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Original Research Article

A clinical study of ectopic pregnancy at a tertiary care hospital of North Delhi

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ABSTRACT

Background: aim was to study the risk factors, clinical presentation and management of ectopic pregnancy in a tertiary care centre of North Delhi

Methods: This was a prospective observational study conducted in the department of obstetrics and gynaecology Hindu Rao hospital and NDMC medical college, Delhi. A total of 65 cases of ectopic pregnancy were analyzed, over a period of 1 year that is from September 2020 to August 2021

Results: The incidence of ectopic pregnancy was 12.8/1000 deliveries. Majority of cases were multigravidas and of gestation age between 6 to 10 weeks. The common risk factors were PID, contraception failure (IUCD), tubal ligation, infertility, ART procedures, tubal surgery, and previous ectopic and previous abortion. Ultrasound, urine pregnancy test, serum β -hCG titre were done. Laparotomy was done in all cases. Surgery in form of salpingectomy, salpingo-oophorectomy, and uterine reconstruction was done. No maternal mortality occurred.

Conclusions: Diagnosis of ectopic pregnancy requires clinical suspicion and supportive investigations like UPT, ultrasonography, β -HCG and laparoscopy. It is an important cause of admission to Hindu Rao hospital as maternal near miss cases.

Key words: Ectopic pregnancy, Obstetric emergency, Fetal wastage, Maternal morbidity and mortality, Future infertility, Laparotomy

INTRODUCTION

An ectopic pregnancy or ecyesis is a complication of pregnancy in which the embryo attaches outside the uterus.¹ An ectopic pregnancy is an obstetric emergency if not treated properly, it not only leads to fetal wastage, but also increases the incidence of maternal morbidity and mortality and may even lead to problems of future infertility. The incidence of ectopic pregnancy has steadily risen.²⁻¹² Presently, an ectopic pregnancy occurs at a rate of about 1-2% of all pregnancies with a maternal mortality of 0.2 per 1000 estimated ectopic pregnancies.¹³ The incidence of ectopic pregnancy is increasing and this has

been attributed to the rising incidence of risk factors such as Pelvic inflammatory disease, uses of intrauterine contraceptive device, tubal surgeries, infertility, D&C, previous ectopic pregnancy, etc. The diagnosis of ectopic pregnancy is mostly a clinical diagnosis but, the classic clinical triad of amenorrhea, lower abdominal pain, and bleeding per vaginum is present in less than 50% of cases. Therefore, clinical suspicion is coupled with special tests like Ultrasound scanning (TAS+TVS), serial β -HCG levels, Laparoscopy or Laparotomy, Culdocentesis Quantitative β -HCG is the diagnostic cornerstone of ectopic pregnancy.² The present study was conducted with the objective to study the risk factors, clinical presentation

and management of ectopic pregnancy in a tertiary care centre, hindu rao hospital and ndmc medical college, Delhi

METHODS

This was a prospective observational study conducted in the department of obstetrics and gynaecology, in a tertiary care hospital of Hindu Rao hospital and NDMC medical college, Delhi.

A total of 65 Clinically and/or sonologically suspected cases of ectopic pregnancy were analyzed, over a period of 1 year that is from September 2020 to august 2021 and formed the study group. All cases of ectopic pregnancy coming to casualty/OPD who gave consent to participate in this study were included in the study. Detailed history and proper examination were done in each case after taking informed consent of the patient. Patient particulars regarding age, socioeconomic status, obstetric history, their presenting complains, risk factors. The diagnosis was made on detailed history, clinical examination, routine & special Investigations (bedside urine pregnancy test, transabdominal and transvaginal USG). The diagnosis was confirmed on operative findings. The surgical and medical treatment given was noted and the post-operative period was observed. To analyse the data, relevant tests and appropriate software was employed (SPSS version 21).

RESULTS

During the study period, there were a total of 6600 deliveries and 65 cases of ectopic pregnancy were admitted in the hospital (Table 1).

Table 1: Age and parity wise distribution of cases.

Parameters	N	%
Age (years)		
Below 20	6	9.3
Between 20-29	49	75.3
≥30	10	15.4
Parity		
0	5	7.6
1	11	16.9
2	6	9.2
≥3	43	66

The incidence of ectopic pregnancy in the present study was 12.8 per 1000 deliveries. Majority (75.3%) of the patients were in the age group of 20 to 29 years. Multiparous women were found to be more prone to have ectopic pregnancy (66%) as depicted.

The (Table 2) presents a glance at the major risk factors among the study participants. The majority (38.4%) of the patients had previous history of pelvic inflammatory disease. Out of the five patients who underwent sterilization, two had post-partum sterilization and three had laparoscopic sterilization. None of the patients had

concurrent sterilization with caesarean section. Six out of the 65 patients had previous ectopic pregnancy hence the recurrence rate was 9.2%. The most common clinical presentation was abdominal pain (67.7%) (Table 3). 14 out of 65 (21.5%) cases presented in a state of shock. However, no mortality was reported.

Table 2: Risk factors for ectopic.

Risk factors	N	%
infertility Treatment	8	12.3
STD/PID including tuberculosis	25	38.4
Tubal Surgery (Ligation/Tubo plasty)	5	7.6
IUCD in situ	2	3
Previous history of ectopic pregnancy	6	9.2
History of LSCS /abdominopelvic surgery	12	18.4
Previous abortion/MTP	7	10.7

Table 3: Clinical presentation.

Clinical symptoms	N	%
Asymptomatic	3	4.6
Abdominal Pain	44	67.7
Bleeding per vaginum	20	30.7
Shock	14	21.5

In our study, the most common site of ectopic pregnancy was fallopian tubes (97%) while 1 case of ovarian pregnancy and 1 case of broad ligament pregnancy was seen (Table 4). It depicts that 73.8 % had ruptured tubal ectopic.78.4% had haemoperitoneum.

Table 4: Distribution on the basis of intraoperative findings.

Parameters	N	%
Site of ectopic		
Fallopian tube	63	97
Ovary	01	1.5
Broad ligament	01	1.5
Heterotrophic/abdominal	00	00
Rudimentary horn	00	00
Condition of ectopic pregnancy		
Ruptured	48	73.8
Un-ruptured	16	24.6
Tubal abortion	11	16.9
Hemoperitoneum	51	78.4
Adhesions	5	7.6

The type of surgery done and the number of units of blood transfusion done is depicted in (Table 5). Till date, all cases of ectopic pregnancy are managed by laparotomy at our center. 49 (75.6%) underwent only salpingectomy, 6 (9.2%) had salpingo-oophorectomy and 8 (12.3%) had salpingectomy with contralateral tubectomy. 2 cases were managed medically. 25 cases required >1 unit of Blood

transfusion. 7 patients were managed in icu. Almost 47 % patients needed general anesthesia.

Table 5: Distribution according to line of management.

Parameters	N	%
Ipsilateral salpingectomy	49	75.3
Ipsilateral salpingo-oophorectomy	6	9.2
Ipsilateral salpingectomy + contralateral tubectomy	8	12.3
Medical line of treatment	2	3.07
Blood transfusion (≥1 pints)	25	38.4
Require ICU admission	7	10.7
Require general anesthesia	31	47.6
Mortality	00	00

DISCUSSION

In our study the incidence of ectopic pregnancy is 12.8 per 1000 deliveries while it was reportedly 15.2/1000 live births in the study of Jophy et al and 1:250 in another study by ICMR.^{3,4} In today's era of growing assisted reproductive techniques and higher rates of early detection, the overall incidence of ectopic pregnancy is on a rise. Ectopic pregnancy may be the only life-threatening emergency in which prevalence has increased as mortality has declined. Despite significant reduction in the mortality rate, ectopic pregnancy continues to be the leading cause of pregnancy related deaths during the first trimester. The highest frequency of ectopic pregnancy was recorded among age group of 20 to 29 years, similar results were found in different studies like Yadav et al (63.75%) and Sudha et al (68%).^{5,6} The highest incidence of ectopic pregnancy was noted among multiparous women which is close to other studies.^{6,15} Abdominal pain was most common (67%) in our study. Similar trend was seen in the study by Soren et al; 97% presented with abdominal pain while Yadav et al found amenorrhoea as the most common complain (71%).^{5,11} Ruptured ectopic accounts for 10-15% of all maternal deaths. In our study 73.8% cases reported with rupture Ectopic pregnancy in this Study, whereas In Latchaw et al study, tubal rupture was present in 59% cases and 41% had unruptured ectopic pregnancies.⁷ The key to successful management of Ectopic pregnancy essentially lies in high index of clinical suspicion, appropriate risk stratification, early diagnosis (with TVS, beta hCG estimation) and timely management. Fortunately, there was no fatality in our study, consistent with A. Abbas and H. Akram study.¹⁴ In our study maximum cases were managed surgically (97%), and only 3% were medically managed. Ipsilateral salpingectomy was done in 75% cases, While Ipsilateral salpingectomy + contralateral tubectomy were done in 12%. Total 9% underwent unilateral salpingo-oophorectomy. Shetty et al observed that most common surgery done was salpingectomy in 90.3% cases, salpingo-oophorectomy in 6.5% of cases.⁸ Porwal et al observed that salpingectomy was done in 45% of cases, and salpingo oophorectomy in 32.5% of cases.⁹ Gaddagi et al observed salpingectomy

was the most common procedure in 51.4 % cases followed by salpingo-oophorectomy in 13.5 % of cases.^{7,10} The results of present study are consistent with the above studies Limitations of the study: Cases managed with medical treatment were few, and need more studies.

CONCLUSION

In developing countries, a majority of hospital-based studies have reported that case fatality rate is declining in ectopic pregnancy. However, there is a rising trend in incidence of ectopic pregnancy due to more use of assisted reproductive techniques as well as early detection by the availability of more sensitive methods such as beta- HCG titre, and transvaginal sonography. It is the most important cause of maternal morbidity and mortality in the first trimester. Proper evaluation of pregnancy with associated risk factor and timely intervention will help in preserving fertility as well as decreasing morbidity and mortality.

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REFERENCES

- Linde T. Operative Gynaecology. 8th ed. Philadelphia: Lippincott- Raven; 1997;501-27.
- Karaer A, Avsar FA, Batioglu S. Risk factors for ectopic pregnancy: a case-control study. *Aust NZ J Obstet Gynaecol.* 2006;46:521-7.
- Jophy R, Thomas A, Mhaskar A. Study of tubal ectopic pregnancy at a tertiary teaching centre. *J Obst and Gyn India.* 2002;52:55-8.
- Centers for Disease Control and Prevention. Ectopic pregnancy- United States, 1990-1992. *Morb Mortal Wkly Rep.* 1995;44(3):46-8.
- Yadav DP. Ectopic pregnancy: a comprehensive analysis of risk factors and management. *Int J Reprod Contracept Obstet Gynecol.* 2016;5(80):2723-7.
- Sudha VS, Thangaraj DR. A retrospective study on ectopic pregnancy: a two year study. *Internat J Reprod Contracept Obstet Gynecol.* 2016;5(12):4365-8.
- Latchaw G, Takacs P, Gaitan L, Geren S, Burzawa J. Risk factors associated with the rupture of tubal ectopic pregnancy. *Gynecol Obstet Invest.* 2005;60(3):177-80.
- Shetty SK, Shetty AK. Clinical Study of Ectopic Pregnancies in a Tertiary care hospital of Mangalore, India. *Innovat J Med Health Sci.* 2014;4(1):305-9.
- Gupta R, Porwal S, Swarnkar M, Sharma N, Maheshwari P. Incidence, trends and risk factors for Ectopic Pregnancies in a tertiary care hospital of Rajasthan. *JPBMS.* 2012;16(7):1-3.

10. Gaddagi RA, Chandrashekhar AP. A Clinical study of ectopic pregnancy. *JCDR.* 2012;6:867-9.
11. Soren M. A clinical study on ectopic pregnancy. *Int J Res Med Sci.* 2017;5(11):4776-82.
12. Dabata BY. Management and outcome of Ectopic pregnancy in Developing Countries. Available at: <https://www.intechopen.com/chapters/22235>. Accessed on 20 February 2023.
13. Rajkhowa M. Trends in the incidence of ectopic pregnancy in England and Wales from 1966 to 1996. *BJOG.* 2000;107(3):369-74.
14. Abbas A, Akram H. Ectopic Pregnancy; Audit at Maula Bakhsh Teaching Hospital Sargodha. *Med J.* 2011;18 (1):24-7.
15. Lozeau AM, Potter B. Diagnosis and management of ectopic pregnancy. *Am Fam Physician.* 2005;72:1707-14.
16. Karki RCL, Pradhan B, Duwa S. Annual analysis of ectopic pregnancy in tertiary care hospital. *PMJN.* 2011;11:5-8.

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