

Risk Factors, Clinical Presentation and Management of 62 Cases of Ectopic Pregnancy at Tertiary Care Centre

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ABSTRACT

OBJECTIVE: To observe the risk factors, clinical pattern and management of ectopic pregnancy.

DESIGN: Descriptive observational study.

PLACE AND DURATION: Gynecological Unit II, Liaquat University of Medical and Health Sciences, Hyderabad from January 1st 2006 to April 1st 2008.

PATIENTS & METHODS: All patients with confirmed diagnosis of ectopic pregnancy were included in the study. A pre-formed proforma was used to record the details about the demographic features, pre-existing risk factors for ectopic pregnancy, clinical features at presentation, management and findings at surgery. Data fed to SPSS program version 11 to analyse the results in terms of frequency and percentages.

RESULTS: Total maternity admissions were 8016 with 62 cases of ectopic pregnancy giving an incidence of 0.8% or 1:129. Mean age was 24 years. Majority of the patients were of low parity (n=34, 54.8%). Pelvic inflammatory disease (n=22, 35.4%), previous abdomino pelvic surgery (n=16, 26%), previous ectopic (n=4, 6.4%) and infertility (n=22, 35.4%) were seen as the major risk factors. Regarding the clinical pattern; abdominal pain, amenorrhea and collapse appeared as the common clinical presentations. All patients required surgery. Open laparotomy was performed in 56 (90.3%) cases while 6 (9.7%) patients managed laparoscopically. None of the patients found suitable for conservative or medical management. There was no maternal death related to ectopic pregnancy and the postoperative recovery was uneventful.

CONCLUSION: The classic clinical pattern of amenorrhea and abdominal pain was lacking in most of the cases with ectopic pregnancy and there were initial diagnostic difficulties. Pelvic inflammatory disease and history of infertility were the main risk factors. Due to the delay in making diagnosis at early stage, open surgery was required in all cases. This emphasizes the importance of a thorough clinical evaluation and appropriate investigations for patients with high suspicious to benefit our poor patients by the use of recent therapeutic modalities

KEY WORDS: Ectopic pregnancy, surgical intervention, infertility.

INTRODUCTION

Ectopic pregnancy is a pregnancy in which the fertilized ovum implants in any location other than the endometrial lining of uterus¹. More than 95% of ectopic pregnancies occur in the fallopian tubes² followed by ovary, cervix, cornu of uterus and abdominal cavity. Moreover the caesarean scar is recently identified as a nidus for ectopic gestation³. These abnormal sites always carry a risk of catastrophic hemorrhage and have been traditionally managed by laparotomy². World wide around 10-15% of maternal deaths in 1st trimester are contributed by ectopic pregnancy². Upto 1/3 of the patients may die at home despite of consultation with the physician or gynecologist due to a variety of clinical presentations⁴. Current century is witnessing a four fold increase in the incidence of ectopic pregnancy in the industrialized countries¹ and such rise is mainly attributed to advanced techniques

for diagnosing early ectopic and increased prevalence of pelvic inflammatory disease⁵. Despite of a rising incidence the related morbidity and mortality is declining in the developed countries due to well organized health-care delivery system and the availability of sophisticated techniques for the early recognition and treatment of ectopic pregnancies³. The availability of medical therapy, laparoscopic techniques⁶ and more recently uterine artery ligation⁷ have appeared promising in terms of better conservation of fertility, shorter hospital stay and the related surgical morbidity³.

In Pakistan the reported incidence has been cited as 1:112 to 1:130⁸ but the real figures could be higher due to under diagnosis and poor statistical record. Poverty, quackery, lack of health awareness and poor co-ordination between the health care providers lead to delayed recognition and management. As a result

patients are frequently seen in a moribund state and usually managed by laparotomy with significant impairment of fertility.

The current study is aimed to evaluate the clinical pattern, risk factors and management of ectopic pregnancy at a tertiary care centre with an objective of better understanding the barriers in optimal management of patients at poorly resourced area.

METHODS

A descriptive study was carried out at Gynecology Unit II Liaquat University Hospital Hyderabad between January 1st 2006 to April 1st 2008. This unit is a part of tertiary care hospital providing 24 hours emergency cover for all over Sindh except Karachi. We included all cases with confirmed diagnosis of ectopic pregnancy. The diagnosis was primarily made clinically later on supplemented by sonological findings, HCG estimation, surgical findings and histopathological report. A proforma was used to collect the details regarding age, parity, risk factors, clinical pattern and management of the cases. Data were fed to SPSS program version 11 to analyse the results in terms of frequencies and percentages.

RESULTS

During the study there were 8016 admissions with 62 cases of ectopic pregnancies giving the ratio of 1:129 (0.8%). Mean age of patients was 24 years. Most of the cases were seen in parity group 1-3 (n=34, 54.8%). Infertility, chronic pelvic inflammatory disease and abdomino- pelvic surgery were found as main predisposing factors (**Table I**). Majority of the patients were received in a state of shock (n=54, 87%) due to acute ruptured ectopic pregnancy. Three patients presented with very severe anemia and jaundice, being initially admitted at medical unit as suspected case of chronic liver disease. Typical history of amenorrhea and abdominal pain was obtainable in 32 (51.6%) cases.

All patients underwent surgical intervention and 54 (87.09%) patients required emergency laparotomy for massive haemoperitoneum. Six (9.67%) patients with chronic ectopic pregnancy were managed laparoscopically. None of the patient fulfilled the criteria of medical management. In most of the cases the ectopic sac was located at ampullary part, followed by isthmal, fimbrial and interstitial part. During the study period no maternal death was recorded related to ectopic pregnancy, however 54 (87.09%) of cases required more than 4 units of blood transfusions.

**TABLE I:
RISK FACTORS FOR ECTOPIC PREGNANC (n=62)**

Risk factors	No. of patients	Percentage
History of infertility	22	35.48
Non tuberculous PID*	16	25.81
No risk factor	08	12.90
Tuberculous PID *	06	9.68
Previous abdomino pelvic surgery	04	6.45
Previous ectopic	04	6.45
Endometrisis	02	3.23

* PID Pelvic inflammatory disease

**TABLE II:
CLINICAL PATTERN OF PATIENTS (n=62)**

Clinical pattern**	No. of patients	Percentage
Shock	54	87.10
Marked pallor ness	54	87.10
Positive Peritoneal Tap	49	79.03
Abdominal pain	44	70.97
Amenorrhea	32	51.61
Irregular vaginal bleeding	16	25.81
Adnexal Mass	11	17.74
Syncopal attacks	10	16.13
Jaundice	06	9.68

** Most of the patients had a combined features

DISCUSSION

The current study found the incidence of ectopic pregnancy as 0.8% or 1:129 deliveries. Pelvic inflammatory disease, infertility and previous abdomino-pelvic surgeries were found as the main predisposing factors. World wide the incidence has been reported as between 1:84 to 1:230⁹. Our reported incidence is comparable with the reports from other developing countries^{10,11}. However it was found lower than that reported by industrialized countries⁹. The reason can be related to the availability of advanced diagnostic aids for early asymptomatic ectopic pregnancies as well as more organized set up of health care system for registration in developed countries⁵. Majority of the patients were of low parity, younger age and had the

pelvic inflammatory disease as the main risk factor. The trend of early marriages in our society coupled with lack of knowledge regarding sexual health predisposes the young women to sexually transmitted diseases. More-over there is a very common practice of vaginal insertion of home made herbal medicines under extreme unhygienic conditions for the cure of sexual illness, thus the women often become victims of chronic pelvic inflammatory disease. Westrom and Pirii found pelvic inflammatory disease as the strongest risk factor for the pathogenesis of ectopic pregnancy¹². Rose¹³ reported a 9 fold increased risk for ectopic pregnancy in patients with pelvic inflammatory disease and emphasized the importance of usage of condoms. The alarming rise of pelvic inflammatory disease need a preventive strategy with promotion of health education, in particular the safe sexual practice in our community. Emphasis should be towards treatment of both partners for complete cure.

The classical pattern of period of amenorrhea and abdominal pain was lacking in most of the patients, however a provisional diagnosis was made in the light of risk factors, clinical features and sonological findings. Nevertheless the diagnosis was initially missed in three patients who were admitted at medical ward as suspected case of chronic liver disease due to the clinical presentation of anemia and jaundice. Later on these patients were identified as cases of ruptured ectopic with massive hemoperitoneum. Considering the variable presentation of ectopic pregnancy the diagnosis of ectopic requires a high index of suspicion regarding its possibility in reproductive age, particularly with pre-existing risk factors¹⁴. Judicious selection of appropriate tests can confirm or refute the diagnosis and hence the disastrous delay.

All patients underwent surgery. Majority of patients required complete or partial salpingectomy. Laparotomy was the main surgical approach owing to the acute presentation with hemoperitoneum. Laparoscopic surgery was possible only in six patients. None of the patients in our series fulfilled the criteria for the medical therapy. Laparoscopic and medical therapy have now emerged as the widely used therapeutic modalities with great success in terms of reduced morbidity, shorter hospital stay and conservation of fertility³. However choice depends upon early identification of ectopic pregnancy and stable condition of patients¹⁵. Since most of our patients presented late in a critical state they could not be offered these modern management options. Establishment of early pregnancy units like one in the industrialized nations can help in early diagnosis and management with reduced morbidity and better conservation of fertility.

We did not find any maternal death in our case series and this correlated well with the trend of reduced mor-

tality related to ectopic pregnancy in the developed world. However this should be cautiously commented. Our results may only be depictive of the tip of an iceberg and many of the deaths due to ectopic pregnancies could have been under-reported and unexplored. Another reason may be the prompt surgical intervention in our cases.

In conclusion the classic clinical pattern of amenorrhea and abdominal pain was lacking in most of the cases with ectopic pregnancy and there were initial diagnostic difficulties. Pelvic inflammatory disease and history of infertility were the main risk factors. Due to the delay in making diagnosis at early stage, open surgery was required in most of the cases. This emphasizes the importance of a thorough clinical evaluation and appropriate investigations for patients with high suspicious so that our poor patients can be benefited by the use of recent therapeutic modalities with avoidance of open surgery and better fertility conservation. Prevention of pelvic inflammatory disease and establishment of early pregnancy units are the other areas to be focused on.

Abbreviation

PID (Pelvic Inflammatory Disease)

Beta HCG (Beta Human Chorionic Gonadotrophin)

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