

A Comparative Study between Conventional Cholecystectomy and Laparoscopic Cholecystectomy

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Abstract: With Enhancement of technical skill and equipments in minimally invasive procedures Laparoscopic Cholecystectomy has become more popular in comparison to open cholecystectomy. This study was done to determine the advantages and disadvantages of laparoscopic cholecystectomy over conventional cholecystectomy in surgical management of gall stone disease. Laparoscopic surgery is rapidly becoming popular alternative to traditional operative procedure for a variety of diseases. Endoscopic surgery is associated with diminished pain and cosmetic disfigurement as well as quicker resumption of normal activities has accelerated its acceptance by surgeons. This is exemplified by the recent introduction of laparoscopic cholecystectomy. The present study shows the comparison between conventional cholecystectomy and laparoscopic cholecystectomy.

Keywords: Conventional Cholecystectomy, Laparoscopic Cholecystectomy.

INTRODUCTION

Diseases of the biliary tract have plagued the human race since ancient times. The earliest known gall stones date back to 21st egyptian dynasty discovered in 1909. For a long time open Cholecystectomy was considered the gold standard for management of symptomatic gall stone disease. Laparoscopic Cholecystectomy was done for the first time in India by udwadia in Bombay 1990 [1-3].

Patients now usually prefer to have gall bladder removal by this new technique in anticipation of reduced postoperative discomfort, almost invisible scars and a shorter postoperative hospital stay.

For standardisation of laparoscopic approach it is necessary for this procedure to become a standard part of residency training in surgery for a surgeon to become competent in this technique in this study we will compare the merits and demerits of laparoscopic cholecystectomy over open approach so as to provide better surgical management to patients.

METHODS

After confirmation of diagnosis and attaining fitness for surgery patients were explained both surgical procedures.

A sample of total 50 patients with symptomatic gall stone disease were subjected to clinical, biochemical and radiological examinations and consent was taken from the patients and family members for the procedure

Procedure –a. Laparoscopic cholecyctectomy

1. Surgeon on patients left with monitor on the right
2. Pneumoperitoneum achieved

3. Ports –

- 10mm surgiport is placed through umbilicus for illuminating the peritoneal cavity
- 5mm surgiport is inserted in right anterior axillary line at level of umbilicus
- 5mm surgiport is inserted in midclavicular line 2cm below right costal margin

4. Careful blunt dissection is done to clear away loose areolar tissue form the cystic duct and artery. Clips are applied over the cystic duct and then it is divided. Dissection between liver and gall baldder is done with utmost care. Once dissection is complete the gall bladder is grasped via gall bladder grasping forceps at cystic duct end and pulled out.

Conventional Cholecystectomy

Abdomen opened by kochers incision. After exploration and retraction of surrounding viscera cholecystectomy and was performed in conventional

manner. Cystic artery is ligated and then cystic duct by i/o silk suture [4].

RESULTS & OBSERVATIONS

Table-1: Post-Operative Complaints

	Laparoscopic Chole	Conventional Chole	P-Value
Pain	100	100	.213
Nausea And Vomiting	88	96	
Fever	12	24	
Post Prandial Belching	44	48	

Table-2: Duration of Surgery

S.No	Duration In Mts		P-Value
	Laparoscopic Chole	Conventional Chole	.287
1	120	90	
2	150	90	
3	150	120	
4	100	60	

Table-3: Complications

Complication	Laparoscopic Chole	Conventional Chole	P-Value
Bile Leak	12	8	.270
Pain Upto 12hrs	92	32	
2-3 Days	8	64	
Wound Infection	36	0	

Table-4: Mobilisation

S.No	Mobilisation Out Of Bed (Hrs)		P-Value
	Laparoscopic	Conventional	.259
1	12	48	
2	8	36	
3	6	48	
4	12	32	
5	10	40	

Table-5: Duration of Hospital Stay

S.No	Duration Of Hospital Stay (Days)		P-Value
	Laparoscopic	Conventional	.277
1	5	10	
2	3	8	
3	4	9	
4	5	12	
5	3	10	

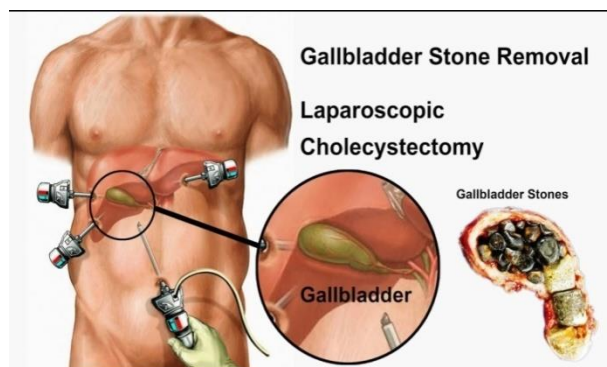


Fig-1: Gallbladder Stone Removal

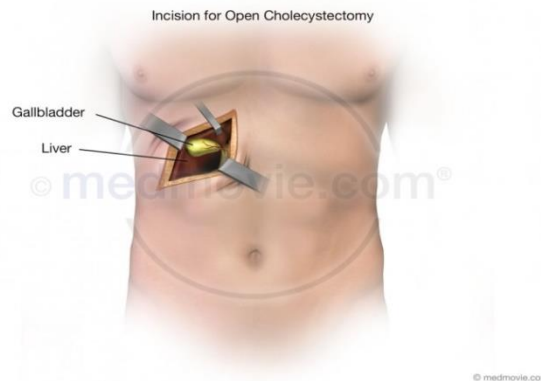


Fig-2: Incision for Open Cholecystectomy

DISCUSSION

A Comparative study of 25 cases of laparoscopic cholecystectomy and 25 of conventional [5, 6] procedure was carried out in the dept of surgery, M.Y. Hospital and M.G.M medical college, indore.

COMPLAINTS –

- Pain in right hypochondrium was the complaint in all patients
- Nausea and vomiting was more common in conventional procedure
- Post prandial belching/fullness more common in conventional procedure
- Fever more commonly associated with conventional procedure

DURATION OF SURGERY

Was longer in laparoscopic approach as compared to conventional approach

- laparoscopic – 1.5 – 2.5 hrs
- conventional – 1- 1.5 hrs

COMPLICATIONS: like pain, biliary leak and wound infection were more common in conventional approach. No cases in laparoscopic approach suffered from wound infection [7].

MOBILISATION – Mobilisation of patients was notably early in patients with laparoscopic approach.

DURATION OF STAY – was notably longer in patients with conventional approach.

SCAR – problems like painful scar, hypertrophic scar was present in 36% patients in conventional approach. This problem was not seen in laparoscopic approach.

CONCLUSION

In the era of minimally invasive surgery laparoscopic cholecystectomy is fastly replacing conventional surgery albeit with some precautions and contraindicstions [8, 10].

In our study we inurred that the advantages of laparoscopic cholecystectomy over conventional

procedure although present but don't assume statistically significant values indicating that we are evolving and require more training in minimal invasive procedures like laparoscopy [9].

REFERENCES

1. Allan A, Cooper MJ, Leaper DJ. A new absorbable ligating clip for use in cholecystectomy. *Journal of the Royal College of Surgeons of Edinburgh*. 1984 Jan;29(1):53-4.
2. Barkun JS, Barkun AN, Meakins JL. Laparoscopic versus open cholecystectomy: the Canadian experience. *The American journal of surgery*. 1993 Apr 1;165(4):455-8.
3. Bass EB, Pitt HA, Lillemoe KD. Cost-effectiveness of laparoscopic cholecystectomy versus open cholecystectomy. *The American journal of surgery*. 1993 Apr 1;165(4):466-71.
4. Bass EB, Pitt HA, Lillemoe KD. Cost-effectiveness of laparoscopic cholecystectomy versus open cholecystectomy. *The American journal of surgery*. 1993 Apr 1;165(4):466-71.
5. Berci G, Sackier JM. The Los Angeles experience with laparoscopic cholecystectomy. *The American journal of surgery*. 1991 Mar 1;161(3):382-4.
6. Bernard HR, Hartman TW. Complications after laparoscopic cholecystectomy. *The American journal of surgery*. 1993 Apr 1;165(4):533-5.
7. Bernard HR, Hartman TW. Complications after laparoscopic cholecystectomy. *The American journal of surgery*. 1993 Apr 1;165(4):533-5.
8. Bosch F, Wehrman U, Saeger HD, Kirch W. Laparoscopic or open conventional cholecystectomy: clinical and economic considerations. *European Journal of Surgery*. 2002 Aug 1;168(5):270-7.
9. Cameron JC, Gadacz TR. laparoscopic cholecystectomy *ann surg* 213:1-2; 1991.
10. Chau CH, Tang CN, Siu WT, Ha JP, li MK. *Hong kong medical journal*. 8(6):394-9; 2002 Dec.