

## ORIGINAL ARTICLE

### Assessment of outcome of laparoscopic procedure for ectopic pregnancy

<sup>1</sup>Dr Ravikant Kumar, <sup>2</sup>Dr Namita Kumari, <sup>3</sup>Amit Varshney

<sup>1</sup>Assistant Professor, Department of General Surgery, Saraswathi Institute of Medical Sciences, Hapur, Uttar Pradesh, India;

<sup>2</sup>Assistant Professor, Department of Obs & Gyane, Saraswathi Institute of Medical Sciences, Hapur, Uttar Pradesh, India;

<sup>3</sup>Assistant Professor, Department of Internal Medicine, Sakshi Medical College, Guna, M.P., India

#### ABSTRACT:

**Background:** Ectopic pregnancy (EP) continues to be a major challenge for gynecologists. The present study was conducted to assess outcome of laparoscopic procedure for Ectopic pregnancy. **Materials & Methods:** 82 women age ranged 18-40 years with diagnosis of tubal Ectopic pregnancy underwent laparoscopic procedures such as salpingectomy and salpingotomy. Parameters such as evaluation for crude intrauterine pregnancy (IUP), recurrent EP and infertility were recorded. **Results:** Group I patients underwent Salpingectomy and group II underwent Salpingotomy. Group I had 42 and group II had 40 patients. Common symptoms were pelvic pain seen in 5 in group I and 4 in group II, vaginal bleeding 3 in group I and 5 in group II and asymptomatic seen in 4 in group I and 6 in group II. Gestation was previous pregnancy 34 in group I and 30 in group II, child bearing 26 in group I and 21 in group II and previous abortion 35 in group I and 34 in group II. Localization was ampulla 30 in group I and 28 in group II, isthmus 8 in group I and 10 in group II and fimbriae 4 in group I and 2 in group II. The difference was significant ( $P < 0.05$ ). **Conclusion:** Choice of surgical treatment for management of EP should be assessed especially considering patients' desire for future childbearing.

**Key words:** childbearing, Ectopic pregnancy, Salpingotomy.

**Corresponding author:** Dr Namita Kumari, Assistant Professor, Department of Obs & Gyane, Saraswathi Institute of Medical Sciences, Hapur, Uttar Pradesh, India

**This article may be cited as:** Kumar R, Kumari N, Varshney A. Assessment of outcome of laparoscopic procedure for ectopic pregnancy. J Adv Med Dent Sci Res 2016;4(6):369-371.

#### INTRODUCTION

Ectopic pregnancy (EP) continues to be a major challenge for gynecologists. Its incidence has been persistently rising in a number of countries, secondary to the increase in sexually transmitted diseases and chronic salpingitis.<sup>1</sup> At the same time, unquestionable therapeutic progress has been made with the development of new techniques of laparoscopic surgery. Fertility after EP is decreased because of damage caused to the tube by the ectopic gestation itself, but also because of frequently pre-existent tubal lesions.<sup>2</sup>

The vast majority of EP cases affect the fallopian tube, with 70-76% of these tubal EPs occurring in the ampullary portion, 11-16% in the isthmic portion and about 2-10% of in the fallopian tube's fimbrial end. Expectant, medical and surgical treatments can be applied for management of this condition. Surgical treatment, however, is the preferred option for ruptured tubal EP management or in stable EP cases when medical therapy has failed or is otherwise contraindicated.<sup>3</sup>

The two main surgical approaches employed for removal of the EP from the fallopian tube include salpingectomy (removal of part or the entirety of the fallopian tube containing the products of gestation)

and salpingotomy (only removal of the products of gestation from the fallopian tube). The question of the ideal surgical approach (either conservative; salpingotomy, or radical; salpingectomy) to EP management in women desiring future pregnancy is subject to ongoing debate.<sup>4</sup> The present study was conducted to assess outcome of laparoscopic salpingectomy.

#### MATERIALS & METHODS

The present study comprised of 82 women age ranged 18-40 years with diagnosis of tubal Ectopic pregnancy. They were diagnosed based on ultrasound (USG) and b-hcg measurements. All were enrolled after their written consent. Patients with a prior history of EP, not desiring future conception, or with contralateral tubal pathology were excluded.

Demographic data such as name, age, gender etc. was recorded. All laparoscopic procedures such as salpingectomy and salpingotomy were performed. Parameters such as evaluation for crude intrauterine pregnancy (IUP), recurrent EP and infertility were recorded. Patients were followed up regularly. Results of the study was compiled and subjected for statistical analysis. P value less than 0.05 was considered significant.

**RESULTS**

**Table I Distribution of patients**

Groups	Group I	Group II
Procedure	Salpingectomy	Salpingotomy
Number	42	40

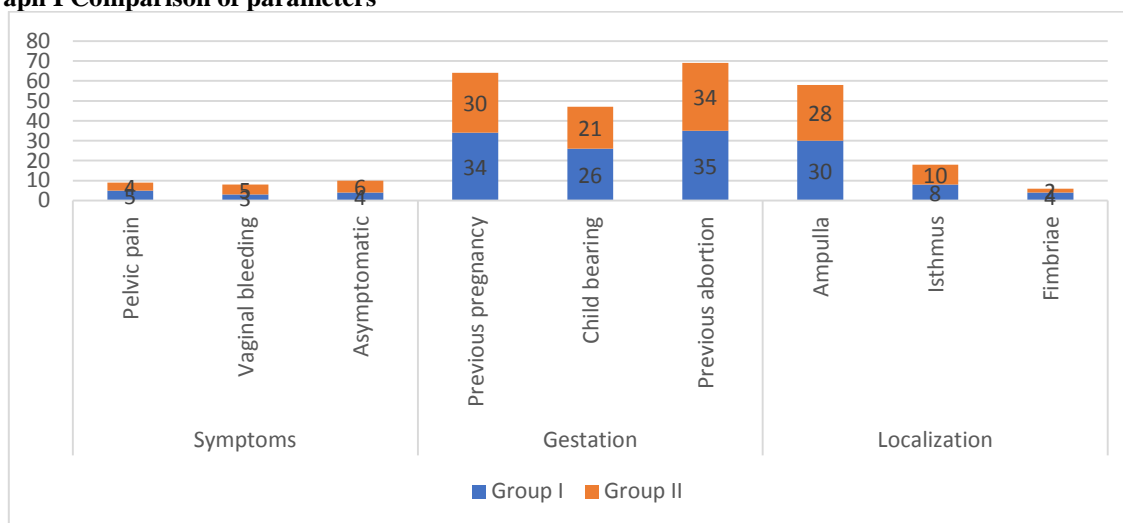
Table I shows that group I patients underwent Salpingectomy and group II underwent Salpingotomy. Group I had 42 and group II had 40 patients.

**Table II Comparison of parameters**

Parameters	Variables	Group I	Group II	P value
Symptoms	Pelvic pain	5	4	0.81
	Vaginal bleeding	3	5	
	Asymptomatic	4	6	
Gestation	Previous pregnancy	34	30	0.92
	Child bearing	26	21	
	Previous abortion	35	34	
Localization	Ampulla	30	28	0.01
	Isthmus	8	10	
	Fimbriae	4	2	

Table II shows that common symptoms were pelvic pain seen in 5 in group I and 4 in group II, vaginal bleeding 3 in group I and 5 in group II and asymptomatic seen in 4 in group I and 6 in group II. Gestation was previous pregnancy 34 in group I and 30 in group II, child bearing 26 in group I and 21 in group II and previous abortion 35 in group I and 34 in group II. Localization was ampulla 30 in group I and 28 in group II, isthmus 8 in group I and 10 in group II and fimbriae 4 in group I and 2 in group II. The difference was significant (P< 0.05).

**Graph I Comparison of parameters**



**DISCUSSION**

Laparoscopic management is widely considered to be the most important progress in the treatment of EP in recent years, although in selected cases, nonsurgical methods such as methotrexate or expectant management may be considered. Conservative laparoscopic treatment is the procedure of choice, especially in young women who desire subsequent pregnancies.<sup>5</sup> Procedures are effective and simple to perform for experienced laparoscopists. Complications are infrequent, providing the disappearance of trophoblastic activity is carefully monitored by serial hCG measurements. However, it is not always possible to preserve the tube-for instance in cases of tubal rupture, voluminous EP > 6 cm, severe chronic lesions, recurrence of homolateral

EP, and previous tuboplasty.<sup>6</sup> The procedure of choice in such cases is laparoscopic total salpingectomy, providing there is no contraindication to laparoscopy. Conservative surgical management of unruptured EP is recommended by most authors. However, conservative treatment may be contraindicated when the tube has been irreversibly damaged by pre-existent chronic salpingitis or by a large trophoblastic implant and hematoma. In such instances; total salpingectomy is advised.<sup>7</sup> The present study was conducted to assess outcome of laparoscopic salpingectomy. In present study, group I patients underwent Salpingectomy and group II underwent Salpingotomy. Group I had 42 and group II had 40 patients. Turan et al<sup>8</sup> compared subsequent post-salpingectomy or esalpingotomy reproductive outcomes in women with

tubal EPs. 95 patients diagnosed with tubal EP were analyzed in a retrospective, observational manner. All patients studied were offered two surgical management options: salpingectomy (removal of the entire fallopian tube), or salpingotomy (removal of products of gestation only, leaving the remainder of the tube intact). Patients that underwent salpingectomy were noted to be significantly older than those that underwent salpingotomy ( $P < 0.05$ ). In addition, childbearing rates were noted to be significantly higher in the salpingectomy group when compared to patients that underwent salpingotomy ( $P < 0.05$ ). No significant differences were noted in mean dimension of mass, pregnancy rates, caesarean section rates and previous abortion rates between the two groups.

We found that common symptoms were pelvic pain seen in 5 in group I and 4 in group II, vaginal bleeding 3 in group I and 5 in group II and asymptomatic seen in 4 in group I and 6 in group II. Gestation was previous pregnancy 34 in group I and 30 in group II, child bearing 26 in group I and 21 in group II and previous abortion 35 in group I and 34 in group II. Localization was ampulla 30 in group I and 28 in group II, isthmus 8 in group I and 10 in group II and fimbriae 4 in group I and 2 in group II. Dubuisson et al.<sup>9</sup> performed laparoscopic salpingectomy as a routine procedure for ectopic pregnancy (EP) in cases where conservative management is impossible or contraindicated. Reproductive outcome after laparoscopic total salpingectomy for EP was evaluated in 125 cases. The pregnancy rate was 33.6%. There was a high proportion of patients with a pathological or absent contralateral tube (74.4%). In patients with a normal contralateral tube (32 cases), the live birth rate (46.9%) was greater but not significantly than in patients (39 cases) with a patent but pathological tube (25.6%). In vitro fertilization (IVF) was performed in 59 patients; clinical pregnancy was obtained in 40.7% of cases. These encouraging results lead us rapidly to consider IVF in patients with a pathological contralateral tube.

Several studies have reported higher risks of recurrent EP after laparoscopic salpingotomy. The future fertility of women that underwent salpingectomy was noted to depend primarily on the health of the contralateral fallopian tube.<sup>10,11</sup>

## CONCLUSION

Authors found that choice of surgical treatment for management of EP should be assessed especially considering patients' desire for future childbearing.

## REFERENCES

1. F. Mol, N.M. van Mello, A. Strandell, D. Jurkovic, J.A. Ross, T.M. Yalcinkaya, et al., European Surgery in Ectopic Pregnancy (ESEP) study group. Cost-effectiveness of salpingotomy and salpingectomy in women with tubal pregnancy (a randomized controlled trial), *Hum. Reprod.* 2015;2038-2047.
2. Calcagno, A.P. Londero, T. Haag, L. Driul, S. Bertozzi, T. Grassi, et al., Surgical treatment of ectopic pregnancy associated with predisposing factors of tuboperitoneal infertility, *Minim. Invasive Ther. Allied Technol.* 2013;97-103.
3. Constanze Banz, Nektarius Chalvatzas, Katharina Kelling, Daniel Beyer, Amadeus Hornemann, Klaus Diedrich, et al., Laparoscopic management of ectopic pregnancy during a 9-year period, *Fertil. Steril.* 2010;2780-2782.
4. C. Frey, C. Poncelet, Endoscopic management of ectopic pregnancy, *Gynecol. Obstet. Fertil.* 2011;640-643.
5. M. Gajewska, P. Kaminski, M. Wielgos, I. Szymusik, M. Zimmer, N. Mazanowska, et al., Laparoscopic management of ectopic pregnancy, *Neuro Endocrinol. Lett.* 2008;267-271.
6. M. Al-Sunaidi, T. Tulandi, Surgical treatment of ectopic pregnancy, *Semin. Reprod. Med.* 2007;117-122.
7. J. Li, K. Jiang, F. Zhao, Fertility outcome analysis after surgical management of tubal ectopic pregnancy: a retrospective cohort study, *BMJ Open* 2015;007339.
8. Turan. Fertility outcomes subsequent to treatment of tubal ectopic pregnancy in younger Turkish women, *J. Pediatr. Adolesc. Gynecol* 2011;24:251-255.
9. Dubuisson JB, Aubriot FX, Foulot H, Bruel D, de Jolinière JB, Mandelbrot L. Reproductive outcome after laparoscopic salpingectomy for tubal pregnancy. *Fertility and sterility.* 1990 Jun 1;53(6):1004-7.
10. X.P. Ye, Y.Z. Yang, X.X. Sun, A retrospective analysis of the effect of salpingectomy on serum antiMullerian hormone level and ovarian reserve, *Am. J. Obstet. Gynecol.* 2015;53.
11. A.G. Grynnerup, A. Lindhard, S. Sorensen, Anti-Müllerian hormone levels in salpingectomized compared with non salpingectomized women with tubal factor infertility and women with unexplained infertility, *Acta Obstet. Gynecol. Scand.* 2013;1297-1303.