

CLINICAL ANALYSIS OF ECTOPIC PREGNANCY IN TERTIARY CARE HOSPITAL

Ushasree Dasari¹

¹Assistant Professor, Department of Obstetrics and Gynaecology, Rangaraya Medical College, Kakinada.

ABSTRACT

BACKGROUND

A ruptured ectopic pregnancy is a true emergency and remains the leading cause of pregnancy-related first trimester deaths. The aim of the study is to study the clinical profile of ectopic pregnancy in a tertiary care hospital.

MATERIALS AND METHODS

It is a study conducted at Rangaraya Medical College and Hospital, Kakinada, from January 1, 2017, to December 31, 2017, for a period of 1 year. A total of 54 patients with ectopic pregnancy were analysed on clinical presentation, investigations, operative findings and outcome.

RESULTS

A majority of women (46.2%) were in the age group of 21-25 years and 80% were multigravida. Risk factors were identifiable in 79% patients. Amenorrhea (90.4%) and pain abdomen (91.6%) were the most common presenting symptoms. 92.5% underwent an exploratory laparotomy, 1.8% underwent laparoscopy and 5.5% women received medical management. There were no maternal deaths and postoperative morbidity in the form of wound dehiscence (11.1%), paralytic illness (5.5%) and DIC (3.7%) were seen.

CONCLUSION

Ectopic pregnancy still remains one of the major causes of maternal morbidity and mortality. Early diagnosis and referral in haemodynamically stable state along with use of minimal access surgery or medical management can change the scenario of ectopic pregnancy in the developing world.

KEYWORDS

Ectopic, Pregnancy, Amenorrhoea.

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BACKGROUND

Ectopic pregnancy is any pregnancy that occurs outside the uterine cavity. A ruptured ectopic pregnancy is a true emergency and remains the leading cause of pregnancy-related first trimester deaths.¹ The number of ectopic pregnancies has increased dramatically in the past few decades. The rise can be attributed partly to increase in certain risk factors, but mostly to improved diagnostics.² Any woman of reproductive age presenting with abdominal pain, vaginal bleeding, syncope or hypotension with or without amenorrhoea with pregnancy test positive should be provisionally diagnosed as an ectopic pregnancy unless proved otherwise. The evaluation may include a combination of determination of urine and serum Human Chorionic Gonadotropin (hCG) levels and ultrasonography. Key to the diagnosis is determination of the presence or absence of an intrauterine gestational sac correlated with serum β -hCG

levels. Greater awareness of risk factors and improved technology (biochemical markers and ultrasonography) allows ectopic pregnancy to be identified before the development of life-threatening events.

The importance of ectopic pregnancy is peculiar in our country because rather than join the global trend of early diagnosis and conservative approach in management, we are challenged by late presentation and rupture in most cases.

Aims and Objectives- This study was undertaken to study the incidence, clinical presentations and risk factors, management of cases and outcome of all cases of ectopic pregnancy that presented to our centre over a period of one year.

MATERIALS AND METHODS

This study is conducted at Rangaraya Medical College and Hospital, Kakinada, from January 1, 2017, to December 31, 2017. All women who presented to our hospital with ectopic pregnancy were analysed and the data is collected regarding-

- Age.
- Parity.
- Chief complaints.
- Period of amenorrhoea.
- Any risk factors for ectopic pregnancy.

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Corresponding Author:
Dr. Ushasree Dasari,
D. No. 2-46-26/12A,
Venkat Nagar, Srividya Colony,
Kakinada-533003, Andhra Pradesh.
E-mail: ushasreedasari@gmail.com
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- Evidence of hypovolaemia.
- HCG in urine/serum.
- Mode of treatment.
- Operative findings.
- Outcome of patients.

Clinical evaluation included general examination of patient including presence of anaemia, shock, restlessness, cold and clammy extremities, pulse, respiration, blood pressure, temperature and cardiovascular and respiratory systems; abdominal examination- for presence of mass, signs of free fluid in peritoneal cavity, guarding, rigidity, tenderness and presence of rare signs like Cullen's sign; Vaginal examination- for presence of bleeding, its nature, colour of the vaginal mucosa, position of the cervix, tenderness on movement of the cervix, size of the uterus, mobility and consistency, presence of mass and/or tenderness in any of the fornices; per rectal examination whenever necessary for confirmation of findings.

RESULTS

The total number of deliveries in our institution in the study period was 10,024 and the total number of ectopic pregnancies during this time was 54. The incidence of ectopic pregnancy in our study is 0.53%.

A majority of women who presented with ectopic pregnancy were in the age group of 21-25 years (46.2%) and 79% had one previous pregnancy. On evaluation of the risk factors, it was found that 43 women (80%) had one or the other risk factor, which included history of Pelvic Inflammatory Disease (PID) in 16 (30.2%), previous abortion in 12 (22%), history of infertility treatment in 2 (3.7%), post-tubal ligation in 5 (9%), post caesarean patients 7 (13.1%) and 11 patients (21%) had no identifiable risk factor.

Risk Factor	Number	Percentage
PID	16	30.2%
Previous abortion	12	22.2%
Infertility treatment	2	3.7%
Post tubectomy	5	9.2%
Post LSCS	7	13.1%
Uterine anomalies	1	1.8%

Table 1. Distribution According to Risk Factors

Amenorrhoea (90.4%), pain abdomen (91.6%) and vaginal bleeding (62.1%) were the usual presenting complaints. Presence of abdominal tenderness (51.6%) and cervical movement tenderness (66.6%) were the most consistent clinical findings. 6 (11.1%) cases presented in shock. Bedside urine pregnancy test (hCG) was positive in 96.7% women.

Laparoscopic salpingostomy and peritoneal lavage was done in 1 (1.8%) women with ectopic pregnancy. Laparotomy was done in 50 (92.5%) women. Only 3 patients (5.5%) were fit and willing for medical management and they were followed up.

Mode of Treatment	Number	Percentage
Laparoscopy	1	1.8%
Laparotomy	50	92.5%
Medical management	3	5.5%

Table 2. Distribution According to Mode of Treatment

Operative findings on laparotomy, there was tubal rupture in 46 (85.3%), tubal abortions in 3 (5.5%), unruptured tubal pregnancy in 4 (7.4%) women and ovarian pregnancy in 1 (1.8%).

Operative Findings	Number	Percentage
Ruptured	46	85.3%
Unruptured	3	5.5%
Tubal abortion	4	7.4%
Ovarian pregnancy	1	1.8%

Table 3. Distribution According to Operative Findings on Laparotomy and Laparoscopy

Majority of the cases had rupture in the ampullary area 31 (57.4%) followed by rupture in isthmus area 10 (18.5%). There were 4 (7.4%) cases of cornual rupture, 9 (16.6%) cases of fimbrial rupture and 1 (1.8%) case of ovarian pregnancy.

Site of Rupture	Number	Percentage
Ampullary	31	57.4%
Isthmus	10	18.5%
Fimbrial	9	16.6%
Cornual	4	7.4%
Ovarian	1	1.8%

Table 4. Site of Tubal Rupture in Ectopic Pregnancy

Most of the patients presented with anaemia of different degrees. 6 patients presented in shock. Blood transfusion was required in 48 patients either intraoperative or postoperative. No transfusion was required in 6 patients.

Number of Transfused Units	Number	Percentage
Nil	6	11.1%
1-3 units	41	75.9%
>3 units	7	12.9%

Table 5. Number of Transfused Units

There were no maternal deaths due to ectopic pregnancy in the study period. Postoperative morbidity in the form of wound dehiscence was seen in 6 (11.1%), DIC in 2 (3.7%) and paralytic illness in 3 (5.5%) patients.

Postoperative Complications	Number	Percentage
Wound dehiscence	6	11.1%
Paralytic illness	3	5.5%
DIC	2	3.7%

Table 6. Postoperative Morbidity

DISCUSSION

Ectopic pregnancy is a high-risk condition, a nightmare for all gynaecologists and reproductive challenge for a patient. It is a heterogeneous disease, which presents itself in a bewildering variety of anatomical, physiological and clinical expressions. There is considerable regional variation in its

incidence and globally, it has been on the rise over the past three decades. Worldwide, ectopic pregnancy complicates 0.25-2.0% of all pregnancies.³ The incidence of ectopic pregnancy in our study is 0.53%. It correlates well with other studies.^{4,5} The increase in incidence is associated with rise in the incidence of Sexually Transmitted Infections (STIs) and salpingitis, advances in assisted reproductive technology, tubal surgeries, female contraception and earlier diagnosis with more sensitive methods.²

More cases were seen between age group 21-25 years. There are different studies with similar results.^{3,6} Our study showed that 79% had one previous pregnancy. Some studies are showing increased risk of ectopic pregnancy in nulliparous or primiparous, which is conflicting with our results.^{2,7} Others have reported similar figures.⁶

No risk factor was found in 11 patients. 43 patients presented with one or the other risk factor. The commonest risk factor was PID (29.6%). Salpingitis and PID increases the risk of ectopic pregnancy by 6-10 fold.⁸ Many studies support our result.^{2,3,8} Both the increased incidence of STIs resulting in salpingitis and the efficacy of antibiotic therapy in preventing total tubal occlusion after an episode of salpingitis are related to the increasing incidence of ectopic pregnancy.⁹

In our study, previous abortions constituted an important risk factor (22.2%) irrespective of the fact whether it is induced or spontaneous. Prior induced abortion significantly increases the risk of ectopic pregnancy.^{6,8} A study found that the risk of ectopic pregnancy was higher in women who underwent medical abortion as compared to women who underwent surgical abortion. They interpreted this association as a consequence of infection.¹⁰ Previous spontaneous abortions increased the risk of ectopic pregnancy, especially for women with three or more spontaneous abortions.¹⁰ So, any type of abortion is a risk factor for ectopic pregnancy.

The incidence of ectopic pregnancy following infertility treatment is much higher as compared to spontaneous pregnancies. Ectopic pregnancy following infertility treatment occurred in 5.6% patients in our study. However, as ectopic pregnancy is known risk factor for subsequent infertility, the links between ectopic pregnancy and infertility, which seem to be mutual risk factors are likely to be complex.^{2,10}

There is 15-50% chance of being ectopic if pregnancy occurs following tubal surgeries.⁸ Prior tubal ligation accounted for 9.2% of ectopic in present study similar to others.² There are 12.9% cases of ectopic pregnancy reported after caesarean section.

Most of the cases (85.3%) presented with ruptured ectopic pregnancy making the scenario clear that still in India most of the patients present late, maybe due to failure of making early diagnosis at various level of healthcare delivery system. As a result, in our study, majority of the women (92.5%) had a laparotomy because of unstable condition and hemoperitoneum. Laparotomy with salpingectomy (66.3%) was the most common modality of treatment in our study, which correlates with other

studies.^{2,3,11} In our study, lack of expertise in laparoscopy and presentation of the patient late in night when seniors are not around also led to increase in rate of laparotomy.^{3,12,13} For women who present early with ectopic pregnancy, medical management with methotrexate remains an attractive option as was seen in our study and by Olofsson et al.^{2,14} We gave medical management in 3 patients. Methotrexate was given as a single dose of 50 mg/m² IM. Medical management was successful with single-dose therapy.

The tubes remained the commonest site of ectopic pregnancy and ampulla being commonly affected (57.4%) in our study correlating with other studies.^{2,15} Ovarian pregnancies are very rare, only about 0.5% of ectopics occur in the ovary.^{9,10} There was 1 case of ruptured ovarian pregnancy in our study (1.8%). Most of the patients (48) had blood transfusions intraoperatively and postoperatively.

CONCLUSION

Ectopic pregnancy still remains one of the major causes of maternal morbidity and mortality. Early diagnosis and referral in haemodynamically stable state along with the use of minimal access surgery or medical management can change the scenario of ectopic pregnancy in the developing world and at same time preserve the potential for future fertility.

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