

Assessment of Clinical Features Responsible for Ectopic Pregnancy

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ABSTRACT

Background: Ectopic pregnancy is a lethal condition and a gynecological emergency. It is associated with maternal morbidity and mortality with pregnancy loss. The incidence of ectopic pregnancy is increasing worldwide. The diagnosis of the ectopic pregnancy can be difficult without the suspicion of the condition. It is confused with the pelvic inflammatory disease and miscarriage.

Objective: This study may help on formulating a guiding principle on the diagnosis and management of Ectopic pregnancies in this area. In this research the frequency of clinical presentations and factors responsible for ectopic pregnancy are determined.

Methodology: This is a cross-sectional based study. This study was conducted at the Obstetricians and gynecology department of Murshid Hospital and health care Center Karachi. The 125 women diagnosed with ectopic pregnancy for the duration of six months from July 2021 to December 2021 were included. Patients were examined for outcome variables (abdominal pain, vaginal bleeding, history of infertility, use of IUCD and previous ectopic pregnancy) noted in predesigned performa.

Results: - The women mean age was $9m31 \pm 6.6$ years. There were 96 (78.4%) women observed with abdominal pain and 72 (57.6%) women with vaginal bleeding in which some of them had both clinical presentations. History of fertility 34 (27.2%), use of intrauterine contraceptive device 58 (46.4%) and previous ectopic pregnancy 33 (26.4%) were responsible for ectopic pregnancy.

Conclusion: Majority of the patients attended the hospital were in acute condition. They were diagnosed with classical features of ruptured ectopic pregnancy. The most common clinical features were use of IUD, infertility history, and previous ectopic pregnancy. For reducing the morbidity and mortality rates associated with the ectopic pregnancy the early diagnosis of the tubal rupture is an essential factor.

Keywords: Ectopic pregnancy, vaginal bleeding, intrauterine contraceptive device

INTRODUCTION

Being one of the nightmare and life-threatening condition for women the ectopic pregnancy is associated with highest mortality and morbidity rate. The frequent extra-uterine location for ectopic pregnancy is the fallopian tube. Out of all the type of ectopic gestation this type accounts for 98%. Other sites are ovary, cervix, corn of the uterus and abdominal cavity.¹ It is a gynecological emergency which affects one in every 80-100 pregnancies.² depending on the population size and geographic features, the incidence of ectopic pregnancy varies between 1-3%.^{3,4}

The major cause of mortality and morbidity among the pregnant women is ectopic pregnancy. It became the condition of the concern in the recent years. Its incidence is increasing worldwide.^{5,6} When a fertilized egg implants and grows outside the uterus's main cavity, its resulted in ectopic pregnancy. It is commonly known as tubal pregnancy. One recent study has documented that the common clinical presentations and risk factors of ectopic pregnancies are abdominal pain which account for 97%. The vaginal bleeding accounts for 79%, while the history of infertility accounts for 15%. The 91% is the percentage ratio of abdominal tenderness while 14% for the intrauterine contraceptive device usage, with the 11% share of previous ectopic pregnancy.⁷ Light vaginal bleeding and pelvic pain are most common initial warning symptoms of an ectopic pregnancy. Shoulder ache or the bowel movement urges are possible symptoms of fallopian tube bleeding.

Since ectopic pregnancy is a life-threatening condition for women, its timely diagnosis and management are preferable. Historically, the prevalence of ectopic pregnancy remained low and it was not significant enough to raise red flags, however, recently a trend of increase in its occurrence has been not worldwide. There is a paucity of literature at the national and even international level and still, more work needs to be done. The divine factor in this increased research is because of the increased prevalence ectopic pregnancies, which might help in formulating a guiding principle for the diagnosis and management of Ectopic pregnancies in this

area. This study aimed at determining clinical presentations and risk factors of ectopic pregnancies.

METHODOLOGY

This cross-sectional study was conducted at the Obstetricians and gynecology department of Murshid Hospital and health care Center Karachi for the duration of six months from July 2021 to December 2021 were included. A total of 125 women were enrolled in a period of six months. The sample size has been calculated using a confidence level of 95%, alpha error of 3%, and prevalence of abdominal pain in women with ectopic pregnancy i.e. 97%. All females having an age range of 18 to 45 years, gestational age of more than 7 weeks on ultrasound of any parity who willingly participated in the study were included. The women with intrauterine pregnancies were excluded from the study. The patients willingly signed the consent. The ethical and review board committee of the hospital approved the study. The study variables were age, parity, height, vaginal bleeding, weight, BMI, abdominal pain, gestational age, diagnosis of ectopic pregnancy, history of infertility, use of IUCD, and previous ectopic pregnancy. Information was noted on a predesigned study proforma by the researcher himself.

The statistical analysis was made by SPSS software. For the quantitative variables the standard deviation and mean was calculated. For the qualitative variables like parity, educational status, socio economic status, place of residence and clinical presentations, abdominal pain, vaginal bleeding, history of infertility, use of IUCD and previous ectopic pregnancy the frequency and percentages were computed.

RESULTS

The 125 women who presented with ectopic pregnancies at the hospital were included. The women mean age was 31 ± 6.65 years while average gestational age, weight, height, and BMI were 27.82 ± 5.32 weeks, 154.18 ± 5.54 cm, 71.91 ± 9.38 , and 30.23 ± 3.52 respectively. (Table 1). There were 84 (67.2%) patients under 30 years of age, 31 (24.8%) between 31 to 40 years, 10 (8.0%) were

> 40 years of age. There were 89 (71.2%) women with 1-2 parity and 36 (28.8%) > 2 parity. Similarly, there were 82 (65.6%) women with a gestational age of ≤ 30 while 43 (34.4%) were > 30 weeks of gestation. Most of the women 63 (50.4%) were obese (> 30 BMI). Similarly, in a great majority of the study cases, 110 (88.0%) belonged to very poor or poor SES status in the study. There were 52 (41.6%) women with primary education, 28 (22.4%) with secondary and 21 (16.8%) had graduate or above education status. Most of the women were from urban areas 88 (70.4%). (Table 2). There were 96 (78.4%) women with abdominal pain in this study. Similarly, of the total, 72 (57.6%) had vaginal bleeding and some of them had both clinical conditions. There were 34 (27.2%) women with a history of fertility, 58 (46.4%) had the use of intrauterine contraceptive device and 33 (26.4%) had a previous ectopic pregnancy. (Table 3)

Table 1: Patients (n=125) baseline characteristics

Variables	No of cases	%age
Age Groups (Years)		
≤30	84	67.2%
31 to 40	31	24.8%
>40	10	8.0%
Parity		
1-2	89	71.2%
>2	36	28.8%
Gestational Age (Weeks)		
≤30	82	65.6%
>30	43	34.4%
BMI (kg/m ²)		
<30	62	49.6%
≥30	63	50.4%
Socio Economic		
≤20,000	48	38.4%
21,000 to 50,000	62	49.6%
>50,000	15	12.0%
Education Status		
Primary	52	41.6%
Secondary	28	22.4%
Intermediate	24	19.2%
Graduate and Above	21	16.8%
Residence		
Urban	88	70.4%
Rural	37	29.6%

Table 2: Descriptive findings in the study women (n=125)

Variables	Mean	Standard deviations	95% Confidence Interval (Mean)	
			Lower Bound	Upper Bound
Age (Years)	31.00	6.65	29.82	32.18
Gestational Age (Weeks)	27.82	5.32	26.88	28.77
Height (cm)	154.18	5.54	153.20	155.16
Weight (kg)	71.91	9.38	70.25	73.57
BMI (kg/m ²)	30.239	3.52	29.616	30.862

Table 3: Clinical presentation of patients (n=125)

Variables	No of cases	%age
Abdominal pain		
Yes	98	78.4%
No	27	21.6%
Vaginal bleeding		
Yes	72	57.6%
No	53	42.4%
History of fertility		
Yes	34	27.2%
No	91	72.8%
Use of a contraceptive uterine device		
Yes	58	46.4%
No	65	53.6%
Previous ectopic pregnancy		
Yes	33	26.4%
No	92	73.6%

DISCUSSION

This study highlights the presence of an acute condition and classical features of ruptured ectopic pregnancy, the most common causative factor being IUD, followed by a history of infertility and previous ectopic pregnancy.

In our study the major number of cases studied were in the age group of 26 to 30 years. These similar findings were reported by the study conducted by the Igwegbe et al.⁹ The one of the commonly suspected risk for the ectopic pregnancy is age. The conflicting results are observed in the different studies.⁹ In a study conducted by Al-Turki et al¹⁰ also (61.1%) of the patients were below 30 years of age. The similar study conducted by another scientist Hamura et al¹¹ concluded that 95% of the cases were of age greater than 25 years. In the current study, 71.2% of women had the parity of 1 to 2 and 28.8% had more than 2 babies. Evidence suggests there is a close association between ectopic pregnancy and nulli parity.¹² A scientist Gaddagi et al conducted the study and concluded that nulliparous cases were 27%, primiparous cases were 10.8% and other 62.2% were multiparous.¹³ The results of the study conducted by Hamura et al also showed that the nulliparous cases were 15%, while 56% were of para 1 or para 2.¹¹ Igwegbe et al study also concluded that the majority of the cases were of multiparous patients with the percentage ratio of 54.8%.⁸

The variation in the clinical signs and symptoms between patients with EP suggests that different populations may present in unique ways. In the current study, there were more than three-fourth of women with abdominal pain and one-half had vaginal bleeding, while some of them had both clinical findings on presentations. Comparative findings regarding the clinical presentation of ectopic pregnancy have been witnessed by many investigators before.¹⁵ These clinical features are comparable to the current study findings with slight variation in the frequency.

As far as the factors associated with ectopic pregnancy are concerned, in the current study it was witnessed that use of intrauterine contraceptive device was the commonest contributing factor 46.4%. The proportion of the women having IUD differ among the different studies. According to the data of the Auvergne register, the IUDs share twenty-five to thirty percent out of all EP cases reported in France.¹⁶ A study of Norwegian showed that in about 28% of EP cases the IUD is used.¹⁷ A study conducted by the group of scientist of British reported that 14% of the EP cases used IUD.¹⁸ The usage of IUD in the EP cases varies with the population size, geography and other features.

In the present study, 26.4% of women had a history of previous ectopic pregnancy. In a study by Gaddagi et al¹² 2.7% of cases had a previous ectopic pregnancy, which is quite lower than the current study findings. Evidence suggests that repeat ectopic pregnancy chances varies from 10 to 15%.¹¹ The underlying reason behind it is that that it is a bilateral disease. The ectopic pregnancy has the tendency to occur at the one side and then move to the other side. It make this type of pregnancy more lethal and dangerous.¹⁹

Our study showed that, the infertility treatment was the cause of 27.2% of the cases of ectopic pregnancy. In our study, infertility therapy was the cause of 27.2% of the cases of ectopic pregnancy. As compare to the spontaneous pregnancies, the incidence of ectopic pregnancy after infertility therapy is observed to be significantly higher. The relationship between infertility and ectopic pregnancy is complicated because it can both be a cause and a result of infertility. Some investigators showed an increased incidence of ectopic²⁰ and heterotopic²¹ pregnancy following clomifene citrate, while others found no such association.²²

It has also been reported that the incidence of ectopic pregnancy following ovulation induction with human menopausal Gonadotropin in (H M G) in anovulatory women with apparently normal Fallopian tubes was associated with rates of ectopic pregnancy between 2.7% and 3.1% of all conceptions.^{23,24,25} The management of ectopic pregnancy have been significantly improved by the advances in the medical. The transvaginal

sonography used to diagnose the ectopic pregnancy at the initial stages. The high-risk cases can be recognized by serum beta-HCG. The laparoscopy has further advanced the diagnosis and management process. The gynecologist should be "ectopically minded" for initial stages diagnosis in the vulnerable population. Therefore most of the clinicians concluded that the reality is the over-diagnosis of ectopic pregnancy, while crime is its underdiagnoses.

CONCLUSION

Majority of the patients attended the hospital were in acute condition. They were diagnosed with classical features of ruptured ectopic pregnancy. The most common clinical features were use of IUD, history of infertility, and previous ectopic pregnancy. Early diagnosis of the tubal rupture is an essential factor for reducing the ratio of the mortality cases associated with the ectopic pregnancy.

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