

Research Article

Analysis of ectopic pregnancy among local population of Pakistan

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ABSTRACT

Introduction: Ectopic Pregnancy (EP) is a pregnancy implanted outside the cavity of the uterus. It is well recognized as a life-threatening emergency in early pregnancy. The incidence of EP is around 1-2% in most hospital based studies. **Aims and objectives:** The basic aim of the study is to find all the cases of EP in Lady Willing Don Hospital and analyze the risk factors and assess the results of management with respect to morbidity and mortality. **Material and methods:** This cross sectional study was conducted at Lady Willing Don Hospital during 2018 with the permission of ethical committee of hospital. The data was collected from the hospital record of those who registered with EP. There were 30 patients who were registered as an EP in this time period. These patients were admitted through emergency or outpatient department. After history and examination, provisional diagnosis was made. Relevant investigations included complete blood picture, blood group and ultrasound. Other investigations i.e. the liver function tests and platelets were done in patients who were given methotrexate. **Results:** In this present study there was 30 registered cases of EP in the hospital. Majority of the women were aged 21-30 years. The most common risk factors were previous abortion (36.1%) and pelvic surgery (37.5%). Among the women who underwent pelvic surgery, 15 women had undergone tubectomy and two women had a tubal recanalization. The frequency of ectopic pregnancy was 1.3%. Multiparous women were found to be more prone to have ectopic pregnancy (61%). **Conclusion:** It is concluded that to reduce morbidity due to EP there is need of early diagnosis. This can be done by screening of high risk patients giving an early diagnosis and intervention before tubal integrity is lost.

Key words: Ectopic, Pregnancy, Uterine, Implant

INTRODUCTION

Ectopic Pregnancy (EP) is a pregnancy implanted outside the cavity of the uterus. It is well recognised as a life-threatening emergency in early pregnancy. The incidence of EP is around 1-

2% in most hospital based studies. Ectopic pregnancy is defined as any intra or extra-uterine pregnancy in which the fertilized ovum implants at an aberrant site which is inconducive to its

growth and development². Diagnosis requires a high index of suspicion as the classic triad of amenorrhoea, abdominal pain and vaginal bleeding is not seen in majority of cases. Women may present with non-specific symptoms, unaware of an ongoing pregnancy or even present with haemodynamic shock². 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 EP³.

Ectopic pregnancy is a cause of pregnancy related deaths. Its incidence is increasing and has risen from 4.9/1000 pregnancies in 1970 to 9.6/1000 pregnancies in 1992⁴. The reason for this increase has not been fully elucidated, but the possible contribution of pelvic inflammatory disease and intra-uterine contraceptive device use have been cited as contributing factors⁵.

In a study of 150 mothers brought dead to the hospital, at least 2 were due to ruptured ectopic pregnancy (1.3%). In order to decrease maternal mortality and morbidity due to ectopic pregnancy, there is a need for early diagnosis⁶.

Theoretical background

Although women with ectopic pregnancy frequently have no identifiable risk factors, a prospective and case controlled study has shown that increase awareness of ectopic pregnancy and knowledge of the associated risk factors like pelvic inflammatory disease, history of previous ectopic pregnancy, tubal sterilization and any previous pelvic or abdominal surgery help in identifying women at higher risk in order to facilitate early and more accurate diagnosis⁷.

Aims and objectives

The basic aim of the study is to find all the cases of EP in Lady Willing Don Hospital and analyze the risk factors and assess the results of management with respect to morbidity and mortality.

MATERIAL AND METHODS

This cross sectional study was conducted at Lady Willing Don Hospital during 2018 with the permission of ethical committee of hospital. The data was collected from the hospital record of those who registered with EP. There were 30 patients who were registered as a EP in this time period. These patients were admitted through emergency or outpatient department. After history and examination, provisional diagnosis was made. Relevant investigations included complete blood picture, blood group and ultrasound. Other investigations i.e. the liver function tests and platelets were done in patients who were given methotrexate. Based on thorough evaluation, type of management was decided. Where any surgical procedure was performed, specimen was sent for histopathological examination.

Inclusion criteria

1. Un-ruptured ectopic pregnancy
2. Ectopic size <4cm
3. Hemodynamically stable patient

Analysis of data

All the information were entered in a pre-structured proforma. All the data was analyzed by percentage method.

RESULTS

In this present study there was 30 registered cases of EP in the hospital. Majority of the women were aged 21-30 years. The most common risk factors were previous abortion (36.1%) and pelvic surgery (37.5%).

Among the women who underwent pelvic surgery, 15 women had undergone tubectomy and two women had a tubal recanalization. The frequency of ectopic pregnancy was 1.3%. Multiparous women were found to be more prone to have ectopic pregnancy (6.1%). The gestational age ranged between 4-11 weeks and the most frequent gestational age was around 6 weeks.

Table 01: Risk factors for ectopic pregnancy

Risk factors	N	%
Previous abortion	5	12.9
Infertility treatment	4	10.3
Use of contraceptive devices	2	5.1
Tubal ligation	1	2.6
Previous ectopic	3	3.1
Pelvic inflammatory disease	2	5.1

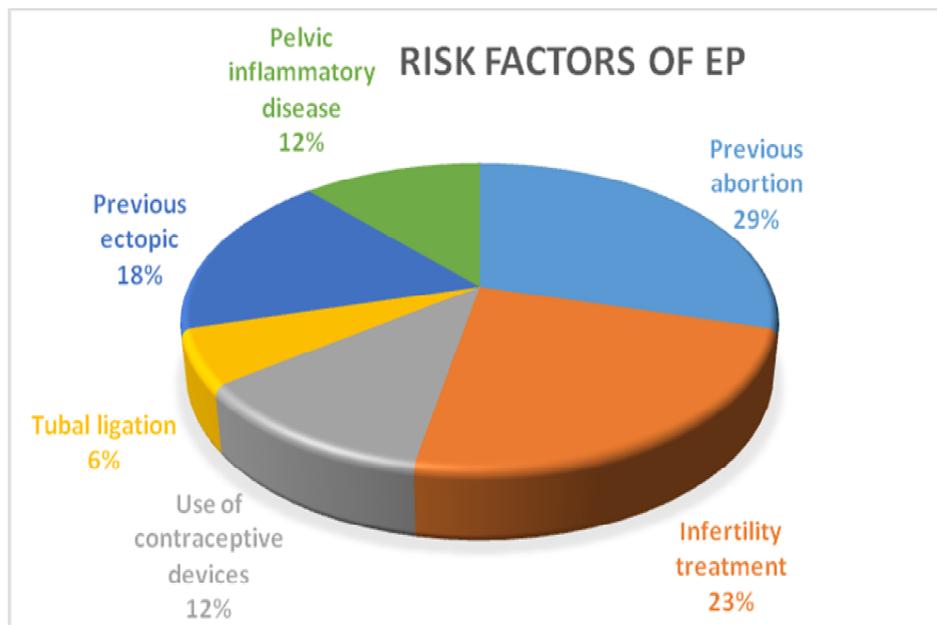


Figure 1: Distribution of cases according to risk factors of EP

The commonest presenting symptom was abdominal pain in 79% followed by vaginal bleeding in 53% (n=21) and fainting in 13% (n=5). One patient was asymptomatic and ectopic pregnancy was detected on ultrasound done for confirmation of pregnancy. Twenty-six patients presented with severe abdominal tenderness, tachycardia, hypotension, pallor and cervical excitation. These were diagnosed on clinical findings, while four patients presented in sub-acute condition and were diagnosed by clinical assessment as well as with the help of investigations. One patient was diagnosed incidentally.

Table 2: Distribution of cases according to site of EP

Site of EP	N	%
Ampulla fallopian tube	12	40
Fimbria	4	13.3
Isthmus	5	16.6
Cornus	5	16.6
Other sites	4	13.3

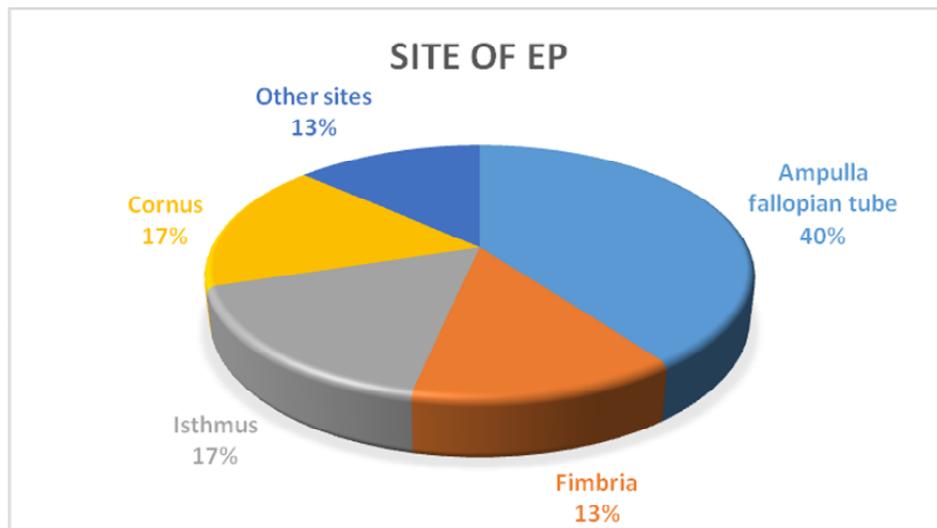


Figure 2: Distribution of cases according to site of EP

DISCUSSION

The frequency of ectopic pregnancy in this series was 1.3% which is comparable to other studies done in Pakistan i.e., 0.6% and 1%^{5,8}. The exact etiology of ectopic pregnancy is not known but different risk factors have been implicated as contributing element⁹. In this study 33% patients had risk factors, among them five patients had history of previous abortions followed by dilatation and evacuation¹⁰. Previous abortions are associated with slightly increased risk. Four patients were infertile and had taken clomiphene citrate for ovulation induction¹¹. Agents that induce ovulation may increase the risk of ectopic gestation, through the effects of hormone fluctuation on tubal function¹².

Ectopic pregnancy is a life threatening emergency in obstetrics. It remains as an important contributor to maternal morbidity and mortality, and is one of the commonest causes of 1 st trimester maternal deaths¹³⁻¹⁴. The prevalence of ectopic pregnancy among women who go to an emergency department with first trimester bleeding, pain or both, varies from 6 to 16%. Singh et al., reported that 52% of their cases did not have preceding amenorrhoea¹⁵. Women may be unaware of an ongoing pregnancy and hence may not anticipate a pregnancy complication. Such women are most often seen first at a primary

health centre or by a general practitioner and hence, the importance of careful history-taking cannot be over emphasized¹⁶.

Among the risk factors, previous pelvic surgery was the most common (37.5%), followed by previous abortions (36.1%) in our study. Studies from various regions have reported a similarly high incidence of previous abortions, but contrary to our study previous abortions were the most common risk factor for EP in these studies¹⁷. The reason for previous pelvic surgery being the most common risk factor in our study could be attributed to the high caesarean section (33.6%) and tubal sterilization (57.4%) rates in our state. Singh et al., also reported prior tubal surgery as the most common (40%) risk factor in their study which is again a reflection of their high acceptance (57.4%) of tubal sterilization as a method of family planning¹⁸. Hence a pregnancy test must be performed in all cases irrespective of their sterilization status. Pregnancy must not be ruled out in women on such pretext¹⁹⁻²⁰.

CONCLUSION

It is concluded that to reduce morbidity due to EP there is need of early diagnosis. This can be done by screening of high risk patients giving an early diagnosis and intervention before tubal integrity is lost. Whenever a patient comes with an ectopic

pregnancy, heterotopic pregnancy should be excluded because early intervention is mandatory to salvage viable intra uterine pregnancy.

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