



## Experience with ectopic pregnancy in a hospital in India

### KEYWORDS

Ectopic pregnancy, ovarian ectopic, retrospective.

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**ABSTRACT** *Objective: To study the incidence, clinical presentation and risk factors of ectopic pregnancy in our centre.*

*Methods: This hospital based retrospective study was conducted at Rama Medical College, Ghaziabad. Data during the period Jan 2011 to December 2014 was analyzed retrospectively using the case-sheets and operative notes.*

*Results: During the period, a total of 2,563 deliveries were recorded of which forty two patients had ectopic gestations accounting for 1.6% (16 per 1000 deliveries). The peak age group was 26-30 years (42.8%); All 42(100%) of the patients were symptomatic. Risk factors present in the patients was PID seen in 16 (38%) of the patients and no risk factor in 12(28.5%) of the cases. Most patients were nulliparous 42.8% (18 cases). We report a higher incidence of ovarian ectopic pregnancy than most other series.*

*Conclusion: With the increasing incidence of ectopic pregnancy, a 'high index of suspicion' is essential for early diagnosis.*

**Introduction:** Ectopic gestations are pregnancies resulting from misimplantation of the blastocyst, outside the endometrial lining of the uterus. The aberrant area is not conducive to further development and growth (Cunninghams,1997). Ectopic pregnancy is a feared emergency as it not only leads to foetal wastage, but is also associated with high maternal morbidity, mortality and loss of future fertility (Abdul,2000).

To preserve the maternal life and future fertility of the patient, high index of suspicion, early and accurate diagnosis, immediate and skillful surgery and moral responsibility remains the cornerstone of management of ectopic pregnancy.

Several risk factors for ectopic pregnancy has been identified including a history of pelvic inflammatory disease (PID), smoking at the time of conception, previous ectopic pregnancy, previous pelvic surgery, assisted reproductive therapy (ART) and usage of intrauterine device (IUCD) usage (Anorlu,2005). Any abnormality of the tubes prevent normal transport of the fertilized egg to the uterus.

The incidence of ectopic pregnancy has been increasing worldwide due to Increased incidence of salpingitis, tubal surgeries and sterilizations, use of intrauterine devices and higher detection rates due to improvement in diagnostic techniques (Arup,2007;Rajkhowa,2000)

A 'high index of suspicion' is required for early diagnosis. Women of reproductive age presenting with a history of abdominal pain, amenorrhea, vaginal bleeding, syncope should have pregnancy test performed. Those with positive pregnancy tests should have a diagnostic work-up especially transvaginal scan and ancillary tests like quantitative  $\beta$ -hCG, laparoscopy and diagnostic uterine curettage (Tenore,2000).

### Materials and Methods:

This hospital based retrospective study was conducted at Rama Medical College and Research Centre. Data during the period Jan 2011 to December 2014 was analyzed

retrospectively using the case-sheets and operative notes. Forty two cases of ectopic pregnancy presented to the gynaecology emergency during this period.

The patient history (Age, obstetric history, amenorrhea, pain abdomen, bleeding per vaginum, predisposing factors and investigations (urine for pregnancy test,Ultrasound) were recorded.

### Results:

We conducted the study over a period of 4 years from January 2011 to December 2014.

During the period, a total of 2,563 deliveries were recorded of which forty two patients had ectopic gestations accounting for 1.6% of all deliveries. (16 per 1000 deliveries).

The peak age group was 26-30 years (42.8%); All 42 (100%) of the patients were symptomatic at presentation.

Abdominal pain, amenorrhoea and syncopal attack were the most common symptoms at presentation.

The most common risk factors present in the patients was PID seen in 16 (38%) of the patients. In our series no risk factor could be identified in a significant number of patients accounting for 12(28.5%) of the cases.

Most patients were nulliparous 42.8% (18 cases) Only 5 (11.9%) had three or more issues.

Clinically the patients commonly presented with (93%) pain abdomen, bleeding per vagina (78%). 95% of cases had a history of amenorrhea while 5% gave no history of amenorrhea.

Regarding the associated risk factors, about 38% (16 cases) had pelvic inflammatory disease. In the second largest group of 28.5%(12 cases) of patients, no risk factor could be identified. A few patients had a history of tubal surgery and LSCS (Table 3).

Clinically almost all had a tachycardia (40 cases) and two of cases were pulse less.

Most patients were anaemic. Eighteen of the cases (42.8%) , had Hb in range of 4-7 gm% and 47.6% Hb in range of 8-10 gm%. Only four cases (9.5%) had Hb more than 10 gm%.

The urine for pregnancy test was positive in all of cases. We used ultrasound as a routine in evaluation of ectopic pregnancy. It showed the site of pregnancy except in three cases of ovarian pregnancy in which the exact site could not be localised.

All patients underwent open exploratory laparotomy. Most of ectopic pregnancies were in the ampullary and isthmic (45.2%,28.5%) region respectively (**Table 4**).

All patients were given blood transfusions. About half the patients received a single unit of blood and half received two or more blood units. We did not encounter any mortality in this series.

An unusual feature of our study is the much higher incidence of ovarian ectopic pregnancy giving an incidence rate much higher than reported in other series. . Also in upto one-third of the patients, no risk factor could be attributed.

#### Tables:

**Table 1 about here**

##### Distribution of cases according to age:

Age group (years)	Number of cases	Percentage (%)
21-25	15	35.7
26-30	18	42.8
31-35	7	16.6
35-40	2	4.7

In our study maximum number of patients (42.8%) of the patients belonged to the age group of 26 to 30 years.

**Table 2 about here**

##### Distribution of cases according to parity

Parity	Number of cases	Percentage (%)
Nulliparous	18	42.8
One issue	9	21.4
Two issues	10	23.8
Three or more issues	5	11.9

In our study maximum number of patients (42.8%) of the patients were nulliparous and only 11.9% had three or more issues.

**Table 3 about here**

##### Distribution of cases according to predisposing factor

Predisposing factor	Number of cases	Percentage (%)
Pelvic Inflammatory disease	16	38.0
Infertility treatment	02	4.7
Previous Ectopic pregnancy	01	2.3
Tubal Surgery	05	11.9
Lower Segment Cesarean	03	7.1
IUCD insertion	03	7.1
No known predisposing factor	12	28.5

The commonest risk factor was a history of PID seen in 16 (38%) of patients. In the second largest group of 28.5% of patients, no risk factor could be identified. A few pa-

tients had a history of tubal surgery and LSCS.

**Table 4 about here**

##### Distribution of cases according to Site of ectopic pregnancy

Site of ectopic	Number of cases	Percentage (%)
Ampullary	19	45.2
Isthmic	12	28.5
Fimbrial	1	2.3
Isthmicoampullary	4	7.1
Interstitial	7.1	9.5
Ovarian	03	4.7

Tubal pregnancy were the most common (92.8%). Of these, ampullary ectopic was most common accounting for 19 (45.2) of all ectopic pregnancies.

#### Discussion:

The incidence of ectopic pregnancy has been increasing worldwide due to increased incidence of salpingitis and higher detection rates. In Finland the incidence increased three times during the period from 1966 to 1985. In USA, the incidence increased four fold from 4.5 to 16.18 per 1,000 pregnancies from 1970 to 1983 (CDC,1999;Nederlof,1990)

In a multicentric case control study in India, the incidence of ectopic pregnancy was 3.12 per 1000 pregnancies or 3.86 per 1000 live births (ICMR,1990).

In another Indian series, the ectopic pregnancy rate was 7.06 per 1000 deliveries or in other terms 1 in every 141 deliveries (Vyas, 2000).

Studies conducted in developed countries report an increasing incidence of ectopic pregnancy with age. In our study most ectopic pregnancy occurred in the age group of 21-26 yrs. This difference may be due to early marriage and child bearing in our country. Similar findings were seen in another Indian study (Vyas, 2000).

The peak age incidence was 26-30 years which is consistent with the findings by Kumar et al, Vyas et al (2000), Igbarese et al (2005), Poonam et al (2005) and Daftary et al (2005).

We found most of the patients to be primigravida. A Kolkata based study too revealed the primigravida to be most of the cases (Majhi,2007).

All patients brought to us had tachycardia while two were in a condition of shock. Majority had anemia and all received blood transfusion.

We found ampullary portion of tubes (45.2%) and isthmus (28.5%) to be most common sites. Vyas et al (2000) also find 42.5% ectopic pregnancies in ampullary portion and 22.4% in isthmic portion of the tubes. Both right and left side of tubes were involved with equal frequency. Vyas et al (2000) also did not find any significant difference between two sides. In our study, the commonest predisposing factors were PID (38.0%), infertility (4.7%), tubal surgeries (11.9%), previous ectopic pregnancies (2.3%)

Since the commonest risk factor, Pelvic inflammatory disease (PID) is preventable; educating the high risk groups by prevent STDs by use of barrier contraceptive methods may reduce the increases. Frequent douching increases the risk of PID and should be avoided. Clinicians need to

be trained to recognise the early signs and symptoms .

Where there is a clinical suspicion of ectopic pregnancy, serial  $\beta$ -HCG estimation and ultrasonography until localization of pregnancy is confirmed is warranted. Early diagnosis and prompt management will help reducing maternal mortality and morbidity rates.

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