Clinical study of ectopic pregnancy

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ABSTRACT

Background: Ectopic pregnancy is not an uncommon condition and is potentially a life- threatening emergency. There is a rising trend in incidence which necessitates the gynecologists to have comprehensive knowledge about the disease.

Aim of the study: To determine the incidence, risk factors, clinical features and management.

Materials and method: This study is conducted in Department of Obstetrics and Gynecology of PIMS, Karimnagar. It is a retrospective descriptive study on patients who presented to our department with clinical features of ectopic pregnancy and later confirmed with intraoperative findings or ultrasound, in the 3-year period from January 2017 to January 2020.

Result: A Total of 34 patients were diagnosed to have ectopic pregnancy with an incidence of 1in 114 deliveries. The cause of ectopic pregnancy was dilatation and curettage in 11.8% and PID, infertility, prior tubal surgery, previous abortions and OCP usage each contributes by 5.9%. Surgical treatment with salpingectomy was done in majority of the cases and medical management in 3 patients. Blood transfusions were given in 38.2% of cases. Postoperative period is uneventful in all the cases.

Conclusion: Gynecologists should have comprehensive knowledge about the clinical presentation and risk factors of EP. If suspected clinically, encouraging women to undergo early ultrasonography allows early detection of EP and can be managed medically or fertility sparing surgical procedures.

Keywords: Amenorrhea, Maternal mortality, Risk factors, Ectopic pregnancy, Ultrasonography, Vaginal bleeding

Introduction

In Ectopic Pregnancy (EP) gestational sac is implanted outside the endometrial lining. The incidence of EP is around 1-2% in most hospital based studies[1-5] and has been on the rise during the last few decades.

Classic triad of amenorrhea, abdominal pain and vaginal bleeding is may not be seen in majority of cases. Women may present with non-specific symptoms, unaware of an ongoing pregnancy or even present with hemodynamic shock. The contribution of EP to the maternal mortality rates in developing countries including India is not precisely known, with data from few studies indicating 3.5- 7.1% maternal deaths due to EP[6-7].

An accurate history and physical examination and its correlation with diagnostic techniques is important for diagnosis and management. Immediate intervention is required to prevent maternal morbidity and mortality.

Material and Methods

This study was conducted at Prathima Institute of Medical Sciences, a tertiary care teaching hospital in Karimnagar, south India. The study was approved by the Institute Ethics Committee. It is a retrospective descriptive study on patients who presented to our department with clinical features of ectopic pregnancy and later confirmed with intraoperative findings or ultrasound, in the 3-year period from January 2017 to January 2020. The case records of patients diagnosed with EP retrieved from the medical records department.

Patient characteristics like age, parity, presenting symptoms, clinical signs, and examination findings were noted. Mode of diagnosis, management modality, complications and need for blood transfusion were also recorded. The primary outcome measures studied were incidence of EP, their risk factors, mortality and morbidity in these women

RESULTS

There were 34 ectopic pregnancies in the study period. Incidence of EP is 1 in 114 deliveries (0.87%). It was more common in the age group of 21 to 30 years (70.6%) with minimum age at diagnosis made was 19 years and maximum age at diagnosis made was 38 years. 9 out of 34 patients were primigravida and rest were multiparous women.

Table 1: Age and parity wise distribution of cases

Age			Party		
Age	No. of Cases	Percentage	Parity	No. of Cases	Percentage
15-20	4	11.8%	NULLI	9	26.5%
21-25	15	44.1%	1	4	11.8%
26-30	9	26.5%	2	9	26.5%
31-35	2	5.9%	3	9	26.5%
36-40	4	11.8%	4	3	8.8%
TOTAL	34	100	TOTAL	34	100%

Previous C section history seen in more than half (56%) of patients. History of abortion in 6 patients (17.7%) . There was previous history of ectopic pregnancy in two patients. History of tubectomy in two patients. Two patients had Infertility and took treatment for same. No risk factor was identified in one patient.

Table 2: Risk Factors for ectopic pregnancy

RISK FACTOR	NO. OF CASES	PERCENTAGE
OCP	2	5.9
Tubectomy	2	5.9
Previous Abortion	6	17.7
Previous Ectopic	2	5.9
Infertility	2	5.9
Previous C section	20	56

Presenting Symptoms

Abdominal pain was the predominant symptom followed by Amenorrhea and bleeding. Nearly 1/4th of patients presented with nonspecific symptoms. On General physical examination Pallor was seen in 76.5% and fever in 5.9% patients. Two patients were in in mild shock.

Abdominal palpation shows Tenderness in 27 patients and Guarding in 5 patients. Abdominal distension was seen in 5 cases. More than half (58.5%) of patients had vaginal bleed on per speculum exam. Cervical Tenderness noted in 55.9% patients and Forniceal tenderness in half of patients.

Table 3: Symptoms and signs of ectopic pregnancy

Symptoms		
Symptoms	No. of Cases	Percentage
Amenorrhea	26	76.5%
Pain abdomen	30	88.2%
Bleeding	20	58.8
Others	9	26.5

General Physical Examination			Abdominal Examination		
Signs	No. of Cases	Percentage	Findings	No. of Cases	Percentage
Pallor	26	76.5%	Tenderness	27	79.4
Shock	2	5.9%	Distension	5	14.7
None	8	23.5%	None	4	11.8
Fever	2	5.9%	Guarding	5	14.7

Table 4: Per Speculum and Per vaginal Examination

Bleeding	No. Of Cases	Percentage
Absent	14	41.2%
Present	20	58.5%
Total	34	100%
Cervical tenderness		
Cervical Tenderness	No. Of Cases	Percentage
Present	19	55.9%
Absent	15	44.1%
Forniceal tenderness		
Forniceal Tenderness	No. Of Cases	Percentage
Absent	17	50%
Present	17	50%

Rupture status

2/3rd of patients presented with ruptured ectopic and hemoperitoneum. 1/3rd are unruptured ectopic.

Management

Majority patients (91.3%) were managed surgically. Of these, Emergency laparotomy and salpingectomy in 71%, Salpingo-oophorectomy in 8.7% and laparoscopic salpingectomy in 11.6%. Three patients were managed conservatively. Blood transfusions was required in 21 patients. There were no deaths due to ectopic pregnancy in study period.

Table 5: Management strategies of ectopic pregnancy

Type of management	NO. OF CASES	PERCENTAGE
Laparotomy Unilateral Salpingectomy	24	71%
Salpingo-oophorectomy	3	8.7%
Laparoscopic Unilateral Salpingectomy	4	11.6%
Medical Management	3	8.7%

Discussion

Incidence of ectopic pregnancy in our study is 0.87%, which is in accordance with previous studies in developing countries[2,5].

Abdominal pain was the predominant symptom followed by Amenorrhea and bleeding. Classical triad of symptoms was seen in 35.4 % of patients. Other studies have reported it to be noted in 28-95% of patients[8]

Among the risk factors, Previous C section history seen in more than half (56%) of the women. History of abortion was there in 6 patients (17.7 %) of which 4 patients underwent dilatation and curettage. However studies from other regions have reported a abortions as the major risk factor for EP in contrary to our study[5,9,10]. This can be explained by higher caesarian section rate in our state. There is History of tubectomy in two patients. Hence a pregnancy test should be performed in all suspected cases irrespective of tubal sterilization status[11]. Other risk factors were history of ectopic pregnancy and Infertility treatment (5.9% each).

2/3rd of patients (67.6%) presented with ruptured ectopic gestation. The higher rate can be explained by delayed presentation to our hospital as it is a referral center. Many previous studies reported similarly higher percentage of ruptured cases.

Most of the patients managed surgically (91.3%). Laparotomy and salpingectomy was the most commonly performed procedure. Laparoscopic salpingectomy (11.6%) was done in unruptured cases and few selected ruptured ectopic patients. A recent study revealed that there is no additional advantage with laparoscopic approach than laparotomy and is not a better option in terms of tubal patency and intrauterine pregnancy rates[12].Most of the studies reported similarly higher rate of surgical management[2,5,13]. 21 women (61.8%) required blood transfusion which is similar to that in other studies. Ultrasound being the mainstay of diagnosis, its availability at point of care allows early diagnosis and reduced morbidity[14].

There were no deaths reported during study period. Many studies reported a mortality rate of EP[2,5]. Mortality is mainly due to delayed diagnosis and hemoperitoneum.

Horne et al., suggested the use of serum placental growth factor(PGF) to differentiate between intra uterine pregnancy and EP. They concluded that serum PGF was undetectable in women with tubal ectopic pregnancies compared to viable intra uterine pregnancies[15]. Cabar et al., correlated the levels of serum vascular endothelial growth factor(VEGF) and ultrasound findings in EP and concluded that serum VEGF was raised in EP with cardiac activity[16]. Further studies are required to evaluate the clinical utility of these markers

CONCLUSION

Gynecologists should have comprehensive knowledge about the clinical presentation and risk factors of EP. If suspected clinically, encouraging women to undergo early ultrasonography allows early detection of EP and can be managed medically or fertility sparing surgical procedures.

LIMITATIONS

Our study is limited by its retrospective nature and small sample size

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