

Clinical Study of Ectopic Pregnancy in a Tertiary Care Centre

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Abstract

Background : Ectopic pregnancy is an emergency condition threatening mothers life. This has increased recently due to various early diagnostic modalities . This study aims to analyze the maternal characteristics , clinical presentation , management in a tertiary care hospital .

Methods : This study was carried out in a tertiary care hospital at Kallakurichi , Tamil Nadu. All the cases of ectopic pregnancies admitted and managed in the Department of Obstetrics and Gynecology at GMCH , Kallakurichi between the period of July 2021 to June 2022 has taken for the study .

Results : Total ectopic pregnancies admitted during the study period was 24. This accounts for about 0.2% of total obstetric admissions and 1 per 350 deliveries . Most common age group in the present study was between 26-30 yrs accounting for 37.5 % . In this study 83.3 % were Multigravida. History with evidence of previous tubal ligation as observed in 25% of total ectopic pregnancies. Ampulla is the most common site of ectopic in 62.5% of cases . 75% had history of amenorrhoea . 91.7% had acute abdomen on presentation , 58.3 % had bleeding pv, 79.2% had pallor and 25% had shock on presentation.

Conclusion : Diagnosis of ectopic pregnancy needs high degree of suspicion and early intervention will reduce the morbidity and mortality. All women in the reproductive age admitted with pain abdomen to emergency department needs to be ruled out of ectopic pregnancy .

Key words: Ectopic pregnancy , sterilization failure, laparotomy.

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I. Introduction

The blastocyst normally implants in the endometrial lining of the uterine cavity. Implantation anywhere else out of the uterine cavity is an ectopic pregnancy (1) . Ectopic is derived from the Greek word 'EXTOPUS ' meaning 'out of place' . This is a life threatening condition and the chance of subsequent successful pregnancy is reduced after an ectopic pregnancy.

Recently the incidence of ectopic pregnancy has been increased due to various factors like early diagnosis, prevalence of sexually transmitted infections of tube and subsequent damage (2), tubal sterilisation procedures, Assisted Reproductive Technique and tubal surgeries for infertility. Incidence of ectopic pregnancies ranges from 1 in 150-300. The incidence increases with age and it is the most common cause of maternal death in 1st trimester . The Cinical Triad of symptoms like amenorrhoea , bleeding pv and lower abdominal pain is present in < 50% of cases only(3).

The most common cause of death in ectopic pregnancy being Hypovolemic shock. This study aims to find the incidence , clinical presentation , Risk factors and management outcome of patients admitted as ectopic pregnancy.

II. Materials and Methods

This is a Retrospective study conducted in the Department of Obstetrics and Gynecology, Government Medical College & Hospital , Kallakurichi. All the cases of ectopic pregnancies admitted and managed at GMCH, Kallakurichi between the period of July 2021 to June 2022 are taken for the study. All the case sheets were analyzed for maternal characteristics, clinical presentation, management and outcome.

III. Results

Total number of obstetric admissions during the period of study was 12,592. Total deliveries during the study period were 8,425. Total ectopic pregnancies admitted during the study period were 24. This accounts for about 0.2% of total obstetric admissions and 1 per 350 Deliveries.

Age

Most common age group in the present study was between 26-30 yrs accounting for 37.5 % . 29.1% were in the age group of 21-25 yrs. 16.7% were in age group of 31-35 yrs. 12.5% were in age group >35 yrs and it was only 42 % in < 20 yrs

Table 1: Age Distribution

Age	No .of patients	Percentage
< 20 yrs	1	4.2%
21-25 yrs	7	29.1%
26- 30 yrs	9	37.5%
31-35 yrs	4	16.7%
>35 yrs	3	12.5%
Total	24	100%

Gravida of the patients

In this study 83.3 % were Multigravida and only 16.7% were Primigravida . Among the multigravida 8 patients were G3 accounting for 33.3 % in total and 7 patients were G2 accounting for 29.2% in total and 20.8% were G4.

Table 2: Gravida of the patients

Gravida	No .of patients	Percentage
Primi	4	16.7%
G2	7	29.2%
G3	8	33.3%
G4	5	20.8%
Total	24	100%

Mode of previous delivery in Multigravida

Among the 20 multigravida patients , 12 had previous vaginal delivery of about 60% and 40% had cesarean delivery.

Table 3: Previous delivery in multigravida

Mode of previous delivery	No .of patients	Percentage
Previous vaginal delivery	12	60%
Previous 1 c.section	4	20%
Previous 2 c.section	4	20%

History of previous tubal ligation

History with evidence of previous tubal ligation was observed in 6 cases. This is about 25% of total ectopic pregnancies. Among them 3 patients had underwent puerperal sterilization (12.5%). 2 patients had previous c section with concurrent sterilisation (8.3%) and one patient had undergone interval Trans Abdominal Tubectomy.

Table 4: Previous tubal ligation

Timing of previous tubal ligation	No .of patients	Average
Puerperal sterilization	3	12.5%
C section with concurrent sterilisation	2	8.3%
Interval TAT	1	4.1%

Side of presentation of ectopic pregnancy

Among the 24 patients 13 had ectopic pregnancy on Right side (54.2%) and 11 (45.8 %) had on Left side.

Table 5: Side of ectopic

Side of ectopic	No .of patients	Percentage
Right	13	54.2%
Left	11	45.8%
Total	24	100%

Mode of presentation on admission

Among the 24 patients with ectopic pregnancy 20 patients presented with ruptured ectopic pregnancy accounting for about 83.4 % , 2 had unruptured ectopic pregnancy with 8.3% and 2 had tubal abortion with 8.3%.

Table 6: Mode of presentation

Mode of presentation	No .of patients	Percentage
Ruptured ectopic	20	83.4%
Un ruptured ectopic	2	8.3%
Tubal abortion	2	8.3%
Total	24	100%

Side of tubal ligation in cases of sterilisation failure

Total cases of sterilisation failure are 6. Among these 2 patients had ectopic on Right side with history of c section with concurrent sterilisation accounting for 1/3rd of total failure cases . And 4 patients had ectopic on Left side accounting for 2/3rd of total failure cases and were done puerperal sterilisation in 3 patients and one patient had interval TAT.

Table 7: Side of ectopic in failure cases

Side of ectopic in failure cases	No. of patients	Previous timing of sterilisation
Right	2	Both concurrent sterilisation with c section
Left	4	3 – PS 1 – Interval TAT

Site of ectopic pregnancy

Ampulla is the most common site of ectopic in 62.5% of total cases while Fimbriae is the least common site with 4.2% in this study.

Table 8: Site of ectopic pregnancy

Site of ectopic	No. of patients	Percentage
Ampulla	15	62.5%
Isthmus	6	25%
Cornua	2	8.3%
Fimbriae	1	4.2%
Total	24	100%

Emergency Procedure done

About 87.5% of cases were done U/L salpingectomy during laparotomy for ectopic pregnancy. 8.3% had undergone U/L salpingectomy with contralateral tubal ligation and had 4.2% had U/L salpingo Oophorectomy.

Table 9: Procedure done on laparotomy

Procedure	No. of patients	Percentage
Unilateral salpingectomy	21	87.5%
U/L salpingectomy with contralateral tubal ligation	2	8.3%
U/L salpingo Oophorectomy	1	4.2%
Total	24	100%

Clinical presentation

75% had history of amenorrhoea. 91.7% had acute abdomen on presentation , 58.3 % had bleeding pv, 79.2% had pallor and 25% had shock on admission.

Table 10: Clinical presentation

Presentation	Number of patients	Percentage
Amenorrhoea	18	75%
Acute abdomen	22	91.7%
Bleeding pv	14	58.3 %
Shock	6	25%
Pallor	19	79.2%

All the cases were done emergency laparotomy and transfused adequate blood and blood products . None of the patients had post operative morbidity or mortality in the current study.

IV. Discussion

Age group

In this study most common age group of presentation of ectopic pregnancy is between 26-30 yrs accounting for 37.5% of total cases. This corresponds to the study by Meenakshi et al (4) which showed 34.4% and by Shukla DB et al (5) showed 30.4% in the similar age group . This also corresponds closely to the study by Asuri et al (6) with 72% presented in the age group between 20-30 yrs. In our study it is 66.6% in the age between 20-30 yrs.

Incidence

In our study the incidence of ectopic pregnancy was 1:350 deliveries . This is similar to the study by Asuri et al which showed 1:380 deliveries.

Parity

In the present study ectopic pregnancy mostly occurred in multigravida corresponding to 83.3%. Multiparous women were found to be more prone for ectopic pregnancy as in study by Shetty et al (7) of about 83.9% and Gaddagi et al with 62.2% and it was 62% in the study by Asuri et al.

Risk factors

In this study 25% had past history of tubal ligation. This corresponds to the study by Chate MT et al (8) from Maharashtra which showed 23.65%. And study by Asuri et al from Hyderabad showed 12.9% of cases had previous tubal ligation. In our study H/O previous c section was seen in 40% of cases where as study by Asuri et al showed only 6.45%.

Site of ectopic pregnancy

In our study ampulla is the most common site of ectopic accounting for about 62.5%. this corresponds with various studies which all supported the common site being ampulla of fallopian tube. It is 51.6% in the study by Chate et al, 69.7% by Gaddagi et al and 45.2% by Shetty et al.

Clinical presentation

In our study, pain abdomen was noted in 91.7% of cases. This seems to be the most common presentation as in the study by Shabab et al (9) with 92.5%, Gaddagi R et al with 89.2%, Shetty et al with 80.6% and Porwal et al (10) with 87.5%. Amenorrhoea was the next common finding in our study of about 75%. This is supported by the study by Shabab et al which showed 75%, Gaddagi R et al (75.7%) and Chate et al (77.4%). Bleeding was reported in 58.3% of cases in the current study. This was very close to the study by Chate et al with 58.06%.

25% of patient presented in hypovolemic shock in our study. Where as the study by Asuri et al showed 40.5%. In our study 80.4% of cases presented with ruptured ectopic pregnancy which is close to the study by Chate et al (76.35%) and by Shukla et al (63.92%).

Side of ectopic pregnancy

In the current study Right sided fallopian tube was more commonly involved accounting for about 54.2% of total cases. This is similar to the study by Shukla et al with 55%, Laxmi et al (11) and Shetty et al.

Procedure done on laparotomy

In this study unilateral salpingectomy was done in 87.5% of cases. This corresponds to the study by Chate et al of about 75.26% and Shetty et al with 90.3%. Unilateral salpingo Oophorectomy was done in only one case with 4.1% in the present study which corresponds to the study Shetty et al of about 6.5%, Asuri et al with 6.45%. Unilateral salpingectomy with contralateral tubal ligation was done in two cases with 8.3%. This is close to the study by Asuri et al which showed about 9.35%.

V. Conclusion

Diagnosis of ectopic pregnancy needs high degree of suspicion, diagnosis and early intervention to reduce the morbidity and mortality. It should be suspected more in patients with history of previous tubal ligation presenting with acute abdomen, irregular spotting or bleeding with or without amenorrhoea. All women in the reproductive age admitted with pain abdomen to emergency department must undergo urine card test for pregnancy and USG abdomen and pelvis should be done emergency. This will help in early diagnosis and management of all cases of ectopic pregnancy and prevent morbidity and mortality.

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