

Ectopic Pregnancy Associated Risk Factors and Complications Latest Insight from Arif Memorial Teaching Hospital

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ABSTRACT

Background: Ectopic pregnancy continues to be a life-threatening emergency and is a leading cause of maternal mortality in first trimester of pregnancy.

Aim: To determine the local incidence, various clinical presentations, associated risk factors and outcome of ectopic pregnancy.

Methods: It was a retrospective, descriptive study which was carried out in pregnant women with diagnosis of ectopic pregnancy over a 2 years period i.e. from Jan 2020 to December 2021 in the Obs and gynae department of Arif Memorial Teaching hospital. 60 cases of ectopic pregnancy were included in this study during this time period. Data was collected from case files from the department of medical records. Results obtained were tabulated and analyzed.

Results: The peak age of patients diagnosed with ectopic was found to be 21 to 30 years and more common in multigravida. Risk factors for ectopic were seen in 49 cases (81.7%), the most common being previous LSCS (28.3%). The most common symptom was abdominal pain (85%) and there was no maternal mortality recorded.

Conclusions: Proper and thorough evaluation of patients with risk factors for ectopic pregnancy will help in diagnosis of ectopic pregnancy early which in turn will facilitate successful medical management to lessen maternal morbidity and also preserve future fertility.

Keywords: Ectopic pregnancy, trends of ectopic, risk factors, ruptured ectopic.

INTRODUCTION

Ectopic pregnancy which implants outside uterine cavity remains a serious health problem¹. It accounts for about 4-10% of all pregnancy related deaths causing not only fetal loss, maternal mortality, morbidity but also recurrent ectopic pregnancy and subsequent subfertility^{2,3}. In developing countries ectopic pregnancy is the second common cause of maternal mortality with postabortal complications being the first one⁴. It complicates 2% of all pregnancies worldwide⁵. There is a considerable regional variation with incidence of 18/1000 in India, 7.4/1000 deliveries in Bangladesh and 1:128 to 1: 130 pregnancies in Pakistan^{6,7}. The incidence of ectopic pregnancy was 4.9/1000 pregnancies in 1970 and has increased to 9.6/1000 in 1992⁸. This increase is associated with an increase in pelvic inflammatory disease, advances in assisted reproductive technologies, tubal surgery, sterilization, the use of intrauterine devices, pelvic or abdominal surgery^{9,10}. This high risk condition is still commonly missed in the emergency department due to lack of distinct risk factors, various clinical presentation, and unavailability of ultrasound posing a serious challenge to the obstetrician and gynecologists⁴.

The ectopic pregnancy can be managed conservatively, medically, laparoscopically and surgically depending on the patient's clinical status, location of ectopic gestation, the patient's reproductive desire and the available resources and technology¹¹. Conventionally ectopic pregnancy is managed by open surgery in Pakistan because only a limited number of gynecologists are trained in laparoscopic surgery¹². Current trend is medical treatment with methotrexate requiring early diagnosis and good patient selection¹³.

The importance of ectopic pregnancies in our area is astounding because instead of joining the universal approach of early diagnosis and conservative management, we face the challenge of late presentation in approximately 80% of cases who present with ruptured ectopic pregnancy making laparotomy and salpingectomy as the only option available¹⁴. Therefore, to control an ectopic pregnancy associated complication, there is a need for 'high suspicion by identifying the obstetric population with risk factors for ectopic gestation. Those patients with risk factors should have an early diagnostic test to detect an ectopic pregnancy by transvaginal ultrasound, β -hCG and laparoscopy¹⁵.

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The rationale of our research was to review the local obstetric patients presenting with ectopic gestations at our work place i.e. Arif memorial hospital with the aim to study the local incidence, clinical presentation and risk factors associated with its rising trend so that high risk patients could be screened at the earliest possible before rupture over here. It would help to improve future fertility prospects of our patients, decrease financial burden and reduce maternal morbidity and mortality in our local obstetric population.

MATERIALS AND METHODS

This was a retrospective medical record review at Arif Memorial Teaching Hospital. Institutional Review Board of Rashid Latif Medical Complex gave ethical approval to conduct the study. The medical records of all pregnant patients were reviewed from 1st January 2020 to 31 December 2021 presenting in gynae department of Arif Memorial Teaching. The total number of deliveries during the study period was recorded. A total of 60 patients reported with diagnosis of ectopic pregnancy. Their history, physical examination, urine pregnancy test, serum β hCG and ultrasound findings were noted. The demographic features of the patients (age, gravida), risk factors for ectopic, clinical presentation, intra operative findings and associated morbidity (rupture, need for salpingectomy) retrieved through the operative procedure registers and entered on a pre designed proforma followed by descriptive analysis of the data.

RESULTS

Total 2300 deliveries and 60 cases of ectopic pregnancy were admitted in the hospital during our study period which made incidence of ectopic pregnancy 2.6 % in our study.

Table 1: Distribution of cases according to the demographic features

Distribution	n	%age
Age (Years)		
<20	5	8.3
21-30	44	73.3
31-40	11	18.3
Parity		
Nullipara	11	18.33
Primipara	07	11.66
Multipara	42	70

Table1: Most of the patients (73.3%) were between 21 to 30 years of age. 70% patients were multiparous women which indicates that ectopic pregnancy is more common in multipara.

Fig. 1: Distribution of cases according to risk factors for ectopic pregnancy

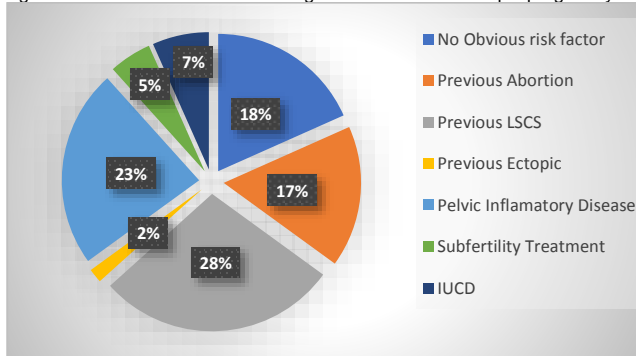


Fig. 1: Presents a view of the risk factors among the study participants. The majority (28%) of the patients has had history of cesarean section. 1 out of the 60 patients has had history of previous ectopic pregnancy so the rate of recurrence was 2%.

Table 2: Distribution of cases according to clinical presentation

Clinical symptom	n	%age
Asymptomatic	03	05
Abdominal Pain	51	85
Shock	06	10

Table 2: The most common clinical presentation was abdominal pain (85%). Six out of 60(10%) cases presented in a state of shock. However, there was no mortality.

Table 3: Distribution of cases according to Intra operative findings

Operative findings	n	%age
Tubal rupture	48	80
Unruptured	09	15
Chronic ectopic	03	05

Table 3: In our study, tubal rupture was found in 80% of cases.

DISCUSSION

The local incidence of ectopic pregnancy was found to be 2.6% by our study which was high when compared to studies conducted by Garg R et al (1.56%), Prasanna B et al (1.8%)^{16,17}. This higher incidence can be attributed to increased number of induced abortions, infertility treatment, cesarean deliveries and advancements in diagnostic modalities. Most commonly affected age group was 21 to 30 years (73.3%) which is comparable to Barik S et al (72.14%)¹⁸. Most of marriages in Pakistan occur at an early age and hence it is probably the underlying reason for higher incidence in this age group. Majority of cases were multiparas (70%) which is similar to Singh et al (70%)¹⁹. This may be due to previous infections during deliveries leading to tubal damage. Risk factors analyzed in this study were previous abortions, previous cesarean section, prior ectopic pregnancy, IUCD, PID, and infertility. The existence of risk factors can help in early diagnosis of ectopic pregnancy but it can occur in the absence of any risk factors like in our study 18% cases had no obvious risk factors also found in another study conducted by Priyanka B et al (20%)²⁰. Cesarean section was found to be the commonest risk factor in our study (28%) which is in comparison with Garg R et al and Barik S et al^{17,18}.

In our study, 17% cases had prior abortions which is close to observations of Kumari S et al (18%)²¹. There is increased chance of repeat ectopic pregnancy and in our study recurrence was found to be 2% comparable to Priyanka B et al (2%)²¹. Other risk factors studied were patients with history of IUCD insertion (7%) and

infertility treatment (5%) comparable to Bulus J et al (4.1%) and mehta A et al (6.25%) respectively^{14,22}. Pelvic Inflammatory disease is a known risk factor of ectopic pregnancy found to be present in 10% to 70% of cases in previous studies by Mehta A et al and Khalil et al^{22,23}.

The most common presenting symptom was abdominal pain (85%) and about 10% of patients presented with signs of shock which is comparable to Kumari S et al (88.2%, 11.7%)²¹. 80% of patients in our study were presented with ruptured ectopic pregnancy which is comparable Kumari and Parasd (87%)⁽²¹⁾. In this study also there was no maternal mortality showing similarity to Mehta A et al²².

CONCLUSION

It is concluded from our study that the local incidence of ectopic pregnancy was on a higher side i.e. 2.6% when compared with worldwide incidence of 2% with maximum cases seen in age group between 20-30 years, multiparas, and patients with history of previous cesarean delivery. The most common presenting complaint was abdominal pain and frequent intra operative finding was ruptured tubal ectopic pregnancy.

RECOMMENDATIONS

1. Early diagnosis of an ectopic pregnancy via detailed history focusing on identification of risk factors for ectopic pregnancy.
2. These high risk women should be facilitated with transvaginal ultrasound and BHCG lab reporting.

The above two stated steps will promote successful medical management thus reducing surgical intervention and ultimately reducing maternal morbidity/mortality with preservation of future fertility.

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Conflict of Interest: None

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