

## Evaluating Clinical Profile and Outcome of Chronic Ectopic Pregnancy in Tertiary Care Hospital

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Received: 22-01-2024 / Revised: 26-02-2024 / Accepted: 20-03-2024

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Conflict of interest: Nil

### Abstract

**Aim:** The aim of the present study was to assess the clinical profile and outcome of chronic ectopic pregnancy in tertiary care hospital.

**Methods:** This prospective observational study was undertaken in the Department of Obstetrics & Gynecology, Netaji Subhas Medical College, Bihta, Patna, India on pregnant women with persistent chronic ectopic pregnancy. During the study period of one year, 9940 patients were delivered to the institute. 85 patients were diagnosed with ectopic pregnancy. Hence, the incidence of ectopic pregnancy was 0.85% in our study. Only 10 patients were diagnosed in chronic ectopic frequency (CEP).

**Results:** 30% cases were aged  $\leq 30$  years while rest of the cases was aged more than 30 years. The mean age was  $34.56 \pm 5.0$  years. 40% (4 cases) were nullipara, 60% (6 cases) were primipara and none of cases were multipara. Our center being tertiary center, 40% (4 cases) were referred from other centers while 60% (6 cases) were diagnosed at our hospital. Majority of the patients 60% (6 cases) presented at 6 to 8 weeks of gestation followed by 40% (4 cases) at less than 6 weeks of gestation. Amenorrhea and pain abdomen was the most common complaint seen in 100% (7 cases) followed by Vaginal Bleeding/Spotting (60%) and Fainting Attack (30%). 80% cases were positive UTP. All of the patients were positive in Culdo/Paracentesis. The beta-HCG levels of more than 5000mIU/ml was observed in 10% (1 case), beta-HCG of less than 1500mIU/ml was in 60% (6 cases), and beta-HCG in the range of 3000-5000 mIU/ml was in 30% (3 cases). All of the patients had hemoglobin range of 7-10 gm/dl.

**Conclusion:** Chronic ectopic pregnancy is rare and is often misdiagnosed preoperatively. Chronic ectopic pregnancy should be the provisional diagnosis in a young multiparous woman with AUB and/or abdominal pain, if the ultrasound shows the presence of a heterogeneous mass in the POD and/or adnexa, with no internal vascularity on CD.

**Keywords:** Chronic ectopic pregnancy, HCG, UTP

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### Introduction

Ectopic pregnancy (EP) is a condition presenting as a major health problem for women of childbearing age. The incidence of EP varies with the population, but it has been accounted for 1-2% of all reported pregnancies. Accordingly, it is speculated that the main risk factors for ectopic pregnancy are conditions or procedures, which can result in tubal damage. [1] The risk is increased by several factors: previous ectopic pregnancy, tubal damage from infection (pelvic inflammatory disease) or surgery, a history of infertility, therapy for in vitro fertilization, increased age, and smoking. The risk of an ectopic pregnancy is increased 7-fold after an episode of acutesalpingitis. This is particularly true if the causal agent is Chlamydia trachomatis. [2] With tubal

pregnancy, because the fallopian tube lacks a submucosal layer, the fertilised ovum promptly burrows through the epithelium. The zygote comes to lie near or within the muscularis, which is invaded by rapidly proliferating trophoblast. Potential outcomes from this include tubal rupture, tubal abortion, or pregnancy failure with resolution. The classic triad is amenorrhea followed by pain and vaginal bleeding. [3]

Diagnosis requires a high index of suspicion as the classic triad of amenorrhoea, abdominal pain and vaginal bleeding is not seen in majority of cases. Women may present with non-specific symptoms, unaware of an ongoing pregnancy or even present

with haemodynamic shock. The contribution of EP to the maternal mortality rates in developing countries including India is not precisely known, with data from few studies indicating 3.5-7.1% maternal deaths due to EP. [4,5]

Ectopic derives from the Greek word “ektopos”, meaning out of place. Unfortunately ectopic pregnancy is very much common place, with rising incidence globally. Ruptured ectopic is potentially life-threatening and requires prompt suspicion and management. Identifying ectopic pregnancy has always challenged the ingenuity of the obstetrician and gynecologist by its bizarre clinical picture. This often leads to delay in diagnosis with disastrous consequences. It is therefore the leading cause of maternal mortality and morbidity in the first trimester accounting for 10–15% of all maternal deaths. [6] The prevalence of ectopic pregnancy among women with first trimester bleeding and pain or both ranges from 6 to 16% in the United States. [7] In a multicentric case–control study in India in 1990, the incidence of ectopic pregnancy was found to be 3.12 per 1,000 pregnancies. [8]

The aim of the present study was to assess the clinical profile and outcome of chronic ectopic pregnancy in tertiary care hospital.

## Materials and methods

This prospective observational study was undertaken in the Department of Obstetrics & Gynecology, Netaji Subhas Medical College, Bihta, Patna, India on pregnant women with persistent chronic ectopic pregnancy. During the study period of one year, 9940 patients were delivered to the institute. 85 patients were diagnosed with ectopic pregnancy. Hence, the incidence of ectopic pregnancy was 0.85% in our study. Only 10 patients were diagnosed in chronic ectopic frequency (CEP).

The study included all eligible prenatal clinic and labor room patients. Prenatal clinic and labor room patients with clinical features and persistent chronic ectopic pregnancy diagnosis were included after written informed agreement. All pregnant women in the first trimester attending prenatal clinic and labor room of Department of OBG with confirmed chronic ectopic pregnancy and willing to participate were included. Intrauterine pregnancies and other hemoperitoneum causes were excluded. Data were presented as frequency and percentages.

## Results

**Table 1: Baseline Characteristics**

Baseline Characteristics	Frequency (N=10)	Percentage (%)
<b>Marital Status</b>		
Married	10	100
Unmarried	0	0
<b>Age Categories (Years)</b>		
≤30	3	30
>30	7	70
<b>Age Mean (Years)</b>	34.56 ± 5.0	
<b>Parity</b>		
Nullipara	4	40
Primipara	6	60
Multipara	0	0
<b>Referral Status</b>		
Non-Referred	6	60
Referred	4	40
<b>Gestational age at time of admission</b>		
≤6 weeks	4	40
6wks, 1day to 8 weeks	6	60
<b>Symptoms</b>		
Amenorrhea	10	100
Abdominal Pain	10	100
Vaginal Bleeding/Spotting	6	60
Fainting Attack	3	30
<b>UPT</b>		
Positive	8	80
Negative	2	20
<b>Culdo/Paracentesis</b>		
Positive	10	100
Negative	0	0

30% cases were aged  $\leq 30$  years while rest of the cases was aged more than 30 years. The mean age was  $34.56 \pm 5.0$  years. 40% (4 cases) were nullipara, 60% (6 cases) were primipara and none of cases were multipara. Our center being tertiary center, 40% (4 cases) were referred from other centers while 60% (6 cases) were diagnosed at our hospital. Majority of the patients 60% (6 cases) presented at

6 to 8 weeks of gestation followed by 40% (4 cases) at less than 6 weeks of gestation. Amenorrhea and pain abdomen was the most common complaint seen in 100% (7 cases) followed by Vaginal Bleeding/Spotting (60%) and Fainting Attack (30%). 80% cases were positive UTP. All of the patients were positive in Culdo/Paracentesis.

**Table 2: Beta-HCG levels in the patients**

Beta-HCG levels (mIU/ml)	Frequency (N=10)	Percentage (%)
<1500	6	60
1500-3000	0	0
3000-5000	3	30
>5000	1	10
Hemoglobin levels (gm/dl)		
<5	0	0
5-7	0	0
7-10	10	100%
>10	0	0

The beta-HCG levels of more than 5000mIU/ml was observed in 10% (1 case), beta-HCG of less than 1500mIU/ml was in 60% (6 cases), and beta-HCG in the range of 3000-5000 mIU/ml was in 30% (3 cases). All of the patients had hemoglobin range of 7-10 gm/dl.

**Table 3: Site of Ectopic**

Site of Ectopic	Frequency (N=10)	Percentage (%)
Ampulla	8	80
Fimbria	2	20

Most common site of ectopic pregnancy was ampulla region (80%), followed fimbrial end of the tube 20% (2 cases).

**Table 4: Management**

Management	Frequency (N=10)	Percentage (%)
Surgical Salpingectomy	8	80
Surgical Salpingo-oophorectomy	2	20

The surgical salpingectomy was the most common procedure done for chronic ectopic pregnancy in 80% (8 cases) while 20% cases were Surgical Salpingo- oophorectomy.

**Table 5: Blood transfusion**

Blood Transfusion	Frequency (N=10)	Percentage (%)
1 Unit	6	60
2 Unit	3	30
3 Unit	1	10

Out of 10 patients of chronic ectopic pregnancy 100% (10 cases) required blood transfusion. It was further observed 60% (6 cases) were transfused with one units of blood, 30% (3 cases) each were transfused with two and 10% were transfused with three units of blood.

### Discussion

Ectopic pregnancy (EP) is a complication that occurs in the first trimester of pregnancy when an embryo implants outside of the uterus.<sup>9</sup> In India, the incidence has been reported in the range of 0.91-

2.3%. [9,10] The most frequent risk factors of EP include a history of abortions and pelvic inflammatory disease (PID). [11,12] Because the classic symptoms triad of amenorrhea, abdominal pain, and vaginal bleeding is present only in 30% to 40% of patients with EP, the diagnosis requires a high index of clinical suspicion. [13] The EP spectrum includes asymptomatic patients as well as ruptured ones that present in shock. Increased morbidity and occasionally even fatality are consequences of delayed diagnosis. [14] It could

even have an impact on her future fertility if not treated instantly and effectively. [15]

30% cases were aged  $\leq 30$  years while rest of the cases was aged more than 30 years. The mean age was  $34.56 \pm 5.0$  years. 40% (4 cases) were nullipara, 60% (6 cases) were primipara and none of cases were multipara. All patients had positive Culdo/Paracentesis. In a study by Singh et al [16] the mean age group of study population was  $28.28 \pm 4.19$  (1SD) yrs with 26.78 to 29.78 yrs and range of patient's age were 20 to 38 years (Median age 28 yrs). In a study by Ugur et al [17] the most common complaints was pelvic pain and vaginal bleeding and a history of amenorrhea present in the majority of cases. Our center being tertiary center, 40% (4 cases) were referred from other centers while 60% (6 cases) were diagnosed at our hospital. Majority of the patients 60% (6 cases) presented at 6 to 8 weeks of gestation followed by 40% (4 cases) at less than 6 weeks of gestation. Amenorrhea and pain abdomen was the most common complaint seen in 100% (7 cases) followed by Vaginal Bleeding/Spotting (60%) and Fainting Attack (30%). 80% cases were positive UTP. All of the patients were positive in Culdo/Paracentesis. [18]

Amenorrhea and pain abdomen was the most common complaint seen in 100% (7 cases) followed by Vaginal Bleeding/Spotting (60%) and Fainting Attack (28.58%). 85.72% cases were positive UTP. All of the patients were positive in Culdo/Paracentesis. The beta-HCG levels of more than 5000mIU/ml was observed in 10% (1 case), beta-HCG of less than 1500mIU/ml was in 60% (6 cases), and beta-HCG in the range of 3000-5000 mIU/ml was in 30% (3 cases). All of the patients had hemoglobin range of 7-10 gm/dl. All of the patients had hemoglobin range of 7-10 gm/dl. Most common site of ectopic pregnancy was ampulla region (80%), followed fimbrial end of the tube 20% (2 cases). The surgical salpingectomy was the most common procedure done for chronic ectopic pregnancy in 80% (8 cases) while 20% cases were Surgical Salpingo- oophorectomy. In Wakankar and Kedar's [19] study, out of 52 cases, 51 underwent surgical management and one case (1.9%) received medical management. Partial salpingectomy was done in most of the patients (65.38%) followed by complete salpingectomy (19.23%). Ranji et al [11] noted that expectant management and medical therapy were offered in 15.9% and 29.4%, respectively. Surgery was done in 47.9% of cases. Salpingectomy (S) alone was done in 78.1 cases and laparoscopy in 15.1% of cases. Out of 10 patients of chronic ectopic pregnancy 100% (10 cases) required blood transfusion. It was further observed 60% (6 cases) were transfused with one units of blood, 30% (3 cases) each were transfused with two and 10% were transfused with three units of blood.

## Conclusion

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Chronic ectopic pregnancy is rare and is often misdiagnosed preoperatively. Chronic ectopic pregnancy should be the provisional diagnosis in a young multiparous woman with AUB and/or abdominal pain, if the ultrasound shows the presence of a heterogeneous mass in the POD and/or adnexa, with no internal vascularity on CD.

## References

1. Moini A, Hosseini R, Jahangiri N, Shiva M, Akhoond MR. Risk factors for ectopic pregnancy: A case-control study. *J Res Med Sci.* 2014;19(9):844.
2. Mullany K, Minneci M, Monjazebe R, C. Coiado O. Overview of ectopic pregnancy diagnosis, management, and innovation. *Women's Health.* 2023;19:174550572311603 49.
3. Cunningham F, Leveno K, Bloom S, Hauth J, Rouse D, Spong C. *Williams Obstetrics.* 26rd ed. Mc Graw Hill; 2022.
4. Shah P, Shah S, Kutty RV, Modi D. Changing epidemiology of maternal mortality in rural India: time to reset strategies for MDG-5. *Trop Med Int Health.* 2014;19(5):568-75.
5. Yadav K, Namdeo A, Bhargava M. A retrospective and prospective study of maternal mortality in a rural tertiary care hospital of Central India. *Indian J Community Health.* 2013;25(1):16-21.
6. Centers for Disease Control and Prevention (CDC). Ectopic pregnancy—United States, 1990-1992. *MMWR Morb Mortal Wkly Rep.* 1995;44(3):46-48.
7. Murray H, Baakdah H, Bardell T, et al. Diagnosis and treatment of ectopic pregnancy. *CMAJ.* 2005;173(8):905-912.
8. ICMR Task force project 1990. Multicentre case-control study of ectopic pregnancy in India. *J Obstet Gynaecol.* 1990. 425-430.
9. Tahmina S, Daniel M, Solomon P. Clinical Analysis of Ectopic Pregnancies in a Tertiary Care Centre in Southern India: A Six-Year Retrospective Study. *J Clin Diagn Res.* 2016 Oct;10(10):QC13-QC16.
10. Verma ML, Singh U, Solanki V, Sachan R, Sankhwar PL. Spectrum of Ectopic Pregnancies at a Tertiary Care Center of Northern India: A Retrospective Cross-sectional Study. *Gynecol Minim Invasive Ther.* 2022 Feb 14;11(1):36-40.
11. Ranji GG, Usha Rani G, Varshini S. Ectopic Pregnancy: Risk Factors, Clinical Presentation and Management. *J Obstet Gynaecol India.* 2018 Dec;68(6):487-492.
12. Gharoro EP, Igbafe AA. Ectopic pregnancy revisited in Benin City, Nigeria: analysis of 152 cases. *Acta Obstet Gynecol Scand.* 2002 Dec;81(12):1139-43.
13. Kalyankar V, Kalyankar B, Gadappa S, Ahire Y. Clinical study of ectopic pregnancy. *New Indian J OBGYN.* 2022;9:148-54.

14. Prasanna B, Jhansi CB, Swathi K, Shaik MV. A study on risk factors and clinical presentation of ectopic pregnancy in women attending a tertiary care centre. IAIM. 2016;3 (1):90-6.
15. Prasanna B, Jhansi CB, Swathi K, Shaik MV. A study on risk factors and clinical presentation of ectopic pregnancy in women attending a tertiary care centre. IAIM. 2016; 3(1):90-6.
16. Singh T, Mohan S, Aggarwal S, Maji D. A study on presentation and management of ectopic pregnancy at tertiary care hospital. International Journal of Reproduction, Contraception, Obstetrics and Gynecology. 20 21;10(5):1997-2000.
17. Uğur M, Turan C, Vicdan K, Ekici E, Oğuz O, Gökmen O. Chronic ectopic pregnancy: A clinical analysis of 62 cases. Aust N Z J Obstet Gynaecol. 1996;36(2):186-189.
18. Behera A, Ghadei R, Bal RN. A clinical study of ectopic pregnancy in a tertiary care hospital. International Journal of Reproduction, Contraception, Obstetrics and Gynecology. 2018; 7(11):4461-4464.
19. Wakankar R, Kedar K. Ectopic pregnancy-a rising trend. International Journal of Scientific Study. 2015 Aug;3(5):18-22.