

## A Clinicopathological Study of Ectopic Pregnancy for a Period of 1 Year

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### ABSTRACT

#### BACKGROUND

Ectopic pregnancy is increasing in its incidence, hence the importance of studying about the risk factors in relation to age of the patient, gestational age, symptomatology is essential for prevention and early diagnosis

#### AIMS AND OBJECTIVES

To estimate the prevalence of ectopic pregnancy, age distribution, risk factors, sites of ectopic pregnancy and histopathological features.

#### MATERIALS AND METHODS

This study is a hospital based observational study for a period of one year from December 2020 to November 2021 at tertiary care centre in the Department of Pathology in Andhra Medical College, Visakhapatnam.

The specimens sent for histopathological examination with clinical diagnosis of ectopic pregnancy are included in the study and were analysed for age distribution, risk factors and various sites of ectopic gestation. The results were tabulated.

#### RESULTS:

Sixty three cases of ectopic gestation were analyzed. Prevalence of ectopic gestation was 1.09%. The commonest age group was between 20-30 years (73%). The triad of symptoms with amenorrhea, pain abdomen and vaginal bleeding was seen in 31.74% of cases. Major risk factor for ectopic gestation was pelvic inflammatory disease (57.1%) of cases and non identifiable risk factors in 15.8% of cases. The lesions were common in multipara. Tubal ectopic gestation was the commonest site (96.8%) with predominance in ampulla. 77.8% of cases presented as ruptured ectopic pregnancy.

**CONCLUSION :-** Early diagnosis of ectopic will help prevent rupture and further complications. The importance of assessing the risk factors are that it helps to overcome those factors and prevents a recurring ectopic pregnancy.

**KEYWORDS:-** Ectopic pregnancy, Prevalence, Risk factors.

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### I. Introduction

Ectopic pregnancy is defined as the implantation of fertilized egg at a place outside the cavity of uterus<sup>1</sup>. This is a life threatening condition and is an important cause of maternal morbidity and mortality in the first trimester<sup>2</sup>. Any woman in reproductive age group with complaints of lower abdominal pain or vaginal bleeding should raise the suspicion of ectopic pregnancy. The risk factors associated with ectopic pregnancy are maternal age, smoking, history of previous ectopic pregnancy, pelvic inflammatory diseases, usage of IUCDs and assisted reproductive techniques aided pregnancies<sup>3</sup>. The implantation site of ectopic pregnancy helps because it affects the severity of the condition and also has effect on subsequent fertility<sup>4</sup>. Early diagnosis of ectopic pregnancy will help in preventing the rupture of ectopic pregnancy and enables the possibility of carrying out medical management or fertility sparing conservative surgical management<sup>5</sup>. This study was done to know the prevalence, age distributions, sites of ectopic pregnancy and the risk factors.

### II. Materials And Methods

**Study design –** this study is a hospital based prospective observational study for a period of one year from December 2020 to November 2021, in the Department of Pathology in Andhra Medical College, Visakhapatnam.

### **Inclusion Criteria**

Specimen sent for histopathology with clinical diagnosis of ectopic gestation

### **Exclusion Criteria**

Products of conception sent for histopathology from intrauterine conception.

**Study subjects** – In the present study, 63 specimens sent for histopathological examination with clinical diagnosis of ectopic gestation were analysed.

### **Methodology**

The clinical data was recorded from the records the specimen were grossed and appropriate sections subjected for routine paraffin embedded sectioning and stained with H&E. For statistical analysis, the data was recorded in MS excel sheet and the percentages were calculated using SPSS24.

## **III. Results:-**

Total number of cases of ectopic pregnancy analysed were 63. The total number of pregnant women admitted during the study period were 5740.

The prevalence of ectopic gestation was (63/5740) 1.09%.

The commonest age group affected are between 20-25 years (n=25,39.7%) followed by 25-30 years (n=21,33.3%). Above 30 years of age the number of cases were (n=13,20.63%). (Table 1).

All the cases came with the history of amenorrhoea and associated symptoms. Pain abdomen was associated in (n=34,53.96%), bleeding PV in (n=20,31.74%), nausea and vomiting in (n=6,9.52%) and asymptomatic in (n=3,4.76%)(Table 2).

The risk factors associated with ectopic pregnancy are: history of pelvic inflammatory disease in (n=36,57.1%) of cases and no identifiable risk factors in (n=10,15.8%) of cases (Table 3).

Ectopic pregnancy was more commonly seen in 2<sup>nd</sup> gravida (n=26,41.3%) followed by third gravida (n=17,27%). The prevalence of ectopic gestation in primi was (n=16,25.4%) (Table 4).

The gestational sac was between 6-8 weeks in (n=35,55.5%) of cases and >8 weeks in (n=17,27%) (Table 5).

Tubal gestation was the most commonest site constituting 61 cases of ectopic gestation (96.82%). We came across one case of cervical and one case of ovarian pregnancy.

The commonest site within the tube was Ampulla (n=51,80.9%) with four cases each in cornua and isthmus, 2 cases occurred in fimbria (Table 6). In these, 49 (77.8%) of cases presented as ruptured ectopic and in 14 (22.2%) of cases the sac was intact. (Table 7).

The surgical procedures adopted for ectopic gestation was unilateral salpingectomy in (n=55,87.3%), unilateral salpingo oophorectomy in (n=5,7.9%) of cases and hysterectomy in (n=3,4.7%) of cases (Table 8).

The histopathological features in cases of ruptured ectopic pregnancy was the presence of chorionic villi with hemorrhage in the lumen of the tube and wall showing congested, thrombosed blood vessels, cytotrophoblasts and syncytiotrophoblasts with inflammatory cells.

## **IV. Discussion :-**

Ectopic pregnancy is a well recognized as a life threatening emergency in pregnancy. The prevalence in most of the hospital based studies varies from 1-2%. Diagnosis requires a high index of suspicion which usually presents as classical triad of amenorrhoea, abdominal pain and vaginal bleeding sometimes women are totally asymptomatic and unaware of the pregnancy presenting with hemodynamic shock.

In the study conducted by S.Tahmima<sup>6</sup> from south india, they analyzed 72 cases of ectopic pregnancy, majority of women were aged 21-30 years and (27.8%) women were nulliparous. The most common risk factor was previous history of abortion (36.1%), Pelvic surgery (37.50%) and tubectomy in (20.8%) of cases. The classical triad of amenorrhoea, vaginal bleeding and lower abdominal pain in (40.3%) of cases. Acute abdominal pain was the most common complaint seen in 81.9% of women. The prevalence of ectopic gestation compared with total pregnancies during the study period was (0.91%).

In majority of the studies the prevalence of ectopic gestation varied from 0.56% to 1.5%<sup>7</sup>.

Majority of the studies in English literature the triad of symptoms varied from 28%-95%<sup>8</sup>.

In the study done by Shagufta et al<sup>9</sup>. 87.5 % of cases presented with amenorrhoea and pain abdomen in 75% of cases.

In the study conducted by Panchal et. Al<sup>10</sup> 77.66% of cases belonged to the age group between 21 to 30 years.

According to the study done by Sudha et al<sup>11</sup>. 15.78% of the patients had pelvic infection and history of previous ectopic in 8.33% cases.

In the study done by Shetty k et al<sup>12</sup>, 83.9% were multiparas and 16.1% were primiparas<sup>9</sup>. In the present study 74.6% cases were multiparas and 25.4% being primi. The gestational sac was between 6-8 weeks in 55% of cases.

In the study done by WM Fageeh<sup>13</sup> the history of usage of IUCD was seen in 1.88% of cases.

In the present study the prevalence of ectopic gestation was seen in 1.09% .The commonest age group was between 20-25 years (39.7%) followed by 25-30 years (33.3%).The triad of symptoms of amenorrhea with abdominal pain and vaginal bleeding was seen in 31.74% of cases.The major risk factor associated with ectopic pregnancy was pelvic inflammatory disease in 57.1% of cases followed by history of previous ectopic gestation in 19%,IUCD in 4.76%, tubectomy in 3.17% and no identifiable risk factors in 15.8% of cases.

According to the study done by Udigwe G.O<sup>14</sup> was more common in the tubes,ampulla was the most commonest site in 69.4% of cases. In the present study tubal ectopic gestation was seen in 96.8% of cases with ampullary location being 80.9%.ectopic gestation was seen in cervix and ovary.

In the study done by Garikapati K et al<sup>15</sup>. 78% of ectopics presented with rupture.In the present study 77.8% were ruptured ectopic pregnancy.

In the study by Ilanjselvi M<sup>16</sup> unilateral salpingectomy was the most common procedure performed in 75.47% of cases. In the present study,unilateral salpingectomy was done in 87.3% of cases,unilateral salpingo oophorectomy in 7.9% of cases and hysterectomy in 4.7% of cases.

## V. Conclusion :-

Timely diagnosis in early pregnancy will reduce the morbidity and mortality due to ectopic pregnancy.identifying the underlying risk factors,prediction of ectopic pregnancy and timely intervention is very much necessary.

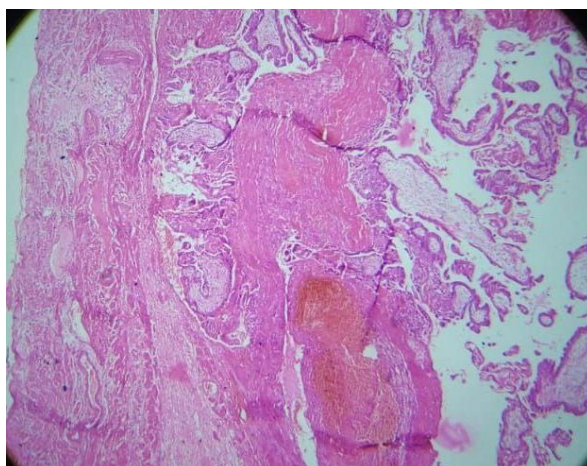
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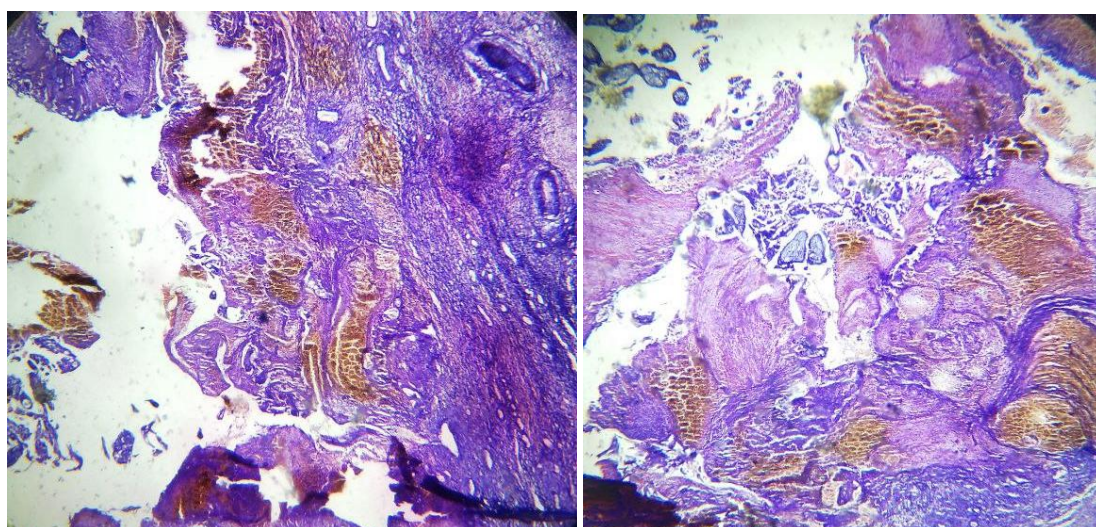
## FIGURES



**FIGURE 1 :** Gross photograph of tube showing dilated ampullary part with haemorrhages.



**FIGURE 2 :** Photomicrograph showing tubal wall with chorionic villi and areas of haemorrhages.



**FIGURE 3 & 4 :** Photomicrograph showing ovarian stroma with chorionic villi and areas of haemorrhages.

**Table 1**

Age	No of cases	Percentage
<20	4	6.3%
20-25	25	39.7%
25-30	21	33.3%
30-35	10	15.9%
35-40	3	4.8%
Total	63	100%

**Table 2**

**Clinical presentation of cases of ectopic pregnancy**

Symptoms	Number	Percentage
Pain abdomen	34	47.6%
Asymptomatic	3	4.7%
Bleeding pv	20	31.7%
Nausea and vomitting	6	9.5%
Total	63	100%

**Table 3**

**RISK FACTORS**

Risk Factors	NUMBER	PERCENTAGE
H/o PID	36	57.1%
PREVIOUS H/O ECTOPIC PREGNANCY	12	19%
H/O IUCD	3	4.76%

H/O PREVIOUS TUBECTOMY	2	3.17%
NO IDENTIFIABLE RISK FACTORS	10	15.8%
Total	63	100%

Table 4

GRAVIDITY	NUMBER	PERCENTAGE
PRIMI	16	25.4
2 <sup>ND</sup>	26	41.3
3 <sup>RD</sup>	17	27
>3	4	6.3
Total	63	100%

Table 5 :- GESTATIONAL AGE

GA	NUMBER	PERCENTAGE
<6 WEEKS	11	17.5
6-8 WEEKS	35	55.5
>8 WEEKS	17	27
Total	63	100%

Table 6

SITE OF EXTRA UTERINE GESTATION

SITE OF PREGNANCY	NUMBER	PERCENTAGE
CORNUA	4	6.3
AMPULLA	51	80.9
ISTHMUS	4	6.3
FIMBRIA	2	3.1
CERVIX	1	1.58
OVARIAN	1	1.58
total	63	100%

Table 7

RUPTURED OR NOT

	NUMBER	PERCENTAGE
RUPTURED	49	77.8%
UNRUPTURED	14	22.2%
total	63	100%

Table 8

PROCEDURE UNDERWENT

PROCEDURE	NUMBER	PERCENTAGE
UNILATERAL SALPINGECTOMY	55	87.3%
UNILATERAL SALPINGO OOPHORECTOMY	5	7.9%
HYSTERECTOMY	3	4.7%
Total	63	100%

Legends :-

FIGURE 1 : Gross photograph of tube showing dilated ampullary part with haemorrhages.

FIGURE 2 : Photomicrograph showing tubal wall with chorionic villi and areas of haemorrhages.

FIGURE 3 & 4 : Photomicrograph showing ovarian stroma with chorionic villi and areas of haemorrhages.

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