

A Prospective Clinical Study on Ectopic Pregnancy

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How to cite this article:

Padma Priya Vellore, Ipineni Padma Priya/A Prospective Clinical Study on Ectopic Pregnancy/Indian J Obstet Gynecol. 2021;9(2):15-18.

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Abstract

Background: Ectopic pregnancy is defined as when gestational sac implants itself outside the uterine cavity in the fallopian tubes, ovary, cervix, and peritoneum. Ectopic pregnancy has become one of the commonest acute abdominal emergencies encountered by gynecologist in today's setup. The frequency of ectopic pregnancy is increasing throughout the globe and it is the most life threatening emergency in first trimester of pregnancy. Not only it increases the mortality rate but it also effects the fertility of the patient.

Methods: This prospective observational study was conducted by the department of OBG at Narayana medical college, Nellore, Andhra Pradesh from December 2019 to May 2020. A total of 42 patients were included in the study on the basis of inclusion criteria.

Results: The maximum 21(50%) were in the age group of 26-30 years followed by 14(33.3%) from the age group 20-25 years. The mean age of the patients was 26.62 (SD14.66) years ranging from 20 to 40 yrs. The study of previous reproductive performance revealed that the maximum incidence of ectopic gestation (71.3%) occurred among the third (42.9%) and fourth gravida (28.4%).

There were no significant correlations between other sites of ectopic pregnancy and condition of the tube.

Keywords: Ectopic pregnancy; Ampulla; Fallopian tube.

Introduction

Ectopic pregnancy is defined as when gestational sac implants itself outside the uterine cavity in the Fallopian tubes, ovary, cervix and peritoneum.¹ Ectopic pregnancy has emerged as one of the commonest acute abdominal emergencies encountered by gynecologist in today's setup. The frequency of ectopic pregnancy is increasing throughout the globe and it is the most life threatening emergency in first trimester of pregnancy. Ectopic pregnancy not only increases the mortality rate but it also effects the fertility of the patient. The word ectopic is from Greek; 'EX' and 'TOPOS' meaning "out of place".² The clinical presentation of ectopic pregnancy may vary from asymptomatic to symptomatic presenting with haemoperitoneum and shock. The classical clinical triad of amenorrhea, bleeding per vagina and lower abdominal pain may not be present in all the cases. Ectopic pregnancy is a disease of diagnostic surprises which makes it an interesting and a challenging problem making it difficult to diagnose and manage.

Materials and Methods

This prospective observational study was conducted by the department of OBG at Narayana medical college, Nellore, Andhra Pradesh from December 2019 to November 2020. All diagnosed

cases of ectopic pregnancy who fulfilled the inclusion criteria were included in the study.

Inclusion Criteria

- All diagnosed cases of ectopic pregnancy admitted to hospital during the study period.

Exclusion Criteria

- All intrauterine pregnancies.
- Ectopic pregnancies managed by medical or expectant management.
- Sonologically diagnosed to mass (acute abdomen).

Procedure

The detailed history and proper clinical findings were entered in a proforma case sheet. The clinical examination was done and necessary investigations and treatment were carried out.

Statistical Analysis

The data was analyzed using SPSS software version.¹⁶ Descriptive statistics like mean and percentages were used to interpret the results. Chi square test was used for comparison and differences were considered significant at $P < 0.05$ with a confidence interval of 95%.

Results

A total of 42 cases were included in this study at our hospital during the period of December 2019 to November 2020.

Table 1: Ectopic pregnancy in relation to age.

Age	No of patients	Percentage
20-25	14	33.3%
26-30	21	50%
31-35	4	9.5%
36-40	2	4.8%
41-45	1	2.4%
Total	42	100

Out of 42 subjects enrolled into the study, maximum 21(50%) were in the age group of 26-30 years followed by 14(33.3%) from the age group 20-25 years. The mean age of the patients was 26.62 (SD14.66) years ranging from 20 to 40 yrs (Table 1).

Table 2: Ectopic Pregnancy in Relation to parity.

Parity	No of patients	Percentage
Nulliparous	1	2.4%
1	2	4.8%
2	6	14.3%
3	18	42.9%
4	12	28.4%
5	3	7.2%
Total	42	100

The study of previous reproductive performance revealed that the maximum incidence of ectopic gestation (71.3%) occurred among the third (42.9%) and fourth gravida (28.4%)(Table 2).

Table 3: Ectopic pregnancy in relation to mode of presentation.

Presentation	No of patients	Percentage
Amenorrhoea	36	85.7%
Abdominal pain	32	76.2%
Bleeding	22	52.4%
Others	12	28.6%

The typical triad of amenorrhoea, pain abdomen and bleeding was observed in majority of the cases. Amenorrhoea and abdominal pain were the most significant symptoms present in 85.7% and 76.2% of the cases. Bleeding was present in 22(52.4%) cases (Table 3).

Table 4: Ectopic pregnancy in relation to site.

Site	No. of patients	Percentage
Ampulla	31	73.8%
Isthmus	8	19%
Infundibulum	2	4.8%
Interstitial	1	2.4%
Total	42	100

On surgery 31 cases (73.8%) were found to be ampullary and 8 cases were isthmus (19%). The remaining 2 cases were infundibulum (2.4%) and 1 case was found to be interstitial (2.4%)(Table 4).

Table 5: Ectopic pregnancy in relation to condition of the fallopian tube on laparotomy.

Condition of the tube	No. of patients	Percentage
Ruptured	22	52.4%
Tubal abortion	11	26.2%
Unruptured	9	21.4%
Total	42	100

In this study, significantly 22 cases had rupture (52.4%) followed by tubal abortion in 11 cases (26.2%) and 9 cases presented with unruptured

ectopic (21.4%)(Table 5).

Table 6: Correlation between the mode of presentation and condition of the tube at laparotomy.

Presentation	Condition of the fallopian tube on laparotomy			Total
	Ruptured	Tubal abortion	Unruptured	
Amenorrhoea	19(52.8%)	6(16.7%)	11(30.5%)	P<0.965
Abdominal pain	13(40.6%)	6(18.8%)	13(40.6%)	P<0.221
Bleeding	10(45.5%)	4(18.1%)	8(36.4%)	P<0.987
Others	6(50%)	3(25%)	3(25%)	p<0.152

On laparotomy, patients who had a ruptured fallopian tube, had amenorrhoea (52.8%) and bleeding (45.5%) as their major symptoms on admission. Whereas 25% of the patients who had a tubal abortion, presented with other symptoms like nausea, vomiting and syncopal attacks. Patients with unruptured tubal pregnancies had abdominal pain (40.6%) as the most common symptom on admission (Table 6).

Table 7: Correlation of the site of ectopic pregnancy and condition of the tube at laparotomy.

Site	Condition of the fallopian tube on laparotomy			Total
	Ruptured	Unruptured	Tubal Abortion	
Ampulla	16(51.6%)	9(29%)	6(19.4%)	31(100%)
Isthmus	3(37.5%)	0	5(62.5%)	8(100%)
Infundibulum	2(100%)	0	0	2(100%)
Interstitial	1(100%)	0	0	1(100%)
Total	22(52.4%)	9(26.2%)	11(21.4%)	42(100%)

CC=0.536; P<1.88

In this study, among the 31 cases of ampullary pregnancy, 17 cases had a ruptured tube (52.8%) and 6 cases had tubal abortion (19.4%). 5 cases (62.5%) of the isthmus ectopic culminated in tubal rupture (Table 7).

Discussion

Ectopic pregnancy is common in reproductive age group but can be seen in any age groups. The maximum cases 83.3% were in the age group of 21-30 years (Table 1). The results are in accordance with Chate MT et al³, Panchal D et al⁴ and Gaddagi RA et al⁵ who noted that 70.96%, 71.66% and 70.2% of patients belonged to the same age group. Majority of women with ectopic pregnancy were multi gravida (71.3%)(Table 2). This correlates with the studies done by Shetty S et al⁶ (83.9%), Panchal D et al⁴ (81.66%) and Poonam et al⁷ (83.6%). The

higher incidence in multigravida is probably due to previous miscarriages and infection resulting in tubal damage. The typical triad of amenorrhoea, pain abdomen and bleeding was observed in majority of the cases. Amenorrhoea and Abdominal pain were the most significant symptoms present in 85.7% and 76.2% of the cases (Table 3) which was consistent with the study done by Chate MT et al³ (77.41% and 92.47%) and Shivakumar et al⁸ (100% and 93.3%) who noted that amenorrhoea and abdominal pain were the most common presenting symptoms. The majority of the cases in our study had ampulla (73.8%) as the most commonest site of ectopic pregnancy (Table 4) which were consistent with the study done by Shivakumar et al⁸ and Madan A et al⁹ who noted ampulla as the most common site in 73.2% and 68.7% of cases respectively. On laparotomy, patients who had a ruptured fallopian tube, had amenorrhoea (52.8%) and bleeding (45.5%) as their major symptoms on admission (Table 6) but there was no significant correlation between the mode of presentation and condition of the tube at laparotomy. Among 73.8% cases of ampullary pregnancy, 52.8% had a ruptured tube and 19.4% of cases had tubal abortion (Table 7) and this showed no significant correlation of the site of ectopic pregnancy and condition of the tube at laparotomy and there were no significant correlations between other sites of ectopic pregnancy and condition of the tube.

Conclusion

From this study, we can conclude that ectopic pregnancy is one of the life threatening emergency and remains a challenge to the treating doctor. The treating doctor should always bear in mind of ectopic pregnancy when any woman in the reproductive age group presents with lower abdominal pain or vaginal bleeding. The early diagnosis and treatment by the doctor helps in preventing the mortality and morbidity associated with ectopic pregnancy.

Funding: No funding sources

Conflict of interest: None declared

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

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