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Study of Clinical Profile in Ectopic Pregnancy

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Abstract

Background: Ectopic pregnancy is a life-threatening condition where a fertilized ovum implants outside the endometrial cavity, most commonly in the fallopian tube. Despite advances in diagnosis and management, it remains a significant cause of maternal morbidity and can compromise future fertility.

Objectives: To study the clinical profile, risk factors, and outcomes of ectopic pregnancy in a tertiary care hospital.

Methods: This prospective observational study was conducted over 24 months (June 2023–May 2025) in the Department of Obstetrics and Gynecology at a tertiary care teaching hospital in Central India. All patients diagnosed with ectopic pregnancy and providing consent were included. Data were collected using a structured case record form, including demographic details, clinical presentation, past history, risk factors, investigations, and management.

Results: Among 11,711 deliveries, 45 ectopic pregnancies were identified (0.384%; 3.84 per 1,000 deliveries). Mean age was 28.22 ± 4.45 years. Pelvic inflammatory disease (24.44%), prior LSCS (20%), and previous ectopic pregnancy (15.56%) were common risk factors. Most cases presented with amenorrhea (91.11%), abdominal pain (75.56%), and vaginal bleeding (48.89%). Tubal ectopics predominated (68.89%). Surgical management was performed in

86.67% of cases, while 11.11% received medical therapy. No maternal deaths occurred.

Conclusion: Ectopic pregnancy, though relatively uncommon, remains an important cause of maternal morbidity. Early diagnosis, recognition of risk factors, and timely intervention are crucial for favorable outcomes.

Keywords: Ectopic Pregnancy, Incidence, Clinical Presentation, Risk Factors, Outcomes

Introduction

Ectopic pregnancy is a life-threatening condition encountered frequently by obstetricians and gynecologists[1]. It occurs when a fertilized ovum implants outside the endometrial cavity of the uterus, most commonly within the female genital tract[2]. The term ectopic originates from the Greek word Extropos, meaning "out of place."

Globally, ectopic pregnancies account for approximately 1–2% of all pregnancies, with the incidence rising up to 4% in women undergoing assisted reproductive technologies. The fallopian tube is the most frequent site (93–97%), with the ampulla involved in about 75%, the isthmus in 13%, and the fimbrial end in 12% of cases[3]. In developing countries, ectopic pregnancy remains the second most common cause of maternal mortality during the first trimester, next only to post-abortal complications[4]. Besides the high risk to maternal survival, it also jeopardizes future fertility by damaging the fallopian tubes and sometimes the ovaries [5].

Clinically, ectopic pregnancy presents with varied symptoms, making early diagnosis challenging. Vaginal bleeding, abdominal or pelvic pain, adnexal mass or tenderness, and cervical motion tenderness are common signs[6]. However, the presentation may mimic intrauterine pregnancy or other gynecological and abdominal conditions, especially in resource-limited settings, thereby delaying diagnosis[7]. In advanced or ruptured cases, patients may present with hemoperitoneum, hypovolemic shock, or even death if not managed promptly[3].

Despite advances in diagnostic tools such as ultrasonography and biochemical markers, ectopic pregnancy continues to be a major contributor to maternal morbidity and mortality[6]. The present study aims to evaluate the clinical profile of ectopic pregnancy in a tertiary care hospital. By identifying its clinical presentations, associated risk factors, and immediate outcomes, the study seeks to generate evidence that can improve early diagnosis, management strategies, and reduction of morbidity and mortality in affected women.

Methodology

This was a prospective observational study aimed at evaluating the clinical profile, risk factors, and outcomes of ectopic pregnancy.

The present study was conducted in the Department of Obstetrics and Gynecology at a tertiary care teaching hospital in Central India over a period of 24 months from June 2023 to May 2025. Ethical approval was obtained from the Institutional Ethics Committee prior to commencement of the study, and written informed consent was obtained from all participants. All patients diagnosed with ectopic pregnancy during the study period who provided consent were included in the study, while those who did not consent were excluded. Universal sampling was employed, and all eligible cases were consecutively enrolled to minimize selection bias.

Data were collected using a structured and pre-tested case record form. Demographic details, presenting complaints, menstrual and obstetric history, past medical and surgical history, contraceptive use, and known risk

factors such as PID, ART/IVF use, and smoking were recorded. Each patient underwent general, systemic, abdominal, and pelvic examination, including per rectal examination when indicated.

Laboratory investigations included hemoglobin, hematocrit, TLC, blood grouping, Rh typing, urine pregnancy test, and additional tests as clinically indicated. Abdominal and transvaginal ultrasonography was performed to confirm the diagnosis and assess intra-abdominal pathology.

Patients were managed according to clinical presentation, with acute or hemodynamically unstable cases undergoing emergency surgical intervention, and stable cases managed medically with methotrexate as appropriate. Outcome measures included clinical presentation, proportion of ectopic pregnancies, risk factors, type of management, immediate morbidity, postoperative complications, duration of hospital stay, and mortality. Postoperative follow-up was conducted at one week for recovery assessment and counseling.

Data were entered and analyzed using Microsoft Excel 2023 and SPSS software, with continuous variables expressed as mean ± standard deviation and categorical variables as frequencies and percentages.

Result

During the two-year study period, 11,711 deliveries were conducted, among which 45 ectopic pregnancies were diagnosed, yielding an incidence of 3.84 per 1,000 deliveries (0.384%). No maternal deaths occurred, reflecting timely diagnosis and effective management.

Among the ectopic pregnancy cases, the mean age was 28.22 ± 4.45 years, with the highest proportion in the 31–35 years age group (35.55%) followed by 26–30 years (31.11%). All patients were unregistered for antenatal care. Residence was almost equally distributed between urban (51.11%) and rural (48.89%) areas. The majority of participants were Hindu (57.78%), followed by Muslim (26.78%) and Buddhist (15.44%). Most women had completed middle (53.33%) or high school education (40%), with very few having primary, intermediate/diploma, or no formal education. Socioeconomic status was predominantly upper (44.44%), followed by middle (28.89%) and lower (26.67%). Regarding marital duration, 44.44% were married 1–5 years, 35.56% for 5–10 years, and 20% for more than 10 years. Parity distribution showed that 31.11% were nulliparous, 20% had one child, 33.33% had two children, and 15.56% had three children. Only 6.67% reported a history of infertility, while 93.33% had no such history. (Table 1)

Figure 2 illustrates the distribution of risk factors among 45 ectopic pregnancy cases. Pelvic inflammatory disease was the most common (24.44%), followed by previous LSCS (20%), prior ectopic pregnancy (15.56%), and ART use (8.89%). IUCD use and history of miscarriage or tubal surgery were less common (4.44–6.67%). Notably, 17.77% of cases had no identifiable risk factors, highlighting that ectopic pregnancy can occur even in the absence of recognized risks.

Among the 45 ectopic pregnancy cases, the most common presenting symptom was amenorrhea (91.11%), followed by abdominal pain (75.56%) and vaginal bleeding (48.89%), with the classical triad observed in 40% of cases. On examination, pallor (77.78%), abdominal tenderness (73.33%), and adnexal mass (64.44%) were frequently noted, while 26.67% presented in shock and 8.89% had fever. Urine pregnancy test was positive in 91.11% of cases. (Table 2)

Among cases, tubal ectopics were the most common (68.89%), followed by scar ectopics (17.78%) and chronic ectopics (8.89%). Cervical and rudimentary horn ectopics were rare, each accounting for 2.22% of cases. Histopathological examination (HPR) confirmed the diagnosis in all cases. (Table 3) The majority (86.67%) were managed surgically, including right salpingectomy (22.22%), left salpingectomy (28.89%), scar excision (17.78%), diagnostic laparoscopy with mass excision (8.89%), and rudimentary horn excision (2.22%). Medical management was employed in 11.11% of cases, with one patient (2.22%) receiving methotrexate injection. (Table 4)

Table 1: Distribution of study cases (Ectopic Pregnancies) according to the Sociodemographic characteristics.

Sociodemographic characteristics	No of Cases (n=45)	Percentage (100%)
Age Group (in years)		
15-20	02	04.44%
21-25	13	28.89%
26-30	14	31.11%
31-35	16	35.55%
Mean Age ± SD in Years	28.22 ± 04.45 Years	
ANC Registration.		
Registered	00	00
Unregistered	45	100%
Residence		
Urban	23	51.11%
Rural	22	48.89%
Religion		
Hindu	26	57.78%
Muslim	12	26.78%
Buddhist	07	15.44%
Education Level		
Professional Degree	00	-
Graduate	00	-
Intermediate/Diploma/HSC	01	02.22%
High School	18	40.00%
Middle School	24	53.33%
Primary School	01	02.22%
Illiterate/Uneducated	01	02.22%
Socioeconomic status		

Upper	20	44.44%
Middle	13	28.89%
Lower	12	26.67%
Years of Marriage		
1-5	20	44.44%
5-10	16	35.56%
>10	09	20.00%
Parity		
Nulliparous	14	31.11%
1	09	20.00%
2	15	33.33%
3	07	15.56%
H/O Infertility		
Present	03	06.67%
Absent	42	93.33%

Fig 1: Distribution of study cases (Ectopic Pregnancies) according to the Risk factors present.

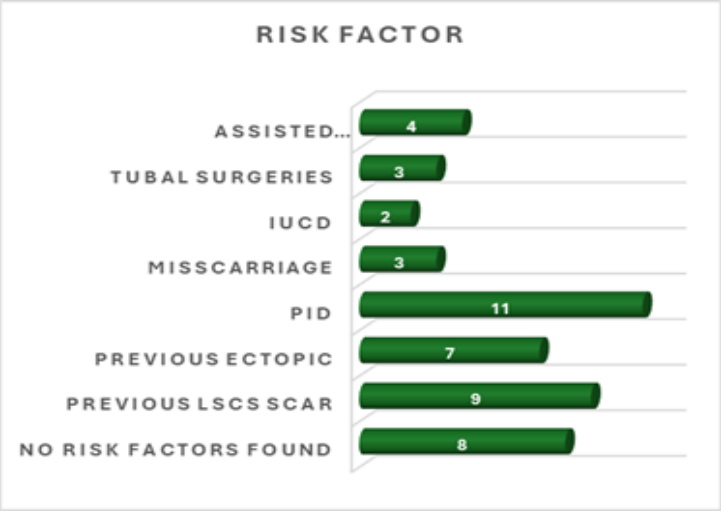

Table 2: Distribution of study cases (Ectopic Pregnancies) according to the Presenting symptoms.

Presenting symptoms	No of Cases (n=45)	Percentage (100%)
Symptoms		
Amenorrhea	41	91.11%
PV bleeding	22	48.89%
Pain in abdomen	34	75.56%
Triad is seen in	18	40.00%
Signs on Examination.		

Shock(SBP≤90mmHg)	12	26.67%
Abdominal tenderness	33	73.33%
Pallor	35	77.78%
Fever	04	08.89%
Adnexal Mass	29	64.44%
UPT		
Positive	41	91.11%
Negative	04	08.89%

Table 3: Distribution of study cases (Ectopic Pregnancies) according to the Types/Proportion.

Types/Proportion	No of Cases (n)	Percentage (%)	HPR
Tubal Ectopic	31	68.89%	Fallopian tube on HPR
Scar Ectopic	08	17.78%	Embryo with myometrium on HPR
Chronic Ectopic	04	8.89%	Degenerated chorionic villi found on HPR
Cervical Ectopic	01	2.22%	Cervical Ectopic on HPR
Rudimentary Horn	01	2.22%	Rudimentary Horn ectopic on HPR
Total	45	100%	-

Table 4: Distribution of study cases (Ectopic Pregnancies) according to the Type of Management.

Type of Management	Number of Cases (n=45)	Percentage (%)
Medical Management	05	11.11%
Medical management only	05	11.11%
Medical management with Inj. Methotrexate	01	02.22%
Surgical Management	39	86.67%
Salpingostomy	03	06.67%
Right salpingectomy (Open 05, Laparoscopic 05)	10	22.22%
Left salpingectomy (Open 06, Laparoscopic 07)	13	28.89%
Scar excision	08	17.78%
Diagnostic laparoscopy with excision of mass	04	08.89%
Rudimentary horn excision	01	02.22%

Discussion

In the present study, the incidence of ectopic pregnancy was 3.84 per 1,000 deliveries, comparable to Samantaray SR et al.[8] (5.3 per 1,000) and Poornima C[9] (6.6 per 1,000), while other studies reported lower incidences (0.48–1.9%). Tubal ectopic pregnancy was the most common type (68.9%), similar to Eke EO et al.[10] (91.1%) and Samantaray SR et al.[8] (92.4%), with the ampullary region most frequently involved. The majority of cases occurred in women aged 31–35 years (37.8%), slightly older than other reports where the 26–30 years group predominated **(**Sreelatha S, et al[11] & Ilanjselvi M,

et al[12]**).** In terms of parity, parity 2 (33.3%) was most common in our study, similar to previous studies noted predominance among multiparous women **(**Sreelatha S, et al[11] & Ahirwar M, et al[13]**).** A history of infertility was uncommon (6.7%), consistent with Godria PP, et al (6.6%) and Ahirwar M, et al[13] (5%). Pelvic inflammatory disease (24.4%) was the most frequent risk factor, followed by previous LSCS and prior ectopic pregnancy, in line with Godria PP, et al (PID 25%) and Ilanjselvi M, et al[12] (PID 28.3%)**.** The common presenting symptoms were amenorrhea (91.1%), abdominal pain (75.6%)**,** and PV bleeding (48.9%), with the classical triad present in 40%, comparable to Samantaray SR,et al[8] and Attri P, et al**.**[15] Clinically, pallor/anemia (77.8%) and abdominal tenderness (73.3%) were predominant, while shock (26.7%) occurred less frequently. No maternal mortality was reported, consistent with most contemporary studies **(**Ahirwar M, et al[13]; Suliman AA, et al[14]**).** Surgical management (86.67%) was the mainstay, most commonly left and right salpingectomy**,** with medical management (13.33%) reserved for selected cases, similar to Ahirwar M, et al[13] and Attri P, et al.[15]

Overall, the findings of this study highlight that ectopic pregnancy continues to present most commonly in women of reproductive age with tubal involvement, often associated with pelvic inflammatory disease and prior cesarean sections. Early recognition of clinical features such as amenorrhea, abdominal pain, and pallor, coupled with timely surgical intervention, plays a crucial role in reducing complications and ensuring favorable maternal outcomes. The patterns observed in this study reinforce the importance of maintaining high clinical suspicion and adopting evidence-based management strategies to improve care in similar hospital settings.

Conclusion

The study highlights that ectopic pregnancy, though relatively uncommon (0.384% of deliveries), remains a significant contributor to maternal morbidity. The majority presented with amenorrhea, abdominal pain, and vaginal bleeding, though atypical presentations were also common, emphasizing the need for clinical vigilance. Pelvic inflammatory disease, prior cesarean section, and previous ectopic pregnancy were important risk factors. Tubal ectopic predominated, with surgical management being the mainstay, though methotrexate proved useful in selected cases.

Limitation

As an observational study from a single tertiary care center, the findings may not be generalizable to all populations or healthcare settings. The inclusion of only diagnosed and consenting patients introduces selection bias, excluding asymptomatic or externally managed cases. Moreover, while the study highlights associations between risk factors and ectopic pregnancy, it cannot establish causation.

References

1. Dwivedi N, Gupta A, Vij A. Clinical profile and outcome of ectopic pregnancy in tertiary care hospital. Shock. 2023; 3:4-2.
2. Panelli DM, Phillips CH, Brady PC. Incidence, diagnosis and management of tubal and nontubal ectopic pregnancies: a review. Fertil Res Pract. 2015; 1:15.
3. Ganitha G, Anuradha G. A study of incidence, risk factors, clinical profile and management of 50 cases of ectopic pregnancy in a tertiary care teaching hospital. Int J Reprod Contracept Obstet Gynecol. 2017;6(4):1336-41.

4. Anaswara T, Jacob AT. Clinical profile and risk factors of ectopic pregnancy: A prospective study from a tertiary care center in Kerala. Int J Clin Obstet Gynaecol. 2021;5(3):12-6.
5. Dwivedi N, Gupta A, Vij A. Clinical profile and outcome of chronic ectopic pregnancy in tertiary care hospital. Age. 2023;30(4):80.
6. Patel UM, Gandhi MR, Jani PS, Kakani CR, Thakor N. Clinical profile and management of ectopic pregnancy in patients with ectopic pregnancy at GMERS Medical College and Hospital Dharpur-Patan, North Gujarat region, India. Int J Res Med Sci. 2015; 3:841-5.
7. Kumari A. Clinical profile and outcome of ectopic pregnancy in tertiary care hospital. Strategies. 4:5.
8. Samantaray SR, Mohapatra I, Vivekanada A. A clinical study of ectopic pregnancy at a tertiary care centre in Telangana, India. Int J Reprod Contracept Obstet Gynecol. 2020 Feb 1;9(2):682-8.
9. Poornima C. Analysis of various types of ectopic pregnancies: a five-year review. International Journal of Reproduction, Contraception, Obstetrics and Gynecology. 2018 Jun 1;7(6):2411.
10. Eke EO, Ekeleme NC, Ezirim EO, Onwuka CJ, Eke KO. Ectopic Pregnancy: a 10-year review of cases in a tertiary health institution in Umuahia, South East, Nigeria. European Journal of Medical and Health Sciences. 2022 Aug 18;4(4):54-9
11. Sreelatha S. Risk Factors and Maternal Outcome in Ectopic Pregnancy. EC Gynaecology. 2024; 13:1-4.
12. Ilanjselvi M, Priya KS. Prospective study on ectopic pregnancy in a tertiary care hospital. Int J Reprod Contracept Obstet Gynecol. 2021 May 1;10(5):1890.
13. Ahirwar M, Singh P, Dohare R. Clinical study of ectopic pregnancy in tertiary care centre. Trends Clin Med Sci. 2023:309-18.
14. Suliman AA, Ahmed HS, Hammad KM, Alsiddig IJ, Abdelgader MA, Elhag AO, Ibrahim SM. Ectopic Pregnancy Risk Factors Presentation and Management Outcomes. Clinical Journal of Obstetrics and Gynecology. 2023 Sep 29;6(3):143-9.
15. Attri P, Gupta A, Vij A, Gupta B. A clinical study of the incidence, management and outcome of ectopic pregnancy. Int J Clin Obstet Gynaecol. 2020;4(3):219-26.