develop inside your gallbladder, so removing your gallbladder significantly reduces the chance that you'll have any more. If gallstones have brought you to the hospital once, they're likely to do so again. Cholecystectomy is the only treatment that can reliably prevent this. Most people feel it's easier to have a planned procedure than to expect to have repeat episodes of gallstone emergencies<sup>6</sup>.

A classic finding for gallbladder disease is right upper quadrant or epigastric abdominal pain. The pain typically has an onset 30 minutes to two hours after consumption of fatty foods. The pain can last from one to two hours, up to more than 24 hours. Pain lasting more than 24 hours is associated with a secondary infection known as acute cholecystitis. Pain radiates from the right upper quadrant to the right flank, and occasionally to the right shoulder due to sympathetic innervation. Associated symptoms include but are not limited to nausea, vomit (bilious), fever, chills, and diarrhea. Less specific symptoms may be experienced like indigestion, GERD-like symptoms, PUD symptoms, and dyspepsia. Earlier in the disease process pain will be intermittent and associated with oral intake of fatty foods. As the process progresses, pain may become more frequent and occur regardless of oral intake<sup>7</sup>.

## **II. Material And Methods**

#### **Study Design:**

Pre-experimental and one group pretest and posttest design. And study conducted at Apollo Speciality Hospitals, Jayanagar, and Bangalore from 05.01.2024 to 05.06.2024. Study conducted for 50 Laparoscopic Cholecystectomy patients. The sample size was collected from the hospitals inpatients among who are all underwent Laparoscopic Cholecystectomy and interested in the study. And Subjects & selection method: **Non probability sampling** pre-test and posttest method was applied to select the research material

#### **Inclusion Criteria-**

Post Laparoscopic Cholecystectomy patients were included in the study:

Those who are:

1. Able to read, write and understand English.

2. Admitted in the Apollo Speciality Hospital, Jayanagar, Bangalore.
3. Post Laparoscopic Cholecystectomy first day patients.

**Exclusion Criteria-**

1. Not willing to participate in the study.
2. Not available at the time of data collection.
3. Laparoscopic Cholecystectomy patients having any medical discomfort or any complication.
4. Patient age below 20 year

**Procedure methodology:**

A structured questionnaire was used to collect data regarding patient’s knowledge on Laparoscopic Cholecystectomy. The questionnaire consists of self-declaration for study, Type of surgery. A multiple choice questionnaire used to assess the knowledge. It consist of 10 questions in which each question carries 1 mark. Handwritten questions were given to patients. Questions includes the parameter such as Knowledge on Gall Bladder, Laparoscopic Surgery and Gall Stones. A randomly selected 50 patients under inclusion criteria had done the pretest for assessing knowledge. A structured Teaching Programme were conducted to for patients in regard to improve their knowledge on Laparoscopic Cholecystectomy. Post-test given to the patients to assess knowledge on Laparoscopic Cholecystectomy had conducted using same questionnaire checklist on the same patients on the same day.

**III. Result**

After successfully giving information to the patients who participated in the study, their knowledge level has improved by showing difference in the parameters which is statistically significant. Their knowledge has been improved which is evident in posttest with significant difference in the parameters. Table 1 shows demographic variables with percentage distribution according to (1) Gender, 17 (34%) of them were Male, 33(66%) of them were Female. (2) Age in years, 6 (12%) Patients were to 21-40 Years, 37 (74%) patients were 41-60 years of age and 7 (14%) patients were more than 61 years of age. In regard to the (3) Religion- 15(30%) were Hindu, 22 (44%) were Muslims, 12 (24%) were Christians and 1 (2%) were Jain. (4)Education - 8 (16%) patients were completed PUC, 20 (40%) patients were completed Undergraduate and 22 (44%) patients were completed the Post-graduation. In regard to the (5) Occupation- 3 (6%) patients were doing Govt job, 30(60%) patients were doing Private Job, 17(34%) were doing Business.

**Table1 - Demographic variables with percentage distribution**

SI No	Variables	f	%
1	<b>Gender</b>		
	Male	17	34
	Female	33	66
2	<b>Age In Years</b>		
	21-40 years	6	12
	41-60 years	37	74
	61 and above	7	14
3	<b>Religion</b>		
	Hindu	15	30
	Muslim	22	44
	Christian	12	24
	Jain	1	2
4	<b>Education</b>		
	PUC	8	16
	Undergraduate	20	40
	Post-graduate	22	44
5	<b>Occupation</b>		
	Govt Job	3	6
	Private Job	30	60
	Business	17	34

Table no 2 shows the knowledge level of the Cholecystectomy patients. In the pretest 30 (60%) patients had average level of knowledge and 20(40%) had Good knowledge. Whereas, in posttest 40(80%) patients had Very Good knowledge and 10(20%) had good level.

**Table 2-The level of knowledge in Pretest and Posttest**

Level of Knowledge	Very Good		Good		Average	
	Frequency (n)	Percentage (%)	Frequency (n)	Percentage (%)	Frequency (n)	Percentage (%)
Pre-test	0	0	20	40%	30	60%
Post-test	40	80%	10	20%	0	0

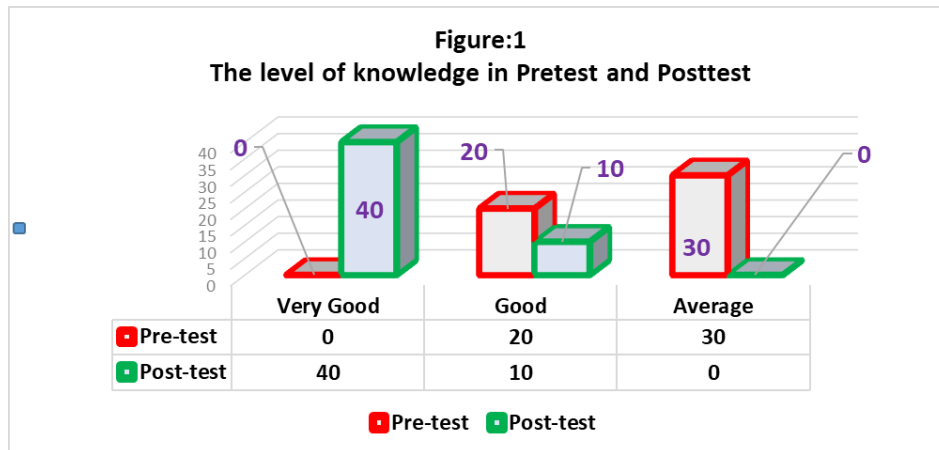


Table no 3 shows Paired t-test value of knowledge was 11.9 and 18.2 respectively, which was higher than the table value 0.699 at  $p < 0.05$  hence the structured teaching program was found to be effective in improving the knowledge of the cholecystectomy patients

Knowledge Score	Max score	Cholecystectomy Patients			Paired 't' test
		Mean $\bar{x}$	Mean Percentage $\bar{x}$ (%)	SD( $\sigma$ )	
Pre-test	10	6.53	21.79	1.83	2.66
Post-test	10	8.4	28.31	1.45	
Enhancement	10	1.87	6.52		

#### IV. Discussion

This chapter deals with the discussion, based on the formulated objectives of the study and hypothesis. The study was designed to assess the effectiveness of Structured Teaching Programme on knowledge on laparoscopic Cholecystectomy among patients in Apollo Speciality hospitals, Jayanagar, Bangalore. Eighty six percent participants though thought that they had adequate knowledge regarding laparoscopic Cholecystectomy, but most of them were not adhering to education. There is a need of continued education. We believe that the introduction of standardized routines and training, combined with an exchange of the existing paper-based referral management system with an electronic system for managing referrals, could increase safety in the pre analytical process, with positive effects on patient knowledge. Given the importance of exercise in patient care, a more extensive study covering other hospital wards and primary health-care centres is needed.

Most evidence point to the safety and feasibility of conservative treatment (clinical follow-up) of asymptomatic cholelithiasis. However, in post-cardiac transplant patients and those with biliary microlithiasis with low preoperative surgical risk, a prophylactic cholecystectomy is recommended. To establish these recommendations, more studies with better levels of evidence must be conducted.

#### V. Conclusion

Not having the knowledge on laparoscopic cholecystectomy is a common problems receiving from the inpatient. Hence the patient’s knowledge on differentiation of cholecystitis, Choledo-choolithiasis and Cholelithiasis, has improved after implementing a structured teaching programme. Now there is huge reduction related to knowledge gap or miscommunication.

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