



A STUDY OF EPIDEMIOLOGY OF ECTOPIC PREGNANCIES AT A TERTIARY CARE CENTRE IN EASTERN INDIA

Obstetrics & Gynaecology

Dr Punam Dan Department of Obstetrics and gynaecology, RIMS, Ranchi.

Dr Atima Bharti Associate Professor, Department of Obstetrics and gynaecology, RIMS, Ranchi.

Dr Rupam Kumari Department of Radiology, RIMS, Ranchi.

ABSTRACT

Background: Ectopic pregnancy is one in which an ovum after fertilization implants and develops outside the normal endometrial cavity. It is an important cause of vaginal bleeding, maternal mortality and morbidity in the first trimester [1]. **Aim:** Aim of the present study was to determine the Incidence, Clinical profile, Various risk factors, Associated maternal mortality and morbidity. **Methods:** This study was a retrospective study conducted from April 2017 to March 2018 in the labour room of a tertiary care center in Jharkhand. Data was collected from the labour room record. The diagnosis was made based on a detailed history, clinical examination and investigations. **Results:** The incidence of ectopic pregnancy in our study was 0.838%. Etiological factors observed were pelvic inflammatory disease, infertility, bilateral tubal ligation, intrauterine contraceptive device, previous ectopic pregnancy, caesarean section and genital tuberculosis. The mainstay of management was salpingectomy and salpingo-oophorectomy. There was no mortality in current study. **Conclusions:** Early diagnosis, assessment of risk factors and timely intervention in the form of medical (Methotrexate) or surgical management help in reducing the morbidity and mortality in patients with ectopic pregnancy. **Clinical significance:** Prompt diagnosis and timely management decreases morbidity and mortality in patients of ectopic pregnancy.

KEYWORDS

Ectopic pregnancy, Salpingectomy, Salpingo-oophorectomy, Methotrexate.

INTRODUCTION

Ectopic pregnancy is one of the commonest cause of acute abdomen encountered by an obstetrician during practice. An ectopic pregnancy is a challenge for the obstetrician due to its atypical presentation. It is an important cause of morbidity and maternal mortality in early pregnancy. In developing countries majority of patients present late with rupture of ectopic pregnancy. Ectopic pregnancy is one in which a fertilized ovum implants and develops outside the uterine cavity. It is the most important cause of vaginal bleeding in the first trimester of pregnancy [1]. The rising incidence of ectopic pregnancy is due to an increased incidence of tubal surgeries and pelvic inflammatory disease (PID) [2]. Women with a history of PID have an approximately three times increased risk of ectopic pregnancy [3,4]. Now a-days due to early detection, definitive medical management with methotrexate has been possible. Methotrexate is a folic acid antagonist. It is most commonly used agent for medical treatment of ectopic pregnancy [5]. Methotrexate decrease the morbidity and mortality due to ectopic pregnancy. Undiagnosed ectopic pregnancy is like an impending time bomb which may rupture any time. Ruptured ectopic pregnancy is a life threatening condition. Incidence of ectopic pregnancy is about 1-2% in the general population, and 2-5 % among patients who have utilized assisted reproductive technology (ART) [6]. Most common site of ectopic pregnancy is fallopian tube (95%), majority occur in the ampullary or isthmic portions of the fallopian tube. Other less common sites are cervical, fimbrial, ovarian and peritoneal sites as well as previous caesarean section scars. An ectopic pregnancy may also co-exist with intrauterine pregnancy known as heterotopic pregnancy and is a rare event.

The diagnosis of ectopic pregnancy is complicated by wide spectrum of clinical presentations, from asymptomatic cases to acute abdomen and hemodynamic shock. The classic clinical triad of ectopic pregnancy is Pain, Amenorrhea, Vaginal bleeding or spotting. Unfortunately, only about 50% of patients present with all the 3 symptoms.

The implanted ovum burrows actively into the tubal lining & its vessels and is responsible for bleeding. Pain is caused by prostaglandin release at site of implantation & also by free blood in peritoneal cavity acting as a local irritant. It not only endangers the life if not treated timely and effectively but also damage fallopian tube with or without ovary and sometimes even the uterus and so impair her future fertility. Ruptured ectopic pregnancy is the leading cause of maternal mortality and accounts for 10-15% of all maternal deaths [7]. There is an increasing incidence of ectopic pregnancy in recent past, the possible contributing factors are pelvic inflammatory disease (PID), ovulation inducing drugs, previous abdominal-pelvic surgeries and intra-uterine contraceptive device use and more frequent diagnosis of ectopic pregnancy. The incidence of ruptured ectopic pregnancy has declined

due to quantitative human chorionic gonadotropin measurements, minimally invasive surgeries, and transvaginal ultrasonography (TVS). The concept of combining transvaginal ultrasound and quantitative serum β -hCG measurement within a diagnostic algorithm has resulted in a profound change occurring in both the diagnosis and management of ectopic pregnancy. Prompt diagnosis reduces the risk of tubal rupture and allows more conservative medical treatments to be employed. The present study was undertaken to provide a better understanding of ectopic gestation, its clinical presentation, and various risk factors associated with ectopic pregnancy

AIMS AND OBJECTIVE

To determine:

1. Incidence
2. Clinical profile
3. Various risk factors associated with ectopic pregnancy
4. Associated maternal mortality

MATERIALS & METHODS

This is a retrospective study conducted over a period of 1-year from April 17 to March 18 in Department of Obstetrics and Gynaecology at a tertiary health care centre in Eastern India. A total of 73 cases reported with ectopic pregnancy during this time period and were admitted in the labour room of institute. All data were collected retrospectively from the case record of patients. Total number of deliveries during study period, details of demographic characteristics, presenting clinical symptoms and signs, parity, use of contraception, diagnostic tool used, detail obstetric history, risk factors for ectopic pregnancy, site of ectopic pregnancy, line of management as well as morbidity and morbidity details were obtained through case sheets of patients from labour ward registers and operation theatre registers. Relevant investigations including complete blood picture, blood group, urine pregnancy test (UPT), and ultrasound were studied. The type of management was decided after complete evaluation. Data were collected, analysed and tabulated.

Inclusion Criteria's: All women with confirmed ectopic pregnancies.

Exclusion Criteria: None

Statistical Analysis: This was a retrospective observational study.

Statistical analysis was done using Microsoft Excel.

RESULTS

Incidence

The incidence of ectopic pregnancy during 1-year duration in relation to the total admission (73 ectopic pregnancies out of 8705 total obstetric admissions) was 0.838 %.

Age Distribution For Ectopic Pregnancy

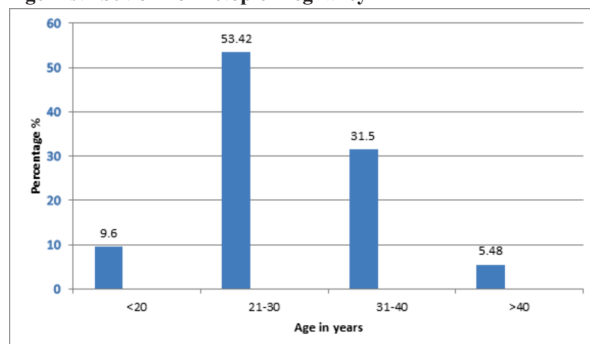


Figure 1: The most common age group in our study was 21-30 years. 53 % of the patients were in this age group.

Risk Factors For Ectopic Pregnancy

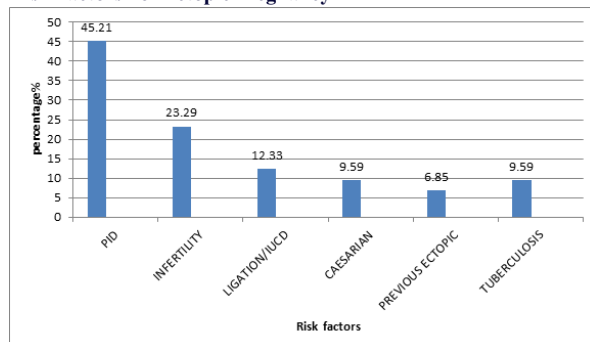


Figure 2: Most common (45 %) risk factor in our study was PID.

Clinical Presentation

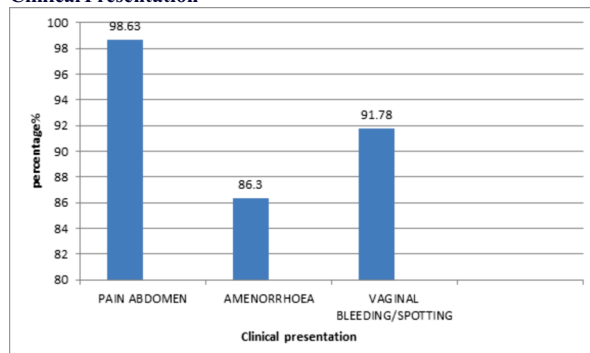


Figure 3: Most Common Presentation Was Pain Abdomen (98.6 %) Followed By Vaginal Spotting Or Bleeding In 91.8 % Cases.

Signs Of Ectopic Pregnancy

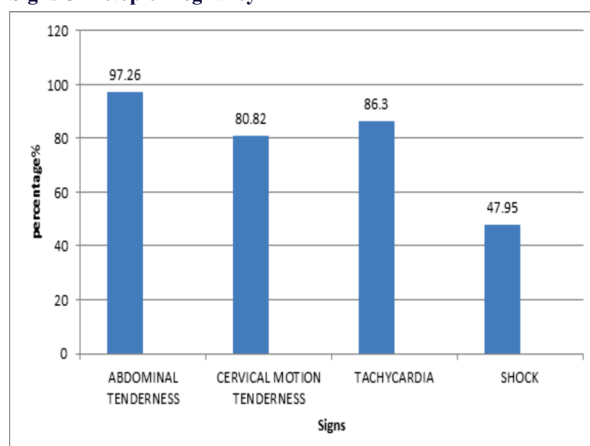


Figure 4: Most common finding in our study was abdominal tenderness (97%) followed by tachycardia (86%).

Sites Of Ectopic Pregnancy

Most common site of ectopic pregnancy was fallopian tube (97.2 %) followed by ovary (1.37 %) and cornual (1.37 %).

Various ultrasonographic findings noted in Ectopic Pregnancy

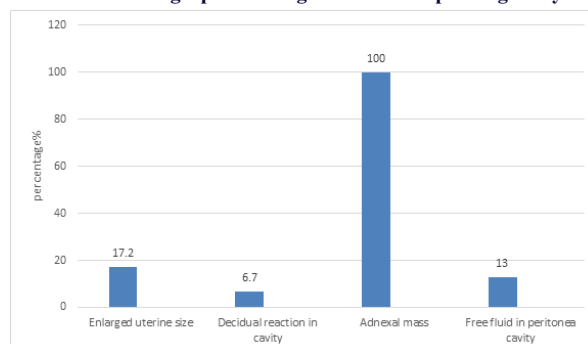


Figure 5: Ultrasonography Showed All The Patients Had Adnexal Mass.

Distribution On Basis Of Ruptured And Unruptured Ectopic Pregnancy

In current study most of the patients presented with ruptured ectopic pregnancy (78 %).

DISCUSSION

During the study period of 1 years, total number of obstetric admission were 8705 out of which 73 cases were ectopic pregnancies.

In the current study on ultrasonography uterine cavity was empty in 93.3% cases, Decidual reaction was seen in 6.7% cases, adnexal mass was present in all the cases. Uterine enlargement was noted in 17.2% cases and minimal free fluid in the peritoneum was noted in 13% cases. Most of the cases (84.92%) were of age group 21-40 year which was similar to other studies, 72.5% by Gupta R et al (8), 71.6% by Panchal D et al (9) and 66.5% by Barnhart KT et al (10).

6.85% of the cases with ectopic pregnancy had past history of ectopic pregnancy which was almost similar to 6% reported by Shetty VH et al (11), (7.8%) by Shah N et al (12) and 5% by Gupta R et al (8)

Prior pelvic inflammatory disease is an important risk factor for ectopic pregnancy. Indian Council of Medical Research Task force project (13) (1990) noticed a 6-fold high risk of ectopic pregnancy among patients who had PID as compared to women who never had PID. PID causes damage to the fallopian tube by distorting the tubal architecture.

Infertility was reported in 23.29% of cases in present study. Several authors have reported similar incidence of infertility preceding ectopic pregnancy. Shetty VH et al [14] 20%, Gupta R et al [8] 22.5% and Shah N et al [12] 23.6%.

Panchal D et al [9] and Shetty VH et al [11] (94.9% and 96% respectively) showed that fallopian tube was the most common site of ectopic pregnancy which was similar to current study (97.2%).

Abdominal pain was the most consistent presentation (98.63%) followed by bleeding per vagina /spotting was present in 91.78% cases. There was no mortality in our study.

Our study had few limitations. It was a retrospective study and data was collected retrospectively from medical records.

CONCLUSION

There is an increase in the incidence of ectopic pregnancy and a decrease in maternal mortality secondary to ectopic pregnancy during the past two decades due to better diagnostic facilities, early intervention and blood transfusion facility. Clinician should ectopic minded for diagnosis of ectopic pregnancy. It is therefore important that all the physicians should be sensitive to the fact that in the reproductive age group any women presenting with pain in the lower abdomen, diagnosis of ectopic pregnancy should be entertained irrespective of the presence or absence of amenorrhoea whether or not she has undergone sterilization. Early identifying of underlying risk

factors, diagnosis with the essential aids like transvaginal ultrasound and β -hCG and timely intervention in the form of medical or surgical treatment will definitely help in reducing the morbidity and mortality associated with ectopic pregnancy and to improve the future reproductive outcome.

Clinical Significance

Prompt diagnosis and timely management decreases morbidity and mortality in patients of ectopic pregnancy.

Conflict Of Interest: The authors declare that they have no conflict of interest.

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