EXPERIENCE OF LAPAROSCOPIC SURGERY IN PREGNANT PATIENTS SAFETY OF LAPAROSCOPIC SURGERY IN PREGNANT PATIENTS

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ABSTRACT

OBJECTIVES: Laparoscopic surgery is well established in general patients but its safety and efficacy in pregnant patients is still debated especially in emergency situation.

METHODS: This study was conducted at Rai Medical Complex, Sargodha as prospective single centre study for all pregnant patients in need of laparoscopic appendectomy and cholecystectomy for acute appendicitis and acute cholecystitis respectively from April 2009 to December, 2011. After routine preoperative assessment, all were operated under general anesthesia with antibiotic cover, four port technique for lap. chole. And three port technique for lap. appendectomy were used. Peri-operative morbidity and mortality for the mother and fetus were evaluated at Rai Medical Complex, Sargodha from 2009 to 2011.

RESULTS: 32 patients underwent laparoscopic procedures. 18 had laparoscopic cholecystectomy and 14 laparoscopic appendectomies. No maternal death and no loss of fetus.

CONCLUSION: Laparoscopic cholecystectomy and appendectomy appears to be as safe as in open surgery in pregnant women.

INTRODUCTION

The advantages of laparoscopic surgery are similar for pregnant and non pregnant women but the procedure had been avoided due to suspected harm to fetus. Non obstetric general surgical procedures are required approximately one in 635 pregnancies, appendicitis and cholecystitis most common indications^{1,4}. The incidence of acute appendicitis during pregnancy is similar to that of non pregnant women⁵. Cholecystectomy is needed in approximately 45% of pregnant patients who presents with acute cholecystitis. Pregnancy remained a relative contraindications for laparoscopic surgery, despite this, use of laparoscopic surgery for treatment of acute appendicitis and acute cholecystitis in pregnant ladies has increased^{4,6,7}.

We hypothesize that laparoscopic management of appendicitis and cholecystitis is safe to both mother and fetus.

MATERIAL AND METHODS

This study was conducted at Rai Medical Complex, Sargodha as prospective single centre study for all pregnant women in need of

laparoscopic appendectomy and cholecystectomy. Performa was used to collect information regarding past medical and surgical history, obstetric history, presenting complaints operative reports and clinical reports and discharge status. Fetal monitoring was done pre and post operatively per obstetric guidelines.

Pre-operative assessment was done; this includes complete blood count, urine routine examination, blood sugar, serum creatinine, viral markers, abdominal ultrasonography and liver function tests in patients of cholecystitis. ECG and x-rays chest PA view was done in patients where indicated after covering the abdomen and pelvis with lead apron.

Every patient had prophylactic antibiotic, injection zinacef 1.5 mg just prior to induction of anesthesia and two further doses at 8 hours interval in case of chronic cholecystitis and therapeutic dose of antibiotic in case of acute cholecystitis. All patients having acute appendicitis had three doses of antibiotic injection ceftriaxone 1g and injection metronidazole at 8 hours interval. Patients having

perforated appendicitis received therapeutic doses of antibiotics. All patients were operated under general anesthesia, 4 ports technique for laparoscopic cholecystectomy and 3 port technique of laparoscopic appendectomy.

The average age range of patients were given in the table.

Patients	Age range	Average age
7	26-28 years	30 years
12	28-30 years	
8	30-32 years	
5	32-34 years	

RESULTS

A total 32 pregnant patients underwent laparoscopic surgery 18 have laparoscopic cholecystectomy and 14 underwent laparoscopic appendectomy. Majority of laparoscopic surgery in pregnant patients were performed in 1st and 2nd trimester of pregnancy. Two laparoscopic cholecystectomies were done at 32 weeks of pregnancy. No open conversion was made in either case.

Total No.	Appendectomy	%age	Cholecystectomy	%age
32	14	44%	18	56%

Of 32 patients 22 were delivered in hospital, Rai Medical Complex, Sargodha, 20 have normal simple vaginal deliveries and 02 patients had lower segment caesarian section i.e. 8 ± 2 . 10 patients did not return back for delivery with us. The average age of patients who went for laparoscopic procedures was 30 ± 4 . No maternal and fetal motility.

Number of patients	1 st trimester	2 nd trimester	3 rd trimester
32	18	12	2

DISCUSSION

Laparoscopic surgery is procedure of choice for many surgeries. The advantages of laparoscopic surgery are;

Decrease hospital stay,
Decrease post operative pain,
Decreased chances of ileus and vomiting,
Decreased use of IV fluid and medicines,
Early return to work,
Decrease chances of wound sepsis,

Decrease chances of incisional hernias,
Cosmetically more acceptable,
Decrease incidence of thromboembolism phenomenon⁸,
Decrease chances of direct contact of blood in HIV, HbSag and anti HCV positive patients to surgeons.

Laparoscopic procedures performed in pregnant patients showed that laparoscopic cholecystectomy and appendectomy were as safe and effective as their respective open procedures. This co-relates with previous reports in literature. Affleck et al reported 67 laparoscopic operations safely performed in pregnant women with no incidence of fetal loss, uterine injury or birth defects⁹. They concluded that laparoscopic surgery during pregnancy is safe for both mother and fetus. The risk of developing acute appendicitis does not increased by pregnancy but incidence of perforation is significantly higher than in general population. In our series, 04 patients had perforation (04/14) i.e. 25%. Dietrich et al. described the incidence of perforated appendicitis in pregnancy to be as higher as 43% compared with 4-19% in general population¹⁰. The increased incidence of perforation in pregnancy is due to delay in diagnosis and management. No fetal loss or premature birth in our series as compared to MG Corneille et al where 04 premature birth occurred out of 30 laparoscopic procedures¹¹.

CONCLUSION

Laparoscopic surgery during pregnancy is as safe as in non pregnant ladies and pregnant women can enjoy benefits and advantages laparoscopic cholecystectomy and appendectomy.

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