

THE CLINICAL PRESENTATIONS OF ECTOPIC PREGNANCY AND ITS CORRELATIONS WITH INTRA-OPERATIVE FINDINGS IN A TERTIARY CARE HOSPITAL OF WEST BENGAL

Dr Anirban Mandal, Dr. Biswajit Mahapatra, Dr. GAUTAM CHAUDHURI, Dr Arpita Chakraborty

Associate Professor, Department of Gynaecology & Obstetrics, Bankura Sammilani Medical College and Hospital.

Assistant Professor, Department of Gynaecology & Obstetrics, Bankura Sammilani Medical College and Hospital.

Associate Professor, Department of Physiology, Jhargram Government Medical College & Hospital.

Senior Resident, Department of Gynaecology & Obstetrics, Bankura Sammilani Medical College and Hospital. (Corresponding Author)

Email :debarsheejana@gmail.com

ABSTRACT

Introduction: The first known description of an ectopic pregnancy is by Al-Zahrawi in the 11th century. The term “Ectopic” is derived from Greek word “EXTOPOS” meaning “out of place”. Ectopic pregnancy is defined by diagnostic code O00 by International Statistical classification of diseases and related health problems 10th revision (ICD-10).

Aims: Clinical presentations of ectopic pregnancy and Intraoperative findings and its correlation with presentation.

Materials and methods: This study was conducted in Bankura Sammilani Medical College and Hospital among 60 pregnant mother which were selected from Bankura Sammilani Medical College & Hospital after applying inclusion and exclusion criteria. After that data was collected.

Result: 22 depicted that most of the participants i.e. 50% (N=30) types of surgery was right salpingectomy whereas 25% (N=15) participants types of surgery was left salpingectomy and 3.33% (N=2) participants types of surgery was excision of mass with repair and b/l tubal ligation and 23 depicted that 11.67% (N=7) participants have admitted at ICU after operation. 1.67% (N=1) participant have suffered from wound infection after operation. Re laparotomy also required for 1.67% (N=1) participant and there is no history of maternal death.

Conclusion: Women at high risk for ectopic pregnancy must be counselled about the possibility for future ectopic pregnancy. They should be emphasised to report to their doctor as soon as they miss their periods for early diagnosis. Avoiding unnecessary pregnancies, safe

sex practices, using barrier contraceptives, prompt treatment of PID/STDs can bring down the incidence of ectopic pregnancies. Early diagnosis, timely referral, aggressive management, improvement of blood bank facilities can reduce the maternal morbidity and mortality associated with ectopic pregnancy.

Keywords: Ectopic, Pregnancy, Maternal Mortality and Adnexal.

INTRODUCTION

The first known description of an ectopic pregnancy is by Al-Zahrawi in the 11th century¹. The term “Ectopic” is derived from Greek word “EXTOPOS” meaning “out of place”. Ectopic pregnancy is defined by diagnostic code O00 by International Statistical classification of diseases and related health problems 10th revision (ICD-10).

Motherhood is a dream of every woman but this dream is not always pleasant and one may have some nightmares through this journey. Ectopic pregnancy is one such nightmare and life threatening condition than every practicing obstetrician and gynecologist face in his or her life¹.

Ectopic pregnancy present in a diverse symptomatology, different anatomical sites and physiological expressions. Most of ectopic pregnancies occur in the Fallopian tube (tubal ectopic pregnancy), but implantation also occur in the ovaries, broad ligaments cervix and in the abdominal cavity (non-tubal ectopic pregnancy).

Ectopic pregnancy occurs mostly in the fallopian tube or tubes with a frequency of 95-98.7% of all ectopic pregnancies with non-tubal accounting for 5- 10% and of all ectopic pregnancy ampulla is the most prevalent site accounting for 55-93% followed by isthmus 8-22%, fimbria end 6-8%, cornua 2.5-13.5%, ovary 1-4% and abdominal pregnancy 1-3%^{2,3} rare sites for ectopic pregnancy are the cervix, myometrium pregnancy, cesarean scar ectopic pregnancy of which all accounts for less than 1% of all EP^{3,4}

The major contributing factors for tubal ectopic pregnancies are PID, use progesterone contraceptives, use of IUDs and postpartum as well as post-abortal complications. For non-tubal pregnancies there is additional risk due to ART methods like IVF – embryo transfer procedures.

Maternal mortality and morbidity in case of ectopic pregnancy mostly depend on the state of diagnosis of ectopic pregnancy. Now a days there is huge reduction in maternal mortality and morbidity in both developed and developing countries as due to improved health services, early

diagnosis , treatment can be possible, even noninvasive surgeries , medical and expectant management are also done⁵.

The anatomical site of ectopic pregnancy is very much important since it not only influence the treatment modalities but also influence the management outcome and also possibilities of further pregnancies.

Ectopic pregnancy is a leading cause of maternal mortality in the first trimester of pregnancy, prevalence is 1-2% of a pregnancies and 10-15% of al maternal death worldwide. Along with maternal death it's also causing fetal wastage with recurrence and impairments of subsequent fertility⁵

In developing countries more than 75% present at ruptured state in hemodynamically compromised condition leads to maternal morbidity and mortality

As ectopic pregnancy especially ruptured ectopic is a life threatening situation so understanding the clinical anatomical pattern will helpineary diagnosis and appropriate management and subsequently reduce the rate of maternal mortality.

MATERIALS AND METHODS

- **Study design:** It is an institutional based Descriptive Cross Sectional study.
- **Study setting and timelines:** The study was conducted in Bankura Sammilani Medical College and Hospital within a time frame of about 12 months from acceptance of synopsis.
- **Place of study:** In the Dept. of Obstetrics & Gynaecology, at Emergency, Septic Ward, Operation theatre and HDU.
- **Period of study:** 12months
- **Study population:** All diagnosed cases of ectopic pregnancy were enrolled in the study. A detailed history and clinical evaluation was done. Information was collected in a pretested proforma.
- **Sample size:** Approximately 4-5 cases of ectopic pregnancy are admitted to BSMCH in a month. accordingly all cases of ectopic pregnancy was included in the study during the study duration of 12 months and sample size was calculated by Complete Enumeration was done .
- **Sampling design:** Data collection for the proposed study was done over a period of 12 months.
- For cases of ectopic pregnancies data was collected on at least two days of the week.

Whenever an ectopic pregnancy was diagnosed in others units, I was informed by the PGTs of respective units. The cases were followed up in the septic ward and in SME cases at HDU also. The earlier informed cases were included.

- **Inclusion criteria:**

Women of pregnancy age group with USG diagnosed ectopicpregnancy.

- **Exclusion criteris**

Persons who did not give consent

RESULT AND ANALYSIS

In our study, 100% (N=60) participants were amenorrhoea stage. Whereas most of the participants i.e. 56.67% (N=34) participants have bleeding per vagina. And 96.67% (N=58) participants have suffered from pain in abdomen. Most of the participants i.e. 90% (N=54) were pallor according to general physical examination, whereas 6.67% (N=4) were in shock. According to abdominal examination 93.33% (N=56) participants have presented abdominal tenderness, 66.67% (N=40) have presented abdominal rigidity and 20% (N=12) have presented abdominal mass. 98.33% (N=59) participants USG findings was Empty Uterus. 100% (N=60) participants findings was adnexal mass present. 88.33% (N=53) participants findings was fluid in POD. 100% (N=60) participants findings was fetal cardiac activity was not present. Most of the participants i.e. 48.33% (N=29) site of ectopic pregnancy was ampulla of right fallopian tube whereas 10% (N=6) participants site was Isthmus of right fallopian tube and 1.67% (N=1) participants site was right cornu of uterus. Most of the participants i.e. 50% (N=30) types of surgery was right salpingectomy whereas 25% (N=15) participants types of surgery was left salpingectomy and 3.33% (N=2) participants types of surgery was excision of mass with repair and b/l tubal ligation. 11.67% (N=7) participants have admitted at ICU after operation. 1.67% (N=1) participant have suffered from wound infection after operation. Re laparotomy also required for 1.67% (N=1) participant and there is no history of maternal death.

Table: Distribution of participants according to Symptomatology at presentation

Symptomatology at presentation	Frequency	Percentages (%)
Amenorrhea	60	100
Bleeding per Vagina	34	56.67
Pain per abdomen	58	96.67

Table: Distribution of participants according to Signs in patients at time of admission

Signs in patients at time of admission		Frequency	Percentages (%)
General physical examination	Pallor	54	90
	Shock	4	6.67
Abdominal examination	Abdominal Tenderness	56	93.33
	Abdominal rigidity	40	66.67
	Abdominal Mass	12	20
Speculum examination	Bleeding present	37	61.67
Vaginal examination	Adnexal tenderness	56	93.33
	Adnexal mass	52	86.67
	Cervix motion tenderness	58	96.67

Table: Distribution of participants according to USG Findings

USG Findings	Frequency	Percentages (%)
Empty uterus	59	98.33
Adnexal mass	60	100
Fluid in pod	53	88.33
Fetal cardiac activity not present	60	100

Table: Distribution of participants according to Site of Ectopic pregnancy

Site of ectopic pregnancy	Frequency	Percentages (%)
Ampulla of left fallopian tube	15	25
Ampulla of right fallopian tube	29	48.33
Isthmus of right fallopian tube	6	10
Isthmus of left fallopian tube	5	8.33
Fimbria of right fallopian tube	2	3.33
Right cornu of uterus	1	1.67
Right fallopian tube and right ovary	2	3.33

Table: Distribution of participants according to Type of Surgery

Type of surgery	Frequency	Percentages (%)
Left salpingectomy	15	25
Right salpingectomy	30	50
Right salpingectomy with left tubal ligation	3	5
Left salpingectomy with right tubal ligation	1	1.67
Right salpingo-oopharectomy	3	5
Left salpingo-oopharectomy	2	3.33
Excision of mass with repair and b/l tubal ligation	2	3.33
Medical management (no surgery)	1	1.67
Left salpingo-oopharectomy with right salpingectomy	1	1.67

Right salpingectomy with cystectomy	1	1.67
Right salpingoopharectomy with left tubal ligation	1	1.67

Table: Distribution of participants according to Post-operative complication

Post-operative complication	Frequency	Percentages (%)
ICU Admission	7	11.67
Wound infection	1	1.67
Re – laparotomy	1	1.67
Maternal death	0	0

DISCUSSION

This was a hospital based descriptive cross sectional study conducted on patient with in the Department of Obstetrics and Gynaecology in Bankura Sammilani Medical College. Among 60 study subjects who presented in the hospital and were fulfilling the inclusion and exclusion criteria. After taking of proper consent from the participant, data were collected according to pre designed data collection proforma.

The results of the present study are as follows:-

Most of the participants i.e. 70% (N=42) belongs to 18 – 25 yrs. of age group. Whereas only 13.33% (N=8) participants were more than >34 yrs. of age group.

Mean value of age of participants was 24.83 and Standard Deviation was ± 6.46.

Most of the participants i.e. 63.33% (N=42) were P0+0. Whereas only 3.33% (N=2) participants were P2+1.

Most of the participants i.e 63.33% (N=38) were peimi gravida. Whereas only 36.67% (N=22) participants were multi gravida.

Most of the participants i.e. 76.67% (N=46) periods of amenorrhoea was within 5 – 8 wks. Whereas only 23.33% (N=14) participants amenorrhoea were >8 wks.

100% (N=60) participants were amenorrhea stage. Whereas most of the participants i.e. 56.67% (N=34) participants have bleeding per vagina. And 96.67% (N=58) participants have suffered from pain in abdomen.

90% (N=54) were pallor according to general physical examination, whereas 6.67% (N=4) were in shock.

According to abdominal examination 93.33% (N=56) participants have presented abdominal tenderness, 66.67% (N=40) have presented abdominal rigidity and 20% (N=12) have presented abdominal mass.

Most of the participants i.e. 96.67% (N=58) UPT result was positive whereas 3.33% (N=2)

participants results was negative.

75% (N=45) hemoglobin level was 7 – 10 gm. % whereas 5% (N=3) participants hemoglobin level was >10 gm. %, 98.33% (N=59) participants USG findings was Empty Uterus. 100% (N=60) participants findings was adnexal mass present. 88.33% (N=53) participants findings was fluid in POD. 100% (N=60) participants findings was fetal cardiac activity was not present. 83.33% (N=50) Serum beta – HCG test was not done where as 6.67% (N=4) participants result was >2000 IU/L.

78.33% (N=47) Doppler study was not done as USG proved ruptured ectopic pregnancy, whereas 20% (N=12) participants result was increased vascularity and 1.67% (N=1) participants result was no vascularity.

Most of the participants i.e. 48.33% (N=29) site of ectopic pregnancy was ampulla of right fallopian tube whereas 10% (N=6) participants site was Isthmus of right fallopian tube and 1.67% (N=1) participants site was right cornu of uterus.

Most of the participants i.e. 56.67% (N=34) tube was ruptured whereas 1.67% (N=1) participants tube was healthy.

Most of the participants i.e. 50% (N=30) types of surgery was right salpingectomy whereas 25% (N=15) participants types of surgery was left salpingectomy and 3.33% (N=2) participants types of surgery was excision of mass with repair and b/l tubal ligation.

Most of the participants i.e. 95% (N=57) required blood transfusion whereas 5% (N=3) participants didn't required blood transfusion.

11.67% (N=7) participants have admitted at ICU after operation. 1.67% (N=1) participant have suffered from wound infection after operation. Re laparotomy also required for 1.67% (N=1) participant and there is no history of maternal death.

In case of association between bleeding per vagina and intra – operative findings, calculated chi square (χ^2) was 2.644 which was found to be statistically significant at 0.103 level of significance as the obtained p value was higher than the 0.05 level of significance, so there was no significant association between bleeding per vagina and intra – operative findings in terms of condition of tube.

In case of association between pallor and intra – operative findings, calculated chi square (χ^2) was 1.02 which was found to be statistically significant at 0.313 level of significance as the obtained p value was higher than the 0.05 level of significance, so there was no significant association between pallor and intra – operative findings in terms of condition of tube.

In case of association between shock and intra – operative findings, calculated chi square (χ^2) was 0.64 which was found to be statistically significant at 0.421 level of significance as the

obtained p value was higher than the 0.05 level of significance, so there was no significant association between shock and intra – operative findings in terms of condition of tube.

In case of association between abdominal tenderness and intra – operative findings, calculated chi square (χ^2) was 0.09 which was found to be statistically significant at 0.754 level of significance as the obtained p value was higher than the 0.05 level of significance, so there was no significant Association between abdominal tenderness and intra – operative findings in terms of condition of tube.

CONCLUSION

Incidence of ruptured ectopic pregnancy is high in developing countries. According to this study, ruptured ectopic pregnancy is also high. Since many patients may not have identifiable risk factors, a high index of suspicion is vital for early diagnosis.

Clinical diagnosis, intraoperative findings and ultrasound findings were highly sensitive for detecting ectopic pregnancy in the study population. However, overall diagnostic accuracy was highest for the ultrasound finding so clinical diagnosis must be complemented by the ultrasound finding for detecting ectopic pregnancy. In this study, we can conclude that ultrasound (both transvaginal and Trans abdominal) had high diagnostic accuracy for the diagnosis of ectopic pregnancy. All cases were managed surgically except one, who was managed by medical treatment and none of these cases was a negative laparotomy Women at high risk for ectopic pregnancy must be counselled about the possibility for future ectopic pregnancy. They should be emphasised to report to their doctor as soon as they miss their periods for early diagnosis. Avoiding unnecessary pregnancies, safe sex practices, using barrier contraceptives, prompt treatment of PID/STDs can bring down the incidence of ectopic pregnancies. Early diagnosis, timely referral, aggressive management, improvement of blood bank facilities can reduce the maternal morbidity and mortality associated with ectopic pregnancy.

REFERENCES

- 1) Nama V , Manyonda I. Tubal ectopic pregnancy:diagnosis and management. Arch Gynecol Obst.2009;279(4):443-53
- 2) Adeyemo, M., Arowojolu, A. O., Damole, I., Ajayi, M., Shittu, A.,&Gbala, M. (2020). Management outcome of ruptured ectopic pregnancy at a secondary level of health care delivery at south-west , Nigeria. Nigerian Journal of Medicine, 29(1), 147-151.
- 3) Sudha, V., &Thangaraj, D. (2016).A prospective study on ectopic pregnancy: atwo year study. International Journal of Reproduction, Contraception, Obstetrics and Gynaecology, 5(12), 4365-4368.

- 4) Panelli, D.M., Phillips, C.H., & Brady,P.C. (2015).Incidence, diagnosis and management of tubal and nontubal ectopic pregnancies : a review. *Fertility Research and Practice*, 1 (1) , 1-20.
- 5) Hamura , N.N .,Bolnga, J . W.,Wangnapi, R., Horne , A. W., Rogerson, S.J., & Unger, H .W. (2013). The impact of tubal ectopic pregnancy in Papua New Guinea- a retrospective case review. *BMC Pregnancy and Childbirth*,13 1-8. <https://doi.org/10.1186/1471-2393-13-86>