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Original Research

Open versus minimal invasive surgery inruptured tubal ectopic pregnancy

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ABSTRACT:

Background: An ectopic pregnancy occurs when a fertilised ovum implants outside the normal uterine cavity. To assess ruptured tubal ectopic pregnancy managed by open and minimal invasive surgery. Methods: The present study comprised of 78 cases of ruptured tubal ectopic pregnancies which were divided into 2 groups of 39 each. Group I patients underwent laparoscopy and group II laparotomy. Parameters such as gravida, parity, previous spontaneous loss, previous MTP, Hb at admission, period of gestation, total blood loss, haemoperitonium and postoperative parameters blood loss, blood requirement and duration of hospital stay were recorded. Results: The mean gravida was 3 in group I and 4 in group II, parity was 1 in group I and 2 in group II, previous spontaneous loss was seen in 7.2 and 15.6, previous MTP was seen in 9.4 in group I and 11.5 in group II and Hb at admission was 7.2 gm% in group I and 8.5 gm% in group II. The presentation was acute abdomen in 30 in group I and 28 in group II and incidental 9 in group I and 11 in group II. Period of gestation was <6 weeks seen in 15 in group I and 18 in group II, 6-10 weeks 16 in group I and 12 in group II and >10 weeks 8 in group I and 9 in group II. Total blood loss was <500 ml 12 in group I and 13 in group II, 500-1000 ml 16 in group I and 13 in group II and >1000 ml 11 in group I and 12 in group II. Hemoperitoneum was seen in 24 in group I and 15 in group II. Location was ampulla in 11 and 13 in group I and group II, cornual in 10 and 8, fimbrial in 6 and 7 and interstitial in 13 and 11. No of PRBC transfusions was 4 and 5.6 and duration of hospital stay was 4.2 days and 7.6 days in group I and II respectively. Conclusion: Laparoscopy was advantageous over laparotomy in terms of shorter hospital stay and speedy recovery. Key words: Laparoscopy, tubal ectopic pregnancies, Gestation

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INTRODUCTION

An ectopic pregnancy occurs when a fertilised ovum implants outside the normal uterine cavity. It is a common cause of morbidity and occasionally of mortality in women of reproductive age. The aetiology of ectopic pregnancy remains uncertain although a number of risk factors have been identified.¹ Its diagnosis can be difficult. In developed countries, diagnosis relies on a combination of ultrasound scanning and serial serum beta-human chorionic gonadotrophin (β -hCG) measurements. Ectopic pregnancy is one of the few medical conditions that can be managed expectantly, medically or surgically.^{2,3}

Although women with ectopic pregnancy frequently have no identifiable risk factors, it is shown that increased awareness of ectopic pregnancy and a knowledge of the associated risk factors helps identify women at higher risk in order to facilitate early and more accurate diagnosis. Most risk factors are associated with risks of prior damage to the fallopian tube. $\!\!\!^4$

Laparoscopy and Laparotomy both are established in gynaecology for several years. Since early 1990s, minimally invasive surgery is considered to be the safest and effective surgical technique.⁵ In the developed countries laparoscopy is widely used for management of ruptured ectopic pregnancy because of the availability of skilled manpower, logistics, improved anaesthesia and cardiovascular monitoring, well organised surgical care and good healthcare insurance.⁶ For ruptured tubal ectopic pregnancy management, Laparoscopic procedures implemented with an aim to reduce intra operative blood loss, analgesic requirements, hospital stay and higher recovery as well as it's effectiveness in patients with massive haemoperitonium.^{7,8}The present study compared ruptured tubal ectopic pregnancy managed by open and minimal invasive surgery.

MATERIALS & METHODS

The present study consisted of 78 cases of ruptured tubal ectopic pregnancies. Patients' consent was obtained before starting the study.

Data such as name, age etc. was recorded. Patients were divided into 2 groups of 39 each. Group I patients underwent laparoscopy and group II laparotomy. Parameters such as gravida, parity, previous spontaneous loss, previous MTP, Hb at admission, period of gestation, total blood loss, haemoperitonium and postoperative parameters blood loss, blood requirement and duration of hospital stay were recorded. The results were compiled and subjected for statistical analysis using Mann Whitney U test. P value less than 0.05 was set significant.

RESULTS Table I Patients variables

Parameters	Group I	Group II	P value	
Gravida	3	4	0.17	
Parity	1	2	0.05	
Previous spontaneous loss	7.2	15.6	0.01	
Previous MTP	9.4	11.5	0.02	
Hb at admission	7.2	8.5	0.05	

Table I shows that the mean gravida was 3 in group I and 4 in group II, parity was 1 in group I and 2 in group II, previous spontaneous loss was seen in 7.2 and 15.6, previous MTP was seen in 9.4 in group I and 11.5 in group II and Hb at admission was 7.2 gm% in group I and 8.5 gm% in group II. The difference was significant (P < 0.05).

Table II Assessment of parameters

Parameters	Variables	Group I	Group II	P value
Presentation	Acute abdomen	30	28	0.01
	Incidental	9	11	
Period of gestation	<6 weeks	15	18	0.05
	6-10 weeks	16	12	
	>10 weeks	8	9	
Total blood loss	<500 ml	12	13	0.75
	500-1000 ml	16	13	
	>1000 ml	11	12	
Hemoperitoneum		24	15	0.04

Table II, graph I shows that presentation was acute abdomen in 30 in group I and 28 in group II and incidental 9 in group I and 11 in group II. Period of gestation was <6 wees seen in 15 in group I and 18 in group II, 6-10 weeks 16 in group I and 12 in group II and >10 weeks 8 in group I and 9 in group II. Total blood loss was <500 ml 12 in group I and 13 in group II, 500-1000 ml 16 in group I and 13 in group II and >100 ml 16 in group I and 13 in group II and significant (P < 0.05).





DISCUSSION

Ectopic pregnancy is more common in women attending infertility clinics even in the absence of tubal disease.9 In addition, the use of ART increases the rate of ectopic pregnancies.^{10,11} In vitro fertilisation (IVF) is associated with an ectopic pregnancy risk of 2-5% and it may be higher than this where there is tubal disease. Indeed, the first IVF pregnancy, before the first IVF live birth, was a tubal ectopic pregnancy.^{12,13} Some types of contraception, such as progestogen-only contraception and the intrauterine contraceptive device, are associated with an increased incidence of ectopic pregnancy when there is contraceptive failure, without necessarily increasing the absolute risk of ectopic pregnancy. One third of all cases of ectopic pregnancy are thought to be associated with smoking.¹⁴ Several mechanisms for this association have been suggested, including one or more of the following: delayed ovulation, altered tubal and uterine motility and microenvironment, or altered immunity.15This study compared ruptured tubal ectopic pregnancy managed by open and minimal invasive surgery.

We found that the mean gravida was 3 in group I and 4 in group II, parity was 1 in group I and 2 in group II, previous spontaneous loss was seen in 7.2 and 15.6, previous MTP was seen in 9.4 in group I and 11.5 in group II and Hb at admission was 7.2 gm% in group I and 8.5 gm% in group II. In the treatment of patients with ectopic pregnancy (EP) who were hemodynamically stable, Murphy et al16 compared surgical laparoscopy to laparotomy. The operating times for laparoscopy and laparotomy were not considerably different. Estimated intraoperative blood loss, postoperative hospital stays, narcotic needs, recovery times, and overall hospital costs were all much lower in individuals who underwent laparoscopy. Rates of intrauterine pregnancy and rates of EP did not differ statistically.

We found that showed that presentation was acute abdomen in 30 in group I and 28 in group II and incidental 9 in group I and 11 in group II. Period of gestation was <6 weeks seen in 15 in group I and 18 in group II, 6-10 weeks 16 in group I and 12 in group II and >10 weeks 8 in group I and 9 in group II. Total blood loss was <500 ml 12 in group I and 13 in group II, 500-1000 ml 16 in group I and 13 in group II and >1000 ml 11 in group I and 12 in group II. Hemoperitoneum was seen in 24 in group I and 15 in group II. Chan et al¹⁷ in their study 2 cases of ruptured interstitial pregnancy were treated with laparoscopic surgery. Laparoscopic cornuostomy and removal of products of conception were performed in 1 case and laparoscopic cornual resection in the other. Laparoscopic tubal occlusion performed 4 and 6 months later showed the cornu region to be well healed in both cases. With increasing experience with the laparoscopic technique, ruptured interstitial pregnancy can be managed safely and successfully with laparoscopic surgery.

CONCLUSION

Authors found that laparoscopy was advantageous over laparotomy in terms of shorter hospital stay and speedy recovery.

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