

**THE OUTCOME OF ECTOPIC PREGNANCY-A TERTIARY CARE HOSPITAL EXPERIENCE**Sreelakshmi U<sup>1</sup>, Pramila Pandey<sup>2</sup>, Shreedhar Venkatesh<sup>3</sup>**HOW TO CITE THIS ARTICLE:**

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**ABSTRACT: AIMS:** Evaluation of risk factors, variable clinical presentations, and study of outcome of ectopic pregnancy by surgical and medical management. **STUDY DESIGN: PROSPECTIVE STUDY: METHODS:** All the women with ectopic pregnancy managed from May 2009 to December 2012 by surgical and medical management were analyzed prospectively. **RESULTS:** In our study incidence of ectopic pregnancy was 12.46 per 1000 live births. Forty-three patients of ectopic pregnancy were under the study in which there was not observed maternal mortality. Abdominal pain and amenorrhoea (97.67%) were the most common symptoms followed by vaginal bleeding (53.49%). Tenderness over lower abdomen was seen in 33 (76.74%) patients and the classical sign of cervical motion tenderness was seen in 19(44.19%) cases. Pelvic inflammatory disease (16.28%), repeat ectopic (11.63%), failed tubal sterilization procedures (11.63%) were the major risk factors. Salpingectomy was done in 35(81.39 %) cases, salpingo- oophorectomy in 1(2.32%) case, D&C followed by laparoscopic salpingectomy was done in 1(2.32%) case and 4(9.30%) cases were managed by medical methods. **CONCLUSION:** In spite of the various recent advances in the management of ectopic pregnancy, surgical management by laparotomy is still the most widely used modality of treatment in our institution because of late referrals.

**KEYWORDS:** Ectopic pregnancy, Amenorrhoea, Laparotomy.

**INTRODUCTION:** Ectopic pregnancy is a major health risk factor for women of child bearing age and if not diagnosed and treated properly can lead to life threatening complications. Many factors increase the risk of ectopic pregnancy, important being pelvic inflammatory disease, repeat ectopic, failed tubal sterilization procedures, intrauterine contraceptive device usage, MTP, previous LSCS, tuberculosis, tuboplasty etc. Tools such as enzyme linked immunoassays and radio immunoassays for beta-hCG as well as ultrasonography have allowed for more rapid diagnosis of ectopic pregnancy. According to American College of Obstetricians and Gynaecologists (2008), 2% of all pregnancies in the United States are ectopic, 3-4% Worldwide. Nearly 95% of ectopic pregnancies are tubal ectopic. The present study was done from May 2009 to December 2012 at department of Obstetrics and Gynaecology, Vydehi medical college, Bangalore.

**MATERIALS AND METHODS:** All the patients with ectopic pregnancy admitted through the emergency and outpatient department of obstetrics and gynaecology at Vydehi hospital, Bangalore, were studied prospectively over a period of 3 years 8 months duration from May 2009 to December 2012.

The analysis was carried out on the basis of age, parity, marital status, period of gestation, risk factors, clinical features, site of ectopic and type of treatment given. On admission complete history was taken. Onset of symptoms and complaints at the time of admission were taken. After

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history taking, general examination was carried out for evidence of anaemia. On per abdominal examination, tenderness, distension, rigidity, guarding, presence or absence of bowel sounds, localised swellings in abdomen were noted. Speculum examination was done; bleeding through the cervical os was noted. On bimanual examination size of the uterus, fullness in the fornices and cervical motion tenderness were noted. The morbidity and mortality resulting from this condition and the management have been discussed; management was in the form of surgical and medical methods.

**OBSERVATIONS AND RESULTS:** The present study was conducted in Vydehi hospital, Bangalore from May 2009 to 2012 December i.e. 3 years 8 months duration. Total number of live births in obstetrics and gynaecology department during study period were 3451. Forty three patients were admitted with ectopic pregnancies.

In our study incidence of ectopic pregnancy was 12.46 per 1000 live births. Table 1 shows age distribution in ectopic pregnant cases. Out of 43 cases, 19 (44.19%) women were in the age group of 25 to 30 years, 14 (32.56%) cases were less than 25 years. Above 30 years incidence was low. Most of the ectopic pregnancies occur in young age group (25-30 years) and subsequent fertility is an important issue. Table 2 gives detailed information regarding profile of present ectopic. 42 (97.67%) women were married, 1 (2.32%) patient was unmarried.

Majority of ectopic pregnant women were primigravidae (37.21%). Grand multiparae were constituted 4.65%. 6 to 8 weeks of amenorrhoea was seen in 32 (74.42%) women, one patient did not give history of amenorrhoea. Pelvic inflammatory disease was the major risk factor 7 (16.28%). The other contributors of tubal damage were failed laparoscopic tubal sterilization 5 (11.63%), previous ectopic 5 (11.63%), IUCD usage 3 (6.97%), tuboplasty 2 (4.65%), tuberculosis 2 (4.65%), previous LSCS 1 (2.32%). In 14 (32.56%) cases did not find any risk factors. There was 6 (13.95%) patients with history of previous spontaneous abortions, 2 (4.65%) patients with history of MTP, 1 (2.56%) had emergency contraception.

Table 3: gives detailed information about clinical features and management. Regarding the clinical findings on admission, 42 (97.67%) women came with history of abdominal pain and amenorrhoea. 23 (53.49%) patients had vaginal bleeding. Tenderness over lower abdomen was seen in 33 (76.74%) patients and the classical sign of cervical motion tenderness was seen in 19 (44.19%) cases. Most of them had more than one complaint. On general examination all the ectopic pregnancy cases were anaemic. Relevant investigations were done, including complete blood picture, blood grouping and typing, serum beta-hCG and transvaginal sonography, random blood sugar, bleeding time and clotting time for all cases. Liver function tests, renal function tests, serum electrolytes were done as and when required.

Screening for HIV and HBsAg was done after taking consent. Haemoglobin on admission was less than 5 grams% was seen in one case, between 5 to 8 grams% in three cases, more than 8 grams% in 39 cases. Supportive therapy was given in the form of intravenous fluids, blood transfusion. Out of 43 patients, 35 (81.39%) women were underwent salpingectomy, 2 (4.65%) patients were treated by salpingo-oophorectomy, 1 (2.32%) patient was treated by milking of the tube, 4 (9.30%) cases were treated with methotrexate, monitored with beta-hCG level, one patient was not followed up due to drop out. D&C followed by laparoscopic salpingectomy was done in 1 (2.32%) case.

Table 4 shows site of ectopic. Site of ectopic pregnancy was determined by laparotomy and ultrasonography findings. Out of 43 patients, ampullary tubal ectopic pregnancy was seen in 36

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(83.72%) women, isthmic site reported in 4 (9.30%) cases. Interstitial and fimbrial ectopic each one had similar incidence (2.32%). Ovarian ectopic pregnancy was seen in one case (2.32%). Blood transfusion was given in 28 (65.17%) patients. There was no maternal mortality, two patients had wound infection. All the patients were discharged in satisfactory condition with haemoglobin level of more than 9 grams% within 2 weeks.

**DISCUSSION:** There has been a significant rise in the incidence of ectopic pregnancy from 3-4 per 1000 reported earlier to almost 16 per 1000 pregnancies. This could be because of early diagnosis by sensitive pregnancy tests, serum beta-hCG, progesterone levels, and high resolution transvaginal sonography before significant haemorrhage occurs.

It is evident from this study that the incidence of ectopic pregnancy is increasing. Our study showed that 12.46 per 1000 live births, Rose et al<sup>1</sup> study showed 9.54 per 1000 live births in 2002. In our study 44.19% of ectopic pregnancies were in the age group 25-30 years, 32.56% were belong to 20-24 years, the majority of ectopic were in the age group 21-40 years in the Gupta et al<sup>2</sup> series. In our study primigravidae constituted 37.21%, Ganguly et al<sup>3</sup> reported 28.3%. In Rose et al<sup>1</sup> series repeat ectopic pregnancy was 3.2%, in our study repeat ectopic pregnancy was 11.63%. Age, parity, and marital status were not the significant risk factors.

Many cases of Chlamydia salpingitis are indolent and asymptomatic causing tubal damage and subsequent tubal pregnancy. We identified 28.2% of our patients having no etiological factors. Probably an unnoticed Chlamydia infection causing alteration in tubal motility may be the cause of ectopic pregnancy in young patients. Documented history of PID was obtained in 16.28% of cases, Rose et al<sup>1</sup> showed 34.4%. Above mentioned factors, changes in sex life, pelvic inflammation are responsible for tubal damage in young nulli or low parity women. Therefore it is advisable to rule out Chlamydia infection while investigating for infertility.

The other etiological factors contributing to the alteration of tubal motility in our study were tuberculosis, previous ectopic pregnancy and use of IUCDs. Failed contraception is one of the risk factor, IUCD usage, tubal sterilization, high dose oestrogen for emergency contraception are common among them. For confirmation of diagnosis combination of history, clinical examination, urine pregnancy test, transvaginal sonography, serum beta-hCG was used. In our study transvaginal ultrasonography was showing complex adnexal mass in all patients.

Incidence by location, fallopian tube accounts to 97.67% in our study of which ampullary accounts 83.72%, in Rose et al<sup>1</sup> series fallopian tube accounts to 98.25% of which isthmus 39.78%, ampullary 56.99%. Buoyer J et al<sup>4</sup> conducted population based study, showed sites interstitial (2.4%), fimbrial (11.1%), isthmic (12.0%), ampullary (70%). Chaudhary et al<sup>5</sup> series showed ampullary (76.75%), isthmic (16.27%), and infundibular (2.33%).

The modalities of management which included were medical and surgical strategies. It is very important for the doctor and the women to discuss the issues regarding future reproductive desires before surgery. Laparoscopy is preferable to laparotomy in the management of the unruptured ectopic pregnancy but it has its own limitations and drawbacks. Hajenius et al<sup>6</sup> conducted a systematic Cochrane database review of 35 randomized trials that compared laparoscopic salpingostomy with open surgical approach.

Laparoscopic salpingostomy was found less successful than open surgical approach due to a significantly higher persistent trophoblast rate in laparoscopic salpingostomy. Laparotomy however,

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may be safer than laparoscopy in women who have had a large intra-abdominal bleed in whom achieving haemostasis is a priority. Ectopic pregnancy can be managed medically after proper selection of patients. Medical management with methotrexate was given for women with unruptured small tubal ectopic pregnancy on ultrasonography (less than 3.5 cms) and low serum beta-hCG values (less than 5000 mIU/ml), without cardiac activity, no contraindication for Methotrexate and desire of future fertility.

Follow-up after medical treatment requires repeated visits and serial measurements of serum beta-hCG until it declines to a very low concentration. The choice between tubal removal by salpingectomy and tubal conservation will depend on factors such as desire for future fertility, size of the ectopic, and extent of tubal damage. Camini et al<sup>7</sup> study series showed salpingectomy (83%), and salpingostomy (17%). In our study salpingectomy was done in 81.39% of cases. In 2 patients (4.65%) salpingo-oophorectomy was done because of chronic ectopic with dense adhesions.

**CONCLUSION:** Ectopic pregnancy is a common and serious problem, with significant morbidity and the potential for maternal death. The choice of treatment should be guided by the patient's preferences, after a detailed discussion about monitoring, outcome, risks and benefits of the surgical and medical approaches. Diagnosis of ectopic pregnancy should be entertained irrespective of presence or absence of amenorrhea, whether or not she has undergone sterilization. In spite of the various recent advances in the management of ectopic pregnancy, surgical treatment by laparotomy is still the most widely used modality of treatment in our institution because of late referrals. Proper sex education, prevention of unwanted pregnancy, prevention and proper treatment of sexually transmitted infection will reduce the incidence of ectopic pregnancy.

Age (years)	No of cases	Percentage
20-24	14	32.56 %
25-30	19	44.19%
31-35	8	18.60 %
>35	2	4.65%

Table 1: Age vs. Ectopic pregnancy

Gravidity	No. of cases	Percentage
G1	16	37.21%
G2	8	18.60%
G3	15	34.88%
G4	2	4.65%
G5	0	-
G6	1	2.32%
G7	0	-
G8	1	2.32%
<b>Amenorrhea</b>		
No h/o amenorrhea	1	2.32%
<6weeks	3	6.97%
6-8weeks	32	74.4%
8-10weeks	3	6.97%
10-12weeks	4	9.30%

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<b>Risk factors</b>		
None	14	32.56%
Pelvic inflammatory disease	7	16.28%
Abortion	6	13.95%
Laparoscopic sterilization	5	11.63%
Previous ectopic pregnancy	5	11.63%
IUCD	3	6.97%
MTP	2	4.65%
Tuberculosis	2	4.65%
Tuboplasty	2	4.65%
Emergency contraception	1	2.32%
Previous cesarean	1	2.32%

**Table 2: Profile of Ectopic pregnancy**

<b>Clinical features</b>	<b>No. of cases</b>	<b>Percentage</b>
<b>Symptoms</b>		
Abdominal pain	42	97.67%
Amenorrhea	42	97.67%
Vaginal bleeding	23	53.49%
Abdominal distension	3	6.97%
Difficulty in passing urine	3	6.97%
Giddiness	2	4.65%
Fever	1	2.32%
Loose motions	1	2.32%
Breathlessness	1	2.32%
<b>Signs</b>		
Abdominal tenderness	33	76.74%
Pallor	28	65.17%
Cervical motion tenderness	19	44.19
Forniceal fullness	10	23.25%
Abdominal mass	2	4.65%
Absence of bowel sounds	1	2.32%
<b>Management</b>		
Medical management	4	9.30%
Salpingectomy	35	81.39%
Salpingo-oophorectomy	2	4.65%
Dilatation and curettage followed by laparoscopic salpingectomy	1	2.32%
Milking of the tube	1	2.32%

**Table 3: Clinical features and management of Ectopic pregnancy**

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Site of ectopic	No. of cases	Percentage
Ampullary	36	83.72%
Isthmic	4	9.30%
Interstitial	1	2.32%
Fimbrial	1	2.32%
Ovarian	1	2.32%

**Table 4: Sites of Ectopic pregnancy**

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