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COMPLICATIONS OF LAPAROSCOPIC CHOLECYSTECTOMY AND IT'S RISK FACTORS : OUR EXPERIENCE FROM A RETROSPECTIVE ANALYSIS

Surgery

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ABSTRACT

AIM: The aim of this study was to evaluate the intraoperative and postoperative complications of laparoscopic cholecystectomy and the rate of conversions.

MATERIAL AND METHODS: Retrospective study of hospital records of 60 patients who had laparoscopic cholecystectomy were analyzed from JULY-16 to JAN-17 using odds's ratio and p-value for proving statistical significance.

RESULTS: There were total 12 complications. Iatrogenic perforations of a gallbladder was the most common complication 4(6.6%),Among the postoperative complications (POC), the most common one is bile leaks 3(5%) and 5 cases converted to open surgery

The increased incidence of complications was noted in patients with ultrasonographic finding of gallbladder empyema and increased thickness of the gallbladder wall > 3 mm in 3 patients, as well as in patients with acute cholecystitis in 4 patients that was confirmed by pathohistological analysis. High incidence of complications was noted in patients with elevated white blood cell count in 8 patients and CRP in 8 patients.

CONCLUSION: Adopting laparoscopic cholecystectomy as a new technique for treatment of cholelithiasis, introduced a new spectrum of complications. Major biliary and vascular complications are life threatening, while minor complications cause patient discomfort and prolongation of the hospital stay. It is important to recognising complications during the surgery so they are taken care of in a timely manner during the surgical intervention. Planned Conversion should not be considered a complication.

KEYWORDS

laparoscopic choleycystectomy, Complications,Conversion to open surgery

INTRODUCTION:

Philip Mouret in 1987 was the first to remove the gall bladder successfully through unmagnified mechanical rigid pipe without doing laparotomy.(1) Laparoscopic Cholecystectomy has replaced open cholecystectomy for symptomatic gall stone disease. It decrease post opeative pain, encourages early oral intake, reduction in wound complications, post operative ileus etc.[(1)]

Adopting laparoscopic cholecystectomy in a treatment of symptomatic cholelithiasis introduced associated intraoperative and postoperative complications.(2) Minor complications (biliary and non-biliary) are usually treated conservatively. Major complications (biliary and vascular) are life threatening and increase mortality rate, therefore creating the need for conversion to open surgical approach in order to treat them. The frequency of complications associated with laparoscopic cholecystectomy varies from 0.5 to 6%[(2)]

MATERIAL AND METHODS:

We retrospectively analysed medical records of 60 patients who were diagnosed with cholelithiasis and had laparoscopic cholecystectomy in smt. Shardaben general hospital,saraspur, in the time period between JULY-16 to JAN-17. diameter. We used a standard four-port technique in all surgical interventions. The analysis included operative protocols, anesthesiology records, the medical history which included the history of the disease, documented laboratory findings and imaging results. We analysed the type and frequency of intraoperative and postoperative complications, as well as factors that increase the risk for development of complications. An ultrasonographic exam was performed 24 hours before each surgery.The patients were divided into groups according to their age, gender, BMI, white blood cell count.All surgically extracted gallbladders were examined by pathophysiologists in order to confirm the diagnosis.

In order to test the differences between the groups and correlation between the presence of the risk factors and outcomes of the surgical interventions regarding the complications, we used odd's ratio and p value.

RESULTS AND DISCUSSION

Out of the 60 patients in the study, 25 were male(42%) and 35 were female(48%), and median age was 48 years. There were 8(13%) patients with intraoperative complications, most common complications noted were; iatrogenic perforation of gall bladder in 4(7%), bleeding from the tissue adjacent to gall bladder3(5%), gall stone spilt into peritoneal cavity 2(4%). Intraoperative bleeding from cystic artery occurred in 1, this complication caused conversion to open procedure. Biliary tree injury, a major complication occurred in only [1].

There were 4 patients with postoperative complication; bile leaks through drain >50-100 ml/24hr in 3 patients, surgical wound infection in 2 patients, bleeding from abdominal cavity >100ml/24hr There were total 5 conversion to open procedure; most common was adhesions in calot's triangle3(6%), empyema of gall bladder in 1, bleeding from cystic artey in [1].

In addition ultrasonographic findings of empyema of gall bladder, gall bladder wall thickness >3 mm is significant factor for complication and conversion. Pathological of surgically extracted gall bladder with the ddiagnosis of acute cholecystitis was also significant for complication and conversion.

Male gender, age, presence of systemic inflammatory response syndrome (defined by elevated inflammatory parameters- elevated white blood cell count and C- reactive protein), acute inflammation of the gallbladder and preoperative ultrasonographic finding of increased thickness of the gallbladder wall, and/or presence of gallbladder empyema, are all factors that increase risk for possible development of intraoperative laparoscopic complications Various complications and its frequency

INTRA-OP COMPLICATIONS	IATROGENIC PERFORATION OF GB	4(6.6%)
	GALL STONE SPILL IN PERITONEUM	2(3.33%)
	BLEEDIND FROM ADJACENT TISSUE	3(5%)
	BLEEDING FROM CYSTIC ARTERY	1(1.6%)
	BILLIARY TREE INJURY	1(1.6)
POST-OP COMPLICATIONS	SURGICAL PORT SIDE INFECTION	2(3.33%)

	BLEEDING(>100ML/24HR)	1(1.6%)
	BILE LEAK(>50ML/24HR)	3(5%)

Risk factors likely associated with complications

		IOC(intraoperative complication)	POC(post operative complication)	ROC(rate of conversion to open surgery)
Age	>65	6	3	4
	<65	2	1	1
Gender	M	3	2	2
	F	5	2	3
WBC	>10K	5	3	4
	<10K	3	1	1
CRP	>5	6	2	2
	<5	2	2	3
CHOLECYSTITIS	ACUTE	6	2	4
	CHRONIC	2	2	1
USG:GB WALL THICKNESS	>3MM	5	2	3
	<3MM	3	2	1

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