



## ECTOPIC PREGNANCY-A CLINICAL STUDY

## Gynecology

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## ABSTRACT

**Background:** Ectopic pregnancy is the commonest acute abdominal emergency a gynaecologist face in his day to day practice. Ectopic pregnancy is a life-threatening condition accounts for 80% of maternal deaths that occur in early pregnancy. The aim of the study is to calculate incidence, the risk factors and the mode of clinical presentation of ectopic pregnancy.

**Methods:** This is a prospective study conducted at Assam Medical College and Hospital, Dibrugarh, Assam from September 2009 to August 2010. The study covered all the cases of Ectopic pregnancy that came during that time frame.

**Results:** There were 40 cases of ectopic pregnancy. The most common symptom in our study was the lower abdominal pain in 100% cases whereas vaginal bleeding in 75% cases and amenorrhea in 80% cases. Fallopian tube was the commonest site of ectopic pregnancy and constitutes 95%, out of which ampulla part was the commonest site in fallopian tube which constitutes 42.11%.

**Conclusions:** In our study, the incidence of ectopic pregnancy is found to be 1/186. Over 45% cases fall in the age group of 21-25 years. We observed that pelvic inflammatory disease was the main risk factor. The classic triad of symptoms for an ectopic pregnancy that is abdominal pain, amenorrhoea, and vaginal bleeding was common in our study out of which pain abdomen of varying degree was present in 100% cases, amenorrhoea in 80% and vaginal bleeding in 75% cases. Fallopian tube was the commonest site constitutes 95%, out of which ampulla part was the commonest site. The preferred surgical management was salpingectomy.

## KEYWORDS

Ectopic pregnancy, fallopian tube, Salpingectomy,

## Introduction

An ectopic pregnancy is defined as a condition in which there is implantation of fertilized ovum other than the normal uterine cavity or in an abnormal location within the uterus<sup>[1]</sup>. This is commonest acute abdominal emergency a gynaecologist face in her day to day practice<sup>[2]</sup>. Ectopic pregnancy is a life threatening condition accounts for 80% of maternal deaths that occur in early pregnancy<sup>[3]</sup>. In general population the incidence of ectopic pregnancy is about 2%<sup>[2]</sup>. It not only threatens the life of patient but also affect fertility because of mutilation of organs like fallopian tube, ovary and rarely uterus. The main risk factor is pelvic inflammatory disease, sexually transmitting disease, any previous pelvic or abdominal surgery, smoking, increase use of intrauterine devices induced abortions, artificial reproductive techniques, advancing age and previous ectopic pregnancy<sup>[4]</sup>. Ectopic pregnancy can implant at various site like fallopian tube, ovary, broad ligament, cervix, rudimentary horn of bicornuate uterus, abdominal cavity. Out of which commonest site if fallopian tube that accounts approximately 95%<sup>[1]</sup>. Ectopic pregnancy usually presents with triad that is amenorrhoea, pain abdomen and vaginal bleeding<sup>[2]</sup>. Ectopic pregnancy can be diagnosed on the basis of clinical suspicion and along with ultrasound scanning and serial serum beta-human chorionic gonadotrophin ( $\beta$ -HCG) measurements. Ectopic pregnancy has various mode of management, it can be expectant, medical and surgical depends upon condition of the ectopic pregnancy<sup>[4]</sup>. In view of increasing incidence of this emergency condition, a short term clinical study was conducted at Assam Medical College and Hospital, Dibrugarh, Assam from September 2009 to August 2010.

## Aims and Objectives

To study incidence, risk factors and mode of clinical presentation of ectopic pregnancy presented in Assam Medical College and Hospital, Dibrugarh during the period commencing from September 2009 to August 2010

## Materials and Methods

This is a prospective study conducted at Assam Medical College and Hospital, Dibrugarh, Assam from September 2009 to August 2010. The study covered all the cases of Ectopic pregnancy that came during that time frame and incidence, risk factors and mode of clinical presentation of ectopic pregnancy was calculated. The data was analysed with simple descriptive statistics.

## Results

During the period of study, there was 7440 deliveries in the hospital including stillbirth, and there were 40 cases of ectopic pregnancy. The incidence of ectopic pregnancy came out to be 1 per 186.

Table 1. Age distribution

Age Groups(in years)	Number of cases	percentage
15-20	2	5
21-25	18	45
26-30	12	30
31-35	6	15
36-40	2	5

The age of patients ranged between 15-40 years. The prevalence of ectopic pregnancy was highest in age groups of 21-25 years. The parity ranged from nulliparous to multigravida. In this study, out of 40 case ,8(20%) were nulliparous and the rest 32(80%) were parous. Of the parous 10 cases (25%) were para 1, 16 cases (40%) were para2,3 cases (7.5%) were para 3, 1 case (2.5%) was para 4 and 2 cases (5%) was para 5.

Table 2. Predisposing factors

Risk Factor	Number of cases	percentages
Pelvic inflammatory Disease	18	45
Abortions	6	15
-spontaneous	14	35
-MTP		
Intra uterine contraceptives	4	10
Oral contraception	3	7.5
Tubal sterilization	6	15
Previous Ectopic	2	5
Treatment of infertility	2	5
Caesarean section	6	15
Appendectomy	3	7.5
Ovariectomy	2	5
Ovarian cystectomy	2	5
No significant risk factor	6	15

In the study of 40 cases of ectopic pregnancies, Pelvic inflammatory disease was found in 18(45%) cases. 4 patients (10%) had used intrauterine contraceptive devices and 3(7.5%) cases gave history of ingesting oral pills. There was history of abortions in 20 cases, 2(5%)

patients had conceived after treatment of infertility. 6(15%) undergone tubal sterilization, 2(5%) had tubal abortion for which laparotomy was done 2 years back. Past history of appendectomy, ovariectomy and ovarian cystectomy was present in 3(7.5%), 2(5%), 2(5%) respectively. Caesarean was done in 6(15%).

**Table 3. Presenting Symptoms**

SYMPTOMS	NUMBER OF CASES	PERCENTAGE
Pain abdomen	40	100
Amenorrhoea	32	80
Bleeding per vagina	30	75
Respiratory Difficulty	4	10
Fever	4	10
Fainting spells	6	15

All the cases (100%) had pain abdomen, amenorrhoea was present in 32 cases (80%). Abnormal vaginal bleeding was present in 30(75%) cases.

**Table 4. Duration of amenorrhoea**

Duration(in weeks)	Number of cases	Percentage
5	3	7.5
6	12	30
7	3	7.5
8	6	15
9	1	2.5
10	3	7.5
11	2	5
12	2	5

Out of the 40 cases studied, 32 had definite period of amenorrhoea ranging from 5 to 12 weeks.

**Table 5. Diagnostic procedures**

Tests	Number of cases	Number of positive cases	Percentage of positivity
Urine pregnancy test	40	37	92.5
Culdocentesis	29	21	72.4
Ultrasound	32	23	71.8
Laparoscopy	4	4	100

Only 25% cases that is only 9 patient had haemoglobin level above 10 rest all were anaemic. Urine pregnancy test was positive in 37(92.5%) cases. Diagnostic Laparoscopy was performed in 4 cases and all were diagnosed to had ectopic pregnancies. Ultrasound confirmed ectopic pregnancies in 23 cases and culdocentesis in 21 cases.

**Table 6. Site of Ectopic gestation**

SITE	Number of cases	Percentages
Fallopian tube	38	95
Ovary	2	5
Abdominal	0	0
Cervical	0	0
Ligamentary	0	0

**Table 7. Site of Ectopic pregnancy in fallopian tube**

Site of tube	Number of case	Percentage
Interstitial	2	5.26
Isthmic	9	23.68
Ampulla	16	42.11
Isthmic-Ampullary	3	7.89
Infundibulum/Fimbria	3	7.89
Indeterminate	5	13.16

Fallopian tube was the commonest site of ectopic pregnancy and constitutes 95%, out of which ampulla part was the commonest site which constitutes 42.11% rest were isthmic, interstitial cornal pregnancy. Out of 40, 30(75%) cases were ruptured, 5(12.5%) were tubal abortion and 5(12.5%) was intact.

**Table 8. Type of Operative Procedures**

Procedures	Number of cases	Percentage
Salpingectomy with contralateral tubectomy	16	53.3
Salpingectomy	10	33.33
Salpingo-opherectomy	4	13.33
Salpingostomy	0	0
Salpingotomy	0	0

Salpingectomy was the common procedure performed for the management of ruptured ectopic pregnancy. Medical management was given to 5 patients with intact ectopic pregnancy. No mortality observed during this study.

### Discussion

Ectopic pregnancy is a fatal emergency faced by the gynaecologist in the day to day practice. It is usually confused with other causes of acute abdomen. Early diagnosis and management can save the patient life can fertility can be preserved. Late diagnosis associated with morbidity and sometimes mortality in some patients.

The incidence of ectopic pregnancy differs from place to place. In the present series, the incidence of ectopic pregnancy is found to be 1/186 deliveries. An ectopic pregnancy can occur at any age of reproductive period. In the studies conducted by Rakhi et al and Poonam et al also shows peak age incidence was 20-25 years [5]. In the present study also, out of 40 cases, 18 cases (45%) were in the age group of 21-25 and 12 cases (30%) were in the age group of 26-30 years.

Doubt of Ectopic pregnancy should be kept in mind if a patient present with complaint of amenorrhea, pain abdomen with or without vaginal bleeding [6]. In one of the study conducted by Hassan N et al, abdominal pain was found in 70.97%, amenorrhea in 51.61% and irregular vaginal bleeding 25.81% [1]. Most of the cases in the present study presented as an acute emergency. All the cases that are 100% had pain abdomen of varying degree. Amenorrhea was present in 80% cases. Abnormal vaginal bleeding was present in 75% cases.

The aetiology of ectopic pregnancy cannot be attributed to only one factor. They are usually multifactorial. In the study by Ankum et al the previous tubal surgery was the most common risk factor associated with ectopic pregnancy other were previous history of ectopic pregnancy, history of the pelvic inflammatory disease, history of infertility, history of chlamydial or gonococcal cervicitis [2]. In the present study, Pelvic inflammatory was seen in 44% cases.

In a study by Bouyer et al. ampulla constitutes (70%), isthmic (12%), fimbria (11%), interstitial (2.4%), ovarian (3.2%) and abdominal (1.3%) [7]. In present series fallopian tube was involved in 38 (95%) cases and ovary in 2 (5%) cases. Among the fallopian tube involvement of right side was involved in 23 cases that is 60.53%, left side was involved in 15 (39.47%) cases. Ampulla was the site of involvement in 16 cases (42.11%), 9 cases (23.68%) were in the isthmus, an isthmo-ampullary junction was involved in 3 cases (7.89%), 3 cases (7.89%) were in fimbria. There were no cervical or abdominal pregnancies in our series. Among the 40 cases, 30 cases (75%) had had rupture, 5 (12.5%) cases had a tubal abortion and 5 (12.5%) cases were diagnosed before rupture. On the basis of patients' history, desire for future fertility and surgical findings the decision to perform conservative versus radical tubal surgery is taken [1]. In the present study Salpingectomy with contralateral tubectomy was performed in 16 (53.3%) cases, Salpingectomy in 10 (33.3%) cases and salpingo-oophorectomy in 4 (13.33%) cases. 35 patient received the blood transfusion. No mortality observed during the study.

### Conclusion

In our study, the incidence of ectopic pregnancy is found to be 1/186. Over 45% cases fall in the age group of 21-25 years. We observed that pelvic inflammatory disease was the main risk factor. The classic triad of symptoms for an ectopic pregnancy that is abdominal pain, amenorrhoea, and vaginal bleeding was common in our study out of which pain abdomen of varying degree was present in 100% cases, amenorrhea in 80% and vaginal bleeding in 75% cases. Fallopian tube was the commonest site constitutes 95%, out of which ampulla part was the commonest site. The preferred surgical management was salpingectomy.

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**Conflict of interest:** None declared

**Ethical approval:** The study was approved by the Institutional Ethics Committee

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