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Original Research Article

## Clinical study of ectopic pregnancy

Meenakshi T. Chate<sup>1\*</sup>, Bhagyashree Chate<sup>2</sup>, Kranti Chate<sup>3</sup>

<sup>1</sup>Department of Obstetrics and Gynecology, <sup>2</sup>Department of Pathology, S.R.T.R.M.C Ambajogai, Maharashtra, India

<sup>3</sup>Department of Anesthesia, GMC Miraj, Maharashtra, India

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**\*Correspondence:**

Dr. Meenakshi T. Chate,

E-mail: [chate.meenakshi8@gmail.com](mailto:chate.meenakshi8@gmail.com)

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### ABSTRACT

**Background:** Ectopic pregnancy is pregnancy that develops following implantation anywhere other than the endometrial cavity of uterus. Objective of present study was to investigate the risk factors, clinical presentation and sites of ectopic pregnancy along with management and assessment of risk of maternal mortality and morbidity.

**Methods:** The study was undertaken at Dr. Shankar Rao Chavhan Government Medical College and Guru Govind singhji hospital, Nanded between December 2012 and May 2014 after obtaining clearance from the Hospital Ethical Committee.

**Results:** Maximum incidence of tubal gestation occurred between the age group of 21-25 years. Greater incidence was noted in multiparous woman. Tubectomy was the most common risk factor seen in 23.65% cases. The most common symptom observed is abdominal pain seen in 92.47% cases. The most common site of ectopic was ampulla seen in 51.61% cases. The most common mode of presentation was rupture seen in 71 cases about 76.35% cases. Unilateral salpingectomy was done in 70 cases about 75.26% cases.

**Conclusions:** Since ectopic pregnancy remains a gynecological catastrophe in countries and a major challenge to the reproductive performance of women worldwide, it should be considered a relevant public health issue. With its rising incidence, which is likely to continue increasing because of the various factors discussed, it is necessary to devise means of early detection and treatment.

**Keywords:** Ectopic pregnancy, UPT (Urine pregnancy test)

### INTRODUCTION

Ectopic pregnancy is pregnancy that develops following implantation anywhere other than the endometrial cavity of uterus.<sup>1</sup> Ectopic is derived from a Greek word "EXTOPOS" meaning "out of place".

Ectopic pregnancy is one of the leading causes of maternal mortality in first trimester but it is also one of the conditions threatening the fertility of the patient. This higher danger to life results from massive bleeding that occurs when these pregnancies rupture. These abnormal

pregnancy locations, unlike uterus, cannot expand enough to fit the growing embryo; thus, these structures eventually rupture causing bleeding.

Over the past three decades, in many countries; the incidence of ectopic showed an initial increase followed by a decrease which has been observed recently. The likely causes of this increase in incidence was prevalence of sexually transmitted disease, use of intra-uterine contraceptive device, tubal sterilization, tubal reconstructive surgery, assisted reproductive techniques and probably early diagnosis of some cases which were

destined for early resolution. The recent decline may be attributed to decline in the prevalence of sexually transmitted diseases like Chlamydia and change in use of intrauterine contraceptive devices.<sup>2</sup>

The incidence of ectopic pregnancy varies from 1 in 300 to 1 in 150. The incidence of ectopic has steadily risen since 1970 and now accounts for approximately 2% of all pregnancies; the risk of death from ectopic pregnancy has declined by 90%.<sup>3</sup>

Ectopic pregnancy is often proclaimed as the great masquerader, as the diagnosis is complicated by a wide spectrum of clinical presentation from asymptomatic cases to haemoperitoneum and shock. The classical clinical triad of amenorrhea, bleeding per vaginum and lower abdominal pain is present in less than 50% of cases<sup>4</sup>.

The cause of death in cases of ectopic pregnancy are shock, acute renal failure, disseminated intravascular coagulopathy, pulmonary embolism, sepsis and multiple organ failure. The study aims on determining risk factors, clinical presentation, diagnostic modalities and various treatment options which might help in guiding principle in diagnosis and management cases of ectopic pregnancies.

## METHODS

The study was undertaken at Dr. Shankar Rao Chavhan Government Medical College and Guru Govind singhji hospital, Nanded between December -2012 and May-2014 after obtaining clearance from the Hospital Ethical Committee.

All diagnosed cases of ectopic pregnancy were enrolled in the study. Detailed history and clinical evaluation was done. Information was collected in a pretested proforma.

### Inclusion criteria

All diagnosed cases of ectopic pregnancy admitted to Dr. Shankar Rao Chavhan and Government Medical College and Guru Gobind Singh Ji hospital, Nanded during the 1½ years study period.

### Exclusion criteria

All intrauterine pregnancies and ectopic pregnancies managed by medical or expectant management were excluded.

## RESULTS

In the present study we found that the most common age group in which ectopic was seen in the present study was 21-25 years (36.55%); this may be attributed to the fact this time period is maximum fertile period and use of contraception is infrequent and occasional. This also may

be because most young unmarried females with unintended pregnancies often procure unsafe abortions, which subsequently predisposes them to having an ectopic gestation in future pregnancies ectopic pregnancy can occur at any parity with variable clinical presentations.

**Table 1: Ectopic pregnancy in relation to age.**

Age group (years)	No. of cases	%
15-20	5	5.38
21-25	34	36.55
26-30	32	34.41
31-35	16	17.20
36-40	3	3.23
41-45	3	3.23
Total	93	100

**Table 2: Distribution of cases based on parity.**

Parity	No. of cases	%
Nullipara	22	23.67
Primipara	23	24.73
Multipara	48	51.60

We observed maximum incidence of Ectopic pregnancy was in Multipara i.e. 51.60% followed by primipara i.e. 24.73% followed by nullipara i.e. 23.67%. This increased incidence in multipara might be due to increased sexual life, increased incidence of pelvic inflammatory disease and use of contraception in form of IUCDs and progesterone only pills.

**Table 3: Ectopic pregnancy in relation to risk factors.**

Risk factors	No. of cases	%
None	36	38.71
Tubectomy	22	23.65
Iucd	6	6.45
Infertility	19	20.43
Pid	10	10.76
Total	93	100

In the present study, the maximum incidence of ectopic was seen in patients who had no apparent risk factors (38.71%). Tubectomy was the most common risk factor in the present study (23.65%).

**Table 4: Mode of presentation.**

Symptoms	No. of cases	%
Amenorrhea	72	77.41
Pain in abdomen	86	92.47
Bleeding per vaginum	54	58.06

In present study, abdominal pain and amenorrhea was present in 92.47% and 77.41% cases suggestive of most common presentation of patient with ectopic pregnancy. In the present 22.58% of cases were without history of

amenorrhea suggesting presentation of ectopic pregnancy before missed period.

**Table 5: Site of ectopic pregnancy on laparotomy.**

Site	No. of cases	%
Ampulla	48	51.61
Isthmus	10	10.76
Ovary	9	9.67
Fimbria	18	19.35
Cornual	8	8.61
Ampulla+isthmus	0	0
Total	93	100

Commonest site for ectopic pregnancy is ampulla in present study accounting for 51.61% cases followed by fimbria in 19.35% cases. Isthmus was next most common site in 10.76% cases. Ovary and corneal involvement was seen in 9.67% and 8.61%.

**Table 6: Condition of tube.**

Condition of tube	No. of cases	%
Rupture	71	76.35
Unrupture	7	7.53
Tubal abortion	15	16.12
Total	93	100

In the present study, the incidence of rupture was 76.35% cases tubal abortion was seen in 16.12% followed by unruptured ectopic pregnancies in 7.53%.

**Table 7: Procedure done.**

Procedure	No. of cases	%
Salpingostomy	1	1.08
Unilateral salpingectomy	70	75.26
Bilateral salpingectomy	0	0
Unilateral salpingo-oophorectomy	20	21.51
Salpingo-oophorectomy with contra-lateral tubal ligation	0	0
Laparoscopic salpingostomy	0	0
Laparoscopic salpingectomy	2	2.15
Laparoscopic Salpingo-oophorectomy	0	0
Laparoscopic bilateral Salpingo-oophorectomy	0	0

Salpingectomy was the commonest life-saving surgical procedure performed in the studied subjects, since most of the cases were ruptured ectopic pregnancies with massive hem peritoneum.

In the present study, unilateral salpingectomy was done in 75.26% cases followed by unilateral salpingo-oophorectomy in 21.51% cases. Laparoscopic salpingectomy was done in 2.15% cases. Salpingostomy was done in 1.08% cases.

**DISCUSSION**

**Age group**

In the present study, we found that the most common age group in which ectopic was seen in the present study was 21-25 years (36.55%). Similarly, reported by Panchal D et al the maximum incidence was seen in the age group of 21-30 years which was 71.66%.<sup>5</sup> Shetty et al also reported maximum incidence of ectopic in age group of 25-30 years i.e 74.2%.<sup>6</sup> Gaddagi et al reported 70.2% of cases belonged to 21-30 years of age; while Porwal et al reported an incidence of 47.5% in age group of 21-25 years.<sup>7,8</sup>

**Parity**

We observed maximum incidence of Ectopic pregnancy was in multipara i.e. 51.60% followed by primipara i.e. 24.73% followed by nullipara i.e. 23.67%. Multiparous woman was found to be more prone to ectopic pregnancy in Gaddagi et al i.e. 62.2%; Shetty et al i.e. around 83.9% and Khaleeque et al study about 61%.<sup>6,7,9</sup>

**Risk factors**

In the present study, the maximum incidence of ectopic was seen in patients who had no apparent risk factors (38.71%). Similarly, Gaddagi et al found 37.83% had no apparent risk factors.<sup>7</sup>

**Mode of presentation**

In present study, abdominal pain and amenorrhea was present in 92.47% and 77.41% cases suggestive of most common presentation of patient with ectopic pregnancy. Shetty S et al observed the commonest symptoms were abdominal pain (80.6%), amenorrhea (77.4%) and abnormal vaginal bleeding (61.3%) cases.<sup>6</sup> Gaddagi et al observed that a majority of the cases presented with pain in the abdomen (89.2% of cases); amenorrhea was seen in 75.7% cases and spotting per vaginum in 43.2% cases Porwal et al noted that maximum (87.5%) cases of ectopic pregnancies reported with pain in abdomen.<sup>7,8</sup>

**Site of ectopic**

Commonest site for ectopic pregnancy is ampulla in present study accounting for 51.61% cases followed by fimbria in 19.35% cases. Isthmus was next most common site in 10.76% cases. Ovary and corneal involvement was seen in 9.67% and 8.61%.

According to Shetty S the commonest site of location of the ectopic pregnancy was in the ampulla of the fallopian tube seen in 45.2% cases.<sup>6</sup> Similar findings were noted by Gaddagi R et al i.e. majority of the cases were ampulla pregnancies (69.7%).<sup>7</sup> Porwal S et al observed that ampullary portion of tubes (40%) and isthmus (32.5%) to be most common sites.<sup>8</sup>

### Condition of tube

In the present study, the incidence of rupture was 76.35% cases Tubal abortion was seen in 16.12% followed by unruptured ectopic pregnancies in 7.53%. Similar findings were noted by Gaddadi R et al 78.3% showed a ruptured ectopic pregnancy on laparotomy.<sup>7</sup> Tubal abortion was seen in 4 cases and an unruptured ectopic pregnancy in 3 cases. Shetty et al unruptured ectopic and tubal abortion in 12.9% cases.<sup>7</sup>

### Procedure done

In the present study, unilateral salpingectomy was done in 75.26% cases followed by unilateral salpingo-oophorectomy in 21.51% cases. Laparoscopic salpingectomy was done in 2.15% cases. Salpingostomy was done in 1.08% cases.

Panchal D et al noted partial salpingectomy was done in 21.66% and total salpingectomy was done in 61.66% cases, Shetty et al observed the most common surgery done was unilateral salpingectomy in 28 (90.3%), salpingo-oophorectomy in 2 (6.5%) and salpingostomy in 1 (3.2%).<sup>5,6</sup> Porwal et al noted the most frequent procedure in cases is total salpingectomy (45%) and salpingo-oophorectomy in 32.5% of cases.<sup>8</sup> Gaddagi et al the most common procedure which was done was salpingectomy in 51.4% of the cases, followed by salpingo-oophorectomy in another 13.5% of the cases.<sup>7</sup> In 5.4% of the cases (i.e. 2 cases) total abdominal hysterectomy was done. Both these cases were cornual pregnancies.

### CONCLUSION

Since ectopic pregnancy remains a gynecological catastrophe in countries and a major challenge to the reproductive performance of women worldwide, it should be considered a relevant public health issue. With its rising incidence, which is likely to continue increasing because of the various factors discussed, it is necessary to devise means of early detection and treatment. This could be achieved by providing adequate materials, manpower and equipment of health facilities, as well as a prompt and efficient referral system, good access roads, and efficient transportation, which will ensure early presentation in hospitals and prompt management of cases.

Health education on safer sex and provision of family-planning services, such as condoms and other barrier contraceptives, will help prevent sexually transmitted infection and unwanted pregnancies, thereby reducing the incidence of pelvic infection and postabortal complications. These interventions are expected to reduce the incidence of ectopic pregnancy and the consequent loss of reproductive potential, as has been recorded in some advanced countries of the world.

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