



## INCIDENCE, RISK FACTORS, CLINICAL PRESENTATION AND MANAGEMENT OF ECTOPIC PREGNANCY IN A TERTIARY CARE CENTRE – A RETROSPECTIVE STUDY

### Obstetrics & Gynaecology

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### ABSTRACT

Ectopic pregnancy is one of the most life threatening emergency has significant effect on maternal mortality and morbidity.

#### Aim :

1. To study age group, risk factor, parity associated with ectopic pregnancy .
2. To find incidence of ectopic pregnancy
3. To know clinical presentation and intervention require in ectopic pregnancy.

**Material and Method** This retrospective study of 104 cases of ectopic pregnancy admitted to the Dep. of Obs and Gynae at Mahila Chikitsalya, SMS Hospital Jaipur from Dec. 2021 to 31 May 2022. Data of 104 patients was tabulated and analyzed. **Results** Majority of patients belongs to age group 20 to 25 years. Maximum no. of cases had PID as risk factor was with ectopic pregnancy (54.8%). The most common symptom was amenorrhea(84.6%) and majority of patients undergone surgical interventions. **Conclusion** Early diagnosis and treatment is the key to preserve fallopian tube and fertility.

### KEYWORDS

Ectopic, PiD, Fallopian tube Incidence, risk factors, clinical presentation & management of ectopic pregnancy and Histopathology report follow up in tertiary care centre – A Retrospective study

### INTRODUCTION

Ectopic pregnancy is defined as implantation of a fertilized ovum outside the uterine cavity.<sup>1</sup>

The incidence of ectopic pregnancy is 2 % approx of all the total number of pregnancy.<sup>2</sup>

The Most common location of ectopic pregnancy is ampulla of the fallopian tube followed by isthmus, infundibulum and interstitium.<sup>3</sup> Other sites of ectopic pregnancy can be ovary, abdomen, cervix etc.

It is one of the most common life threatening event which can lead to maternal mortality and morbidity. There are various risk factor which develop risk of ectopic pregnancy. There risk factors are age, tubal surgery, OCP use or POP use, IUCD use, previous history of abortion or MTP or LSCS, past history of Tuberculosis and H/O ovulation induction or IVF.<sup>4</sup>

The classical triad of ectopic pregnancy includes amenorrhea, abdominal pain and bleeding P.V. The early diagnosis of ectopic pregnancy is possible only due to improvement in USG – TVS and in urine and serum pregnancy tests<sup>5</sup>

Timely diagnosis and proper treatment has decreased mortality and morbidity. Ectopic pregnancy can present is variable presentation from asymptomatic to life threatening condition.

#### Aims and Objective

1. To know age group, risk factor and parity associated with ectopic pregnancy.
2. To know clinical presentation & Intervention required in ectopic pregnancy.
3. To find incidence of ectopic pregnancy.
4. To evaluate histopathology report .

### MATERIAL AND METHODS

This retrospective study was conducted at tertiary care hospital Mahila Chikitsalya SMS Hospital, Jaipur from 1<sup>st</sup> Dec. 2021 to 31<sup>st</sup> May 2022. A total no. of 104 cases of ectopic pregnancy were reported during this period and were admitted in the hospital through emergency.

The case sheet of patients collected from labour room registers and OT theater registers. Information about total number of deliveries, demographic characteristics, clinical symptoms and sign, parity, use of contraception, detail obs. history, risk factors for ectopic preg, PID, line of management, morbidity and mortality because of ectopic pregnancy were obtained. Investigations like urine pregnancy test, ultrasound TVS , complete blood count, blood group, b hcg tests were done.

Based on history, examination, tests, management was decided and data was collected and analysed statistically. Histopathology report was followed and tubal or ovarian pregnancy was evaluated and further tabulated in our study

#### Inclusion criteria

All women with ectopic pregnancies included in the study

#### Exclusion criteria :

All women with intrauterine pregnancy and abortion in present pregnancy were not included in study

**Table 1. Age associated with ectopic pregnancy**

Age Group	No. of patients	%
<20 yrs	2	1.92
20-25 yrs	40	38.46
26-30 yrs	36	34.61
31-35 yrs	18	17.30
>35 yrs	8	7.69
Total	104	100.00

**Table 2 Distribution of cases acc. to risk factor associated with ectopic pregnancy**

	No. of patients	%
Age >35 yr	8	7.69
Tubal surgery / tubal ligation	2	1.92
Prev. abortion / MTP	29	27.88
Prev. ectopic pregnancy	3	2.88
PID	57	54.80
H/o Tuberculosis	8	7.69

OCP/ POP	24	23.07
IUCD	3	2.88
Ovulation induction/IVF	7	6.73
Prev. Abd. pelvic surgery / LSCS	9	8.65

**Table 3 Distribution of cases acc. to signs and symptoms**

	No. of patients	%
H/o amenorrhea	88	84.61
Pain	82	78.84
Bleeding per vagina	52	50.00
Classical triad	50	48.07
Shock	48	46.15
Abdominal tenderness	80	76.92
Cervical motion tenderness	80	76.92
Mass felt through fornices	68	65.38
Abdominal distension	48	46.15

**Table 4 Distribution acc. to condition of fallopian tube.**

Condition of ectopic pregnancy	No. of patients	%
Ruptured	80	76.92
Unruptured	19	18.26
Tubal abortion	5	4.80

**Table 5: distribution according to amount of haemoperitonium**

Condition of ectopic pregnancy	No. of patients	%
Haemoperitonium $\geq$ 500 ml	80	76.92
Haemoperitonium <500 ml	20	19.2
No haemoperitonium	4	3.84

**Table 6 Morbidity and Mortality associated ectopic pregnancy**

Indicators	No. of patients	%
Blood transfusion >1 unit	50	48.07
Post op hospital stay (>10 days)	20	19.23
Post op wound complication	5	4.80
Require ICU admission	10	9.61
Require GA	50	48.07
Acute renal failure	0	0.00
Mortality	0	0.00

**Table 7 USG findings**

USG findings	No.	%
Free fluid in POD	70	67.30
Adenexal fluid mass	60	57.69
G. sac.	20	19.23
Cardiac activity	4	3.84

**Table 8 Parity**

Parity	No.	%
Multipara	60	57.69
Primi para	44	42.30
Total	104	100.00

**Table 9 Histopathology report analysis**

Site of pregnancy	No. of patients	%
Tubal	102	98.1
Ovarian	0	0
Abdominal	0	0
Scar site	0	0
cervical	0	0
Diagnosis could not be possible	2	1.9
Total no. of patients	104	100

## RESULTS

In this study total no. of deliveries were 7831 during the study period of which 104 (1.32%) were diagnosed as ectopic pregnancy.

Incidence of ectopic pregnancy per 1000 live birth is. 13.28% Table 1 depicts maximum no. of ectopic pregnancy were found in 38.4% in age group 20-25 years and minimum in age group less than 20 years i.e. 1.9 % Table 2 depicts in 8 patients (76%) patients with ectopic pregnancy had age >35 years as a risk factor associated with ectopic pregnancy. In 29 patients (27.5%) with ectopic pregnancy with previous abortion or MTP. In 57 patients (54.8%) ectopic preg had pelvic inflammatory disease. In 24 patients (23.07%) with ectopic pregnancy were OCP pill users and POP Users. 9 patients (8.6%) had undergone some abdominal surgeries or LSCS. Only 3 patients (2.8%) had history of previous

ectopic pregnancy and also 2 patients (1.92%) had tubal surgery or tubal ligation. 8 patients (7.69%) had history of tuberculosis. Only 3 patients (2.88%) were IUCD users and 7 patients (6.73%) had taken infertility treatment i.e. Ovulation induction or IVF.

Table 3 depicting signs and symptoms of ectopic pregnancy. The symptom of amenorrhea was most common i.e. 88 patients (84.6%). The classical triad including amenorrhea, pain and bleeding was found in 50 patients (48.07%) H/o pain seen in 82 patients (78.84%) and bleeding per vagina seen in 52 patients (50%). Patients seen in Shock were 48 (46.15%) abdominal tenderness was found in 80 patients (76.9%). Cervical motion tenderness was seen in 80 patients (76.9%). Mass was felt through fornices in 68 patients (65.38%).

Table 4 depicting condition of the fallopian tube 80 cases (76.9%) were of ruptured ectopic pregnancy and 19 cases (18.26%) were of unruptured ectopic and 5 cases (4.8%) were of tubal abortion.

Table 5 depicts amount of haemoperitonium haemoperitonium <500 ml seen in 20 (19.2%) and haemoperitonium  $\geq$  500 ml was seen in 80 cases (76.9%) Table 6 tells us about morbidity and mortality of ectopic pregnancy.

Blood transfusion ( $\geq$ 1) unit required in 50 cases (48.07%) 20 out of 104 patient required more than 10 days of post op hospital stay. 50 patients (48.07%) required general anaesthesia & 54 patients required spinal anaesthesia. Out of 104 patients only 10 patients (9.6%) needed ICU admission and 5 patients (4.8%) had post operative wound complication. No mortality and acute renal failure patients were seen in study. Table 6 depicts USG findings Out of 104 patients, 70 cases (67.3%) had free fluid in POD and 60 cases (57.6%) had adenexal mass found in USG.

Table 7 depicting parity in ectopic preg patients. Majority was of multipara i.e. 60 patients (57.6%) and primipara were 44 patients (42.3%). Out of 104 cases, 100 cases were surgically operated and only 4 cases were given medical treatment Table 8 histopathology report analysis Out of 104 cases 102 cases (98.1%) were tubal ectopic pregnancies, no ovarian ectopic pregnancies, no scar site ectopic pregnancy and 2 cases were there in which diagnosis could not be made.

## DISCUSSION

The incidence of ectopic pregnancy was 13.28% in 7831 deliveries which is comparable to study by Harish KM et al<sup>8</sup>. The most common age group in this study was 20-25 yrs (38-46%) which is comparable to study by Wakankar & Kedar<sup>6</sup> (28.84%) and Harish KM et al (42%)<sup>8</sup> Primigravida patients were 44 (42.3%) and rest 60 (57.6%) were multigravida in present study with similar results in study carried out by Harish KM et al<sup>8</sup> primi 41 (41%) and multigravidae were 59 (59%).

In present study H/o previous abortion / MTP found in 29 cases (27.8%) with similar to study by Wakankar<sup>6</sup> (32.69%) and study by Singh et al<sup>11</sup> (32%).

In our study PID was found in 54.8% cases that shows that PID is responsible for ectopic pregnancy that is similar to study by Akande V et al while PID was associated with 30 to 50% of all ectopic pregnancy. Tubal surgeries was carried out by 2 cases (1.92%) which is comparable to study by Shetty and Shetty<sup>9</sup> (3.2%).

In present study previous ectopic pregnancy was 3 (2.80%) comparable with the study of Saketha et al<sup>1</sup> 2001 in which 4 patients (4.4%) had prev ectopic preg. In our study IUCD cases were 3 people (2.88%) comparable with the study by Saketha et al<sup>1</sup> 2021 with 1.1% cases.

In our study most common presenting symptom was amenorrhea which was seen in 88 (84.6%) cases and pain abdomen seen in 82 (78.84%) comparable with the studies done by Wakankar et al<sup>6</sup> 2015 and Shetty & Shetty<sup>9</sup>.

In our study Classical triad of ectopic pregnancy was seen in 50 patients (48.07%) and which is comparable with Wakankar et al<sup>6</sup> study is (53.84%) In our study on clinical examination abdominal tenderness was present in 76.9% while is comparable to study by Wakankar et al<sup>6</sup> i.e. (71.15%) and also Gaddagi and Chandrashekar<sup>10</sup> (70.3%) In our study, cervical motion tenderness noticed in 76.9% cases comparable

with study by Gaddagi and Chandrashekhan<sup>10</sup> (75.7%).

In our study post op wound infection was found to be 4.8% which is comparable to study by Wakankar et al 2015<sup>6</sup> (9.6%) In our study patient required G.A. were 5 (48.0%) which is comparable to study by Wakander et al 2015<sup>6</sup> (51.92%).

In our study no mortality was reported which is comparable with the study done by Wakandar and Kedar<sup>6</sup> 2015 and Shetty and Shetty<sup>9</sup>.

## CONCLUSION

This study was done to determine the incidence, risk factors, clinical factors, treatment, morbidity and mortality associated with ectopic pregnancy. Ectopic pregnancies majority belonged to the age group 20 to 25 yrs (38.4%) in our study.

Early diagnosis of ectopic pregnancy is possible because of availability of more sensitive method such as hormonal test like beta HCG, urine pregnancy test, sonography and laproscopy. Proper evaluation of pregnancy and early diagnosis can preserve her tube and fertility and thus reduces morbidity and mortality.

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