ORIGINAL RESEARCH PAPER

Surgery

PREOPERTAIVE EVALUATIONS AS A PREDICECTOR FOR ASSESSMENT OF DIFFICULTY IN LAPAROSCOPIC CHOLECYSTECTOMY

KEY WORDS: Laparoscopy, Cholecystectomy, Preoperative evaluations, Specificity, Sensitivity

Gupta Neelkamal* Assistant Professor, Department of Surgery, Mahatma Gandhi. Medical College & Hospital, Jaipur, Rajasthan, India *Corresponding Author

Sharma Brijesh Kumar Professor & Head, Department of Surgery, Mahatma Gandhi. Medical College & Hospital, Jaipur, Rajasthan, India

ABSTRACT

INTRODUCTION: Laparoscopic cholecystectomy is the most common abdominal procedure performed in Western countries. Preoperative procedures including ultrasound can be used as a predictor of difficulty level during surgical procedure in more than 50% of cases. Thus this present study was planned to use various preoperative majors including ultrasound for calculating a scoring system to assess the difficulty in laparoscopic cholecystectomy.

MATERIAL AND METHOD: The present study was conducted on 50 patients of gall bladder diseases on either sex in Department of Surgery, Mahatma Gandhi Medical College & Hospital, Jaipur. A scoring system was developed to find out difficulty level using preoperative findings and compared with difficulty occur during actual surgical procedure. Sensitivity and specificity was calculated.

RESULT AND DISCUSSION: The number of cases predicted to be difficult/ very difficult on preoperative evolutions were compared with difficulty occurred during actual procedure and observed that sensitivity and specificity of preoperative evolutions as 85.7% and 86.2% respectively.

CONCLUSION: It is concluded that preoperative evaluations are a good predictor of difficulty in laparoscopic cholecystectomy in majority of cases and should be used as a screening procedure.

INTRODUCTION:

Cholecystectomy in the commonest operation of biliary tract today. Laparoscopic cholecystectomy offers a cure for gallstones with a minimally invasive procedure, minor pain, least scarring and early return to full activity. Preoperative ultrasound is a useful screening investigation in the candidates undergoing laparoscopic cholecystectomy because operative difficulty can be well predicted by ultrasound in more than 50% of cases. Thus this present study was planned to use various preoperative majors including ultrasound for calculating a scoring system to assess the difficulty in laparoscopic cholecystectomy.

AIMS & OBJECTIVES:

To evaluate preoperative scoring system findings of gall bladder and correlate these aspects with surgical videoscopic findings.

MATERIAL & METHODS:

The present study conducted on 50 patients of both sex with gall bladder disease requiring elective laparoscopic cholecystectomy in the Department of General Surgery, Mahatma Gandhi Medical College, Jaipur. The selected patients were then informed about the procedure and written informed consent was taken. A detailed history was taken from every patient and ultrasound was also taken both in supine as well as recline position, a day prior to surgery. From patient history and findings of ultrasound a scoring system was calculated:

S.No	History	Score		Max Score
1	Age	<50 yrs (0)	>50 yrs (1)	1
2	Sex	Female (0)	Male (1)	1
3	History of Hospitalization	N (0)	Y (4)	4
4	BMI	<25 (0)	25-27.5 (1), > 27.5 (2)	2
5	Abdominal scar	N (0)	Infra umbilical (1) Supra umbilical (2)	2
6	Palpable gall bladder	N (0)	Y (1)	1
7	Ultrasound findings:			
a.	Wall thickness	Thin (0)	Thick > 4mm (2)	2
b.	Pericholecystic collection	N (0)	Y (1)	1
c.	Impacted stones	N (0)	Y (1)	1

***Max Score = 15**

According to above scoring system, scores were calculated for every patient and difficulty was assessed and compared with actual difficulty occurred at the time of Laparoscopic cholecystectomy. After calculating the score, patients were subdivided into following groups:

1) Easy (0-5)
2) Difficult (6-10)
3) Very difficult (11-15)

RESULT & DISCUSSION:

After calculating the score, the number of cases predicted to be difficult/ very difficult on preoperative evolutions were 22 (44%) patients out of which 18 (36%) were difficult/ very difficult or laparoscopic surgery, while 4 (8%) cases were easy. The cases predicted to be easy on preoperative evolution were 28 out of which 25 cases were actually easy while 03 cases turn out to be difficult / very difficult on laparoscopic surgery. This results in sensitivity and specificity of preoperative evolutions as 85.7% and 86.2% respectively.

Nachnani and Supe also analyzed clinical and ultrasonographic factors that allowed preoperative prediction of difficult laparoscopic cholecystectomy and suggested that these findings help in prediction of difficulty in laparoscopic cholecystectomy.

Carmody etal showed that there is no correlation between the preoperative evaluations and difficult laparoscopic cholecystectomy because of increasing surgical experience; many of intraoperative problems encountered were well managed.

SUMMARY & CONCLUSION:

In our study, a strong statistical correlation was found between preoperative evaluation prediction and difficult laparoscopic cholecystectomy. Thus it can be concluded that preoperative evaluation is a good predictor of difficulty in laparoscopic cholecystectomy in majority of cases and should be used as a screening procedure.

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