Research Article

Ectopic pregnancy: A retrospective analysis of 100 cases in a tertiary care centre

Mamatha K

Assistant Professor, Department of Obstretrics and Gynaecology, Mysore Medical College, Mysore, Karnataka, INDIA.
Email: drmamatha8@gmail.com

Abstract

Introduction: Ectopic pregnancy (EP) is one of the causes of maternal mortality and morbidity in the first trimester. The aim of this study was to emphasise on risk factors, clinical presentation and the management of these cases. A retrospective study of 100 cases was undertaken in our tertiary care centre from 01/01 2013-31/12 2014. **Material and Methods:** One hundred patients with provisional diagnosis of ectopic pregnancy were studied. Clinical findings, urine pregnancy test, ultrasonography findings (transabdominal/transvaginal) and culdocentesis were done. The diagnosis was confirmed by laparotomy. **Results:** The peak age of incidence was between 20-25 years 46%, followed by >30yrs in 21%.Multigravidas, especially second gravida were commonly affected. Previous tubectomy was the risk factor seen in 25% of cases, then previous history of abortion in 21% cases. More than one risk factor was present in each case. Most of them presented with the classical triad, pain abdomen (91%), amenorrhea (80%) and vaginal bleeding (59%). Shock and hypotension was seen in 12% of cases. Urine pregnancy test was positive in all the cases and ultrasonography showed adnexal mass in 64 cases, hemoperitoneum in 59 cases. Laparotomy was done in all 100 cases. Tubal pregnancy was seen in 98%, one ovarian and one in rudimentary horn. Right tube was commonly affected in 59 cases and rupture was seen in 68 cases. Salpingectomy was done in 86 cases and blood transfusion was required in 43 cases. One patient developed DIC and treated with component therapy. No maternal mortality among these cases. **Conclusion:** High degree of suspicion, early diagnosis and early intervention are essential in the management of Ectopic pregnancy to reduce morbidity and mortality of this obstetric emergency. Ultrasonography is the gold standard which is a non-invasive diagnostic test and helps in early intervention.

Keywords: Culdocentesis, Ectopic pregnancy, Salpingectomy.

[*]**Address for Correspondence:**
Dr. Mamatha K, Assistant Professor, Department of Obstretrics and Gynaecology, Mysore Medical College, Mysore, Karnataka, INDIA.
Email: drmamatha8@gmail.com
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INTRODUCTION

Ectopic pregnancy (EP) is derived from the Greek word "ektopos" means out of place, which refers to implantation of a fertilized egg in a location outside the uterine cavity.[1] The most common extra-uterine location is the fallopian tube in about 98%.Other sites are ovary, cervix, corn of the uterus and abdominal cavity.[2] Ectopic pregnancy is a life threatening gynecological emergency affecting one in every 80-100 pregnancies.[3]There is a fourfold increase in the incidence of EP in the industrialized countries from 0.3-1.2%.[4,5] Which is attributed to ART techniques, advanced techniques for diagnosing ectopic early and increased prevalence of pelvic inflammatory diseases and the risk of death from EP has declined by 90%.[6] In developing countries, many hospital based studies have reported ectopic pregnancy case fatality rates of around 1-3% which is ten times higher than those in developed countries. EP is an acute emergency and is responsible for significant number of hospital admissions, surgical interventions and blood transfusions. Clinical presentation of Ectopic Pregnancy-Clinical manifestations appear 6-8wks after the last menstrual period. The classic symptoms of ectopic pregnancy are abdominal pain, amenorrhoea and vaginal bleeding. These are seen in both ruptured and unruptured cases. The classical triad is present in 50% patients with ruptured ectopic pregnancy. Abdominal pain is seen in about 100% which varies in severity and nature.

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Amenorrhea is reported in 75-90%; vaginal bleeding in 50% of cases. Referred shoulder pain in about 50% of cases and is related to diaphragmatic irritation from blood in the peritoneal cavity. Signs-Typical signs of haemorrhagic shock like pallor, tachycardia, hypotension and oliguria are seen. Other signs are cervical movement tenderness and/or abdominal tenderness, an adnexal mass. An high index of suspicion is important for early diagnosis and early intervention to reduce morbidity and mortality.[3,4] Role of ultrasound in ectopic pregnancy-Pelvic ultrasound is considered as the gold standard for the diagnosis of ectopic pregnancy. Transvaginal ultrasound can diagnose an adnexal mass as small as10mm indiameter, evaluate the contents of the endometrial cavity and assess the presence of free peritoneal fluid. A live embryo is seen in adnexa about 25% of patients, gestational sac in 70%, an adnexal mass in 90% of patients and free peritoneal fluid in 60% of cases. A meta-analysis of the accuracy of ultrasonography showed sensitivity of 99.3% and specificity of 71% only.[7,8] Role of β hcg in ectopic pregnancy-Mostsensitive, accurate and reliable. A β hcg concentration of 1500IU/L (discriminatory level) or higher, an empty uterus on transvaginalsonography facilitates early diagnosis of ectopic pregnancy. A colourflow Doppler use improves the accuracy of diagnosis which is seen as a typical eccentric leash of vessels. Combined transvaginalsonography and serial quantitative beta hcg measurements are 96% sensitive and 97% specific.[3,7] Differential diagnosis of Ectopic Pregnancy-Normal early pregnancy, abortion, molar pregnancy, appendicitis, salpingitis, ovarian torsion, PID.[6] Management–Either medical line using methotrexate or surgical approach for who are not suitable or failed medical treatment, heterotopic pregnancy or hemodynamically unstable. Salpingostomy is preferred but salpingectomy is done in severely damaged tube, recurrent ectopic pregnancy in the same tube, uncontrolled bleeding after salpingostomy, large tubal pregnancy (>5cm) or in who have completed their family.[9] In this study various clinical features and management of these cases are studied in tertiary care centre for a period of two years.

OBSERVATION AND RESULTS

A total of 100 patients were analyzed from Jan 2013 to Dec2014.Peak age of incidence was in20-25 years (46%), followed by 21% in >30 years age, 19% in 26-30 years age and least in <20years.(Table1)

Table 1: Showing incidence of ectopic pregnancy among different age groups

Age	Incidence
<20yrs	15
20-25	46
26-30	19
>30	21

Most commonly seen in multigravidas (80%), especially second gravidas (44%), followed by third gravid (26%), 20% in primigravida and least in fourth gravid (10%) onwards.

Table 2: Showing Risk factors associated with ectopic pregnancy

Risk factors	No. of cases
Tubectomy/Laparoscopic sterilization	19/6
Previous LSCS	12
Previous abortion	21
Previous ectopic	3
PID	4
Infertility	5
IUCD	3
No identifiable risk factor	33

One or more risk factors are seen in many cases. Previous sterilization (Abdominal tubectomy-19%and laparoscopic sterilization 6%) was the most common cause in about 25%, most of them were after 3-4 years of sterilization. Previous history of abortion was seen in 21% and previous caesarean section in 12%.Recurrent ectopic was seen in 3 cases. Among 5 cases of infertility only one patient had primary infertility and other 4 with secondary infertility. History of IUCD insertion was present in 3 cases. (Table 2) Most cases presented with history of pain abdomen (91%), amenorrhea (80%) and vaginal bleeding (59%).Nausea and vomiting was seen in 21% and syncopal attack in 5 cases.

MATERIALS AND METHODS

This study was conducted in patients with ectopic pregnancy admitted at cheluvamba hospital attached to Mysore medical college and research centre from Jan 2013 to Dec2014.

Inclusion Criteria

All patients suspected to have ectopic pregnancy by history, clinical examination and ultrasonography are included. Patients who were managed by expectant or medical line and with features of chronic ectopic are excluded. Out of 103 patients three patients were excluded. Two chronic ectopic and one patient managed by medical line are excluded. One hundred patients with provisional diagnosis of ectopic were analysed for clinical features, urine pregnancy test, ultrasonographic (transabdominal/transvaginal) findings and laparotomy findings and management.

Table 3: Showing clinical presentation among Ectopic Pregnancy cases

Symptoms	No of cases(n=100)
Pain abdomen	91
Amenorrhea	80
Bleeding PV	59
Syncopal attacks	5
Nausea/vomiting	21
Signs	
Hypotensionandshock	12
Pallor	54
Abdominal tenderness	85
Cervical motion tenderness	79
Fornicial tenderness	78
Fornicial mass	30

On examination hypotension and shock was seen 12 cases and pallor in 54% of cases. Abdominal tenderness was seen in 85%, cervical motion tenderness in 79%,fornicial tenderness in 78% and fornicial mass in 30%.Urine pregnancy test was positive in all the 100% cases. Culdocentesis was positive in 56% of cases. (Table 3) Ultrasonography showed adnexal mass in 64% of cases with hemoperitoneum in 59%. In 4 cases with shock scan could not be done. Cardiac activity in adnexa was seen in 16%, gestational sac was seen in 6%and a pseudogestational sac was seen in 15% (Table 4).Heterotopic pregnancy was seen in 2 cases.

Table 4: Showing Ultrasonographyfindings of Ectopic Pregnancy

Ultrasound findings	No. of cases(n=96)
Complex adnexal mass	64
Cardiac activity	16
Hemoperitoneum	59
Gestational sac	6
Pseudogestational sac	15

On laparotomy Ectopic pregnancy was seen in the tube in 98% of cases, one in the rudimentary horn and ovarian pregnancy in one case. Ectopic Pregnancy was present in the ampulla in 84 cases, isthmus in 9 cases, interstitium in 2 cases and fimbria in 2 cases. Ectopic Pregnancy was seen in tubal stump in recurrent ectopic. Tubal abortion was seen in 24 cases, right tube was involved in 59 cases and left tube in 41cases.Tubal rupture was seen in 68 cases and unruptured in 7 cases. (Table 5)

Table 5: Showing Laparotomy findings of Ectopic pregnancy cases

Laparotomy findings	No. of cases
Ruptured	68
Unruptured	7
Ampulla	84
Isthmus	9
Interstitial	2
Fimbrial	2
Ovarian	1
Tubal stump	1
Rudimentory horn	1
Tubal abortion	24
Right	59
Left	41

Salpingectomy was done in 86 cases, milking in 7 cases, fimbriectomy in 2 cases, salpingo-oophorectomy in 4 cases, excision of rudimentary horn was done in 1 case. Tubectomy in opposite tube was done in 25 cases and salpingectomy in 2 cases (Table 6).Blood transfusion was required in 43 cases and component therapy in one patient with DIC. There were no maternal deaths.

Table 6: Showing Treatment done for Ectopic Pregnancy cases

Treatment	No. of cases(n=1000
Salpingectomy	86
Fimbriectomy	2
Milking	7
Salpingo-oophorectomy	4
Rudimentary horn excision	1
Opposite tube	
Tubectomy	25
Salpingectomy	2

DISCUSSION

The incidence of ectopic pregnancy in this study was 3.5 / 1000 deliveries which is lesser than other Indian studies (1 in 160, Arora *et al*;1 in 161,Arup *et al*).Peak age of incidence was between20-25 yrs, more common in second gravidas. Risk factors are similar to other studies. Urine pregnancy test and ultrasonographic finding of complex adnexal mass and culdocentesis are the diagnostic methods. Most common site was tubal and treated by salpingectomy in majority.[10, 11]Blood transfusion in shock prevents mortality.

CONCLUSION

High degree of suspicion, early diagnosis and early intervention are essential in the management of Ectopic pregnancy to reduce morbidity and mortality of this obstetric emergency. Ultrasonography is the gold standard which is a noninvasive diagnostic test and helps in early intervention.

REFERENCES

1. Dabata,B.Y, Management and outcome of ectopic pregnancy in developing countries.www.Intechopen.com.2000.
2. Rajkhowa,M., Trends in the incidence of ectopic pregnancy in England and Wales from 1960-1996,BJOG,2001,107(3):369-74.
3. Arpita .N,A retrospective and prospective study of maternal mortality in a rural tertiary care hospital of central India. Indian Journal of community health.2013,25(1).

4. Centres for Disease controland prevention. Ectopic pregnancy- United States1990-1992.JAMA 273(7), 533.1995.
5. Chang J. Elam-Evans LD, Berg CJ *et al*: Pregnancy related mortality surveillance-United states, 1991-1999 MMWR Surveill. Summ 52(2), 1-8(2003).
6. Bouyer.J. Fernandez H, Pouly JL, Job-Spira N. Sites of ectopic pregnancy:a ten year population based study of 1800 cases. Hum reprod.17 (120, 3224-3230(2002).
7. Laing F.,Frates MC:Ultrasound evaluation during the first trimester of pregnancy. Ultrasonography in Obstetrics and gynaecology (4th edition) Callen P(ed) WB Saunders.PA, USA (2000).
8. Adhikari S,Blaivas M,Lyon M. Diagnosis and management of ectopic pregnancy using bedside transvaginal ultrasonography in the ED:a 2 year experience. AmJEmerg Med.2007; 25(6):591-6.
9. Al-Sunaidi M, Tulandi T.Surgical treatment of ectopic pregnancy. Semin Reprod Med.2007; 25(2):117-22.
10. Majhi AK,Roy N,Karmakar KS.*et al*. Ectopic pregnancy:an analysis of 180 cases.J Indian Med Assoc.2007;105(6):308-14.
11. Arora R, Rathore AM, HabeebullahS, *et al*. Ectopic pregnancy:changingtrends.J Indian Med Assoc.1998;96(2):53-7.

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