

# Clinical Perspective of Ectopic Pregnancy in a Tertiary Care Hospital in Karnataka, India

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**Abstract:** ***Objectives:** (1) To know the age group, parity and the risk factors with respect to ectopic pregnancy. (2) To know the clinical presentation of ectopic pregnancy. (3) To know the outcome of ectopic pregnancy. **Materials and Methods:** This is a retrospective study conducted in Kempegowda Institute of Medical Sciences and Research Centre, Bengaluru, India. Data was collected regarding 45 cases with ectopic pregnancy from December 2014 to January 2017. and parameters including age, parity, gestational age, risk factors, clinical presentation, need for transfusion of blood products, findings on ultra-sonogram and at surgery, duration of hospital stay and associated morbidity were assessed. **Results:** There was a significant association of ectopic pregnancy with risk factors, most common of which were a history of infertility and abortion(s). The classical triad of pain abdomen, amenorrhoea and vaginal bleeding were not seen in all cases. Pain was the most common presenting symptom seen in 93% of cases, followed by amenorrhoea in 84% of cases. Vaginal bleeding was seen in only 38% of cases. The most common signs encountered were pallor (82%) and abdominal tenderness (77.7%). Surgery by open method was the most common form of treatment. The commonest site of ectopic pregnancy was ampulla and there was haemoperitoneum in 93% of cases. **Conclusion:** Ectopic pregnancy can present in any form within a wide clinical spectrum and a high index of suspicion is mandatory with regard to history and clinical features. A preliminary investigation with a urine pregnancy test and an ultrasound is minimally invasive and appears to be adequate to diagnose a majority of ectopic pregnancies. Surgical intervention remains the mainstay of treatment and there appear to be minimal post-operative complications.*

**Keywords:** Ectopic, Clinical, Presentation, Risk Factors, Outcome, Complications, Signs, Symptoms

## 1. Background

Throughout history, ectopic pregnancy was considered a very serious problem with high mortality rates. This perception has changed only recently with the increased ability to establish the diagnosis of ectopic pregnancy non-invasively in women with minimal clinical symptoms. Ectopic pregnancy has been defined as any intra or extra-uterine pregnancy in which the fertilized ovum implants at an aberrant site which is inconducive to its growth and development(1).

Although there has been a massive increase in the incidence of ectopic pregnancy in recent years, the mortality of the disease has been static(2,3). Therefore the main challenge in modern clinical practice is to identify and treat as early as possible those cases of ectopic pregnancy with the potential to cause serious morbidity and death, and at the same time to minimize interventions in those destined to be resolved without causing any harm.

## 2. Objectives

1. To know the age group, parity and the risk factors with respect to ectopic pregnancy.
2. To know the clinical presentation of ectopic pregnancy.
3. To know the outcome of ectopic pregnancy.

## 3. Materials And Methods

A total of 45 patients admitted into Kempegowda Institute of Medical Sciences and Research Centre, Bengaluru, who were diagnosed with ectopic pregnancy were retrospectively analyzed in the period from December 2014 to January

2017. All women diagnosed with an ectopic pregnancy were included in the study and the cases where an ectopic gestation was not found on laparotomy/laparoscopy were excluded. The parameters assessed were age, parity, gestational age, risk factors, clinical presentation, need for transfusion of blood products, findings on ultra-sonogram and at surgery, duration of hospital stay and morbidity associated with ectopic pregnancy.

## 4. Results

This study was conducted over a period from December 2014 to January 2017. and a total of 45 cases of ectopic pregnancy were diagnosed. Age at presentation ranged from 18-37 years; mean age was found to be 27.8 years. A majority of the cases were multigravidae (73.4%) and 26.6% were primigravidae. A majority had associated risk factors but 22% of patients had no risk factors.

**Table 1:** Associated Risk Factors

(\*Some patients had multiple risk factors.)

Risk factors	Number of Cases	Percentage
Abortion	12	26.60%
Infertility	11	24.40%
History of tubal surgery	8	17.70%
Previous LSCS	8	17.70%
History of using OCP's	2	4.40%
History of using IUCD	2	4.40%
Previous ectopic pregnancy	2	4.40%

A majority of cases presented with pain abdomen(93.3%) and amenorrhoea(84.4%). Other presenting symptoms included abnormal vaginal bleeding (38%), vomiting (31%), giddiness/syncopal attacks (17.7%) and burning micturition

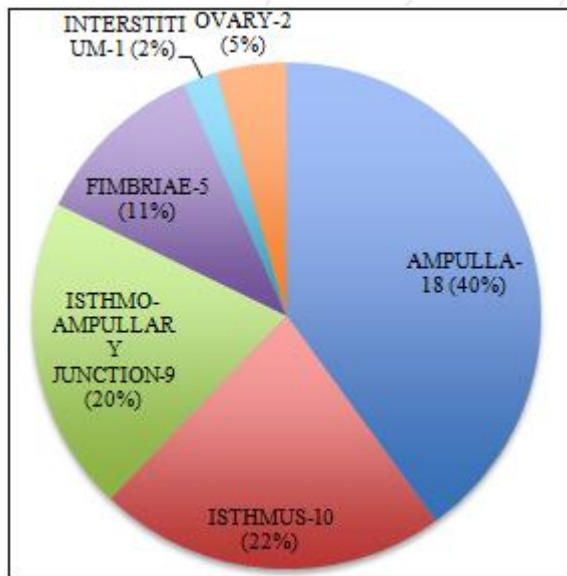
(13.3%). Uncommon symptoms were fever (2.2%), loose stools (6.6%) and constipation (4.4%). On examination, the most common sign was abdominal tenderness (77.7%) followed by adnexal tenderness and guarding.

**Table 2: Presenting Signs**

	Number of Cases	Percentage
Abdominal tenderness	35	77.70%
Adnexal tenderness	13	28.80%
Guarding	12	26.60%
Cervical movement tenderness	7	15.50%
Abdominal distension	5	11.10%

At presentation, anaemia was found in 82% of patients and 8.8% patients had no clinical signs. Ultrasound and a urine pregnancy test were the investigative modalities that were used in the diagnosis for a majority of cases. Urinary pregnancy test was positive in 93.3% of patients. Ultrasound revealed a ruptured ectopic pregnancy in 48.8% of the cases, an unruptured ectopic pregnancy in 24.4% of cases and a heterogenous mass in 22.2% of cases.

In a majority of the cases, the ectopic pregnancies were found to be located in the ampullary segment (40%), followed by the isthmus (22.2%) and the isthmo-ampullary junction (20%).



**Chart 1: Sites of Ectopic Pregnancy Found Intra-Operatively**

Intra-operatively 58% (26) of cases were found to have a ruptured fallopian tube, 13.3% (6) were unruptured and 29% (13) were tubal abortions. There was haemoperitoneum in most cases (93.3%), mean volume being 916.44 ml. Majority of cases were taken up for laparotomy. 3 cases underwent laparoscopic surgery.

**Table 3: Surgical Procedures Performed**

	Number of Cases	Percentage
Unilateral salpingectomy	24	53.30%
Unilateral salpingectomy with contralateral tubectomy	7	15.50%
Bilateral salpingectomy	6	13.30%
Salpingo-oophorectomy	5	11.10%

Lap. unilateral salpingectomy	2	4.40%
Lap. unilateral salpingectomy with contralateral tubal occlusion	1	2.20%

Lap: Laparoscopic.

Of all cases, 69% needed intraoperative and/or postoperative blood transfusions. Morbidity included post-operative fever (15.5%), need for ICU care (13.3%), respiratory complications (pleural effusion, lung collapse) (4.4%), carpo-pedal spasm (2.2%), thrombocytopenia (2.2%) and spurious diarrhea (2.2%). There was no mortality in this study. Mean duration of stay was 7.2 days.

## 5. Discussion

The incidence of ectopic pregnancy in the present study (1:133) was comparable to similar studies by Porwal Sanjay et al. (4) - 1:407 and R Jophy et al. (5) - 15:1000. The age of presentation was 18-37 years in the present study consistent with that recorded by and Khaleeque et al. (6). A majority were multigravidae (74%) and this is in agreement with the observation that ectopic pregnancy is more common in multigravidae (69%) (7).

In the present study, there is a significant association of ectopic pregnancy with risk factors and the most common were a history of infertility (24.4%) and abortion(s) (26.6%). Arora et al. (8) and Gupta et al. (4) reported similar associations. A strong association was also found with previous tubal surgery (17.7%) and other previous abdominal surgeries (17.7%).

Pain was the most common presenting symptom (93%) followed by amenorrhoea (84%). Vaginal bleeding was seen in only 38% of cases. S Porwal et al reported a comparable incidence of pain abdomen (87.5%), amenorrhoea (90%) and vaginal bleeding (67.5%) in their study (4). However, the classical symptoms of pain abdomen, amenorrhoea and vaginal bleeding were not seen in all cases. Uncommon presentations in this study included vomiting, burning micturition and syncopal attacks/dizziness.

Pallor was a significant finding and was seen in 82% of the cases. The second most common sign encountered was abdominal tenderness (77.7%) and this incidence is comparable to 91% reported by Tay et al. and 83.9% by R Jophy et al. (5) in their studies.

**Table 4: Comparison Between Incidence Of Signs**

Presenting signs	Tay et al. (9)	R Jophy et al. (5)	Present study
Abdominal tenderness	91%	83.90%	77.70%
Cervical movement tenderness	54%	55.90%	15.50%
Abdominal distension	-	49.50%	11.10%

In the present study, as most of the cases were suggestive of a ruptured ectopic pregnancy, surgery by open method was the mainstay of treatment, commonly in the form of unilateral salpingectomy (54.54%). Surgery remains the mainstay of treatment in our country as medical management needs resources for close monitoring and follow up (10).

The most common site of ectopic pregnancy in the present study was ampulla and this finding is comparable with similar studies.

**Table 5: Comparison Between Incidence Of Site Of Ectopic**

STUDY	Chow et al.(11)	Jophy et al.(5)	Present study
Ampulla	79.60%	56.90%	40%
Isthmus	12.30%	39.78%	22.20%
Fimbria	6.20%	-	11.10%
Interstitialium	1.90%	1.07%	2.20%
Ovarian	-	1.07%	4.40%

Condition of the fallopian tube found intra-operatively was different in various studies. Rupture of tube in our study(56.8%) was comparable to Latchaw et al.(12)who reported ruptured tube in 59% of cases.The incidence of haemoperitoneum was 93.9%(mean volume 916.44 ml) which is comparable to the observation of 86.4% by Rashmi et al.(13).

## 6. Interpretation and Conclusion

As evidenced by the prevalence of anaemia at presentation, finding of massive haemoperitoneum and need for transfusion of blood products in a majority of cases in this study, ectopic pregnancies have the potential to cause serious morbidity.

The early diagnosis of an ectopic pregnancy reduces the presentation to response time, which is crucial in determining the morbidity, mortality and long-term effects for the patient.

As an ectopic pregnancy can present in any form within a wide clinical spectrum, ranging from an asymptomatic patient to one in shock and in any age group, a high index of suspicion is mandatory with regard to history and clinical features. A preliminary investigation with a urine pregnancy test and an ultrasound is minimally invasive and appears to be adequate to diagnose a majority of ectopic pregnancies.

Surgical intervention remains the mainstay of treatment and there appear to be minimal post-operative complications.

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