# Clinical Study of Ectopic Pregnancy in a Tertiary Care Hospital in Nepal

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## ABSTRACT:

**Introduction**: Ectopic pregnancy is a cause of pregnancy related mortality and its incidence is on the rise. The aim of modern management of ectopic pregnancy should be to diagnose ectopic pregnancy accurately, so that women can seek prompt diagnosis and treatment and optimize their future fertility. **Methods**: This prospective study was done for a period of one year in patients suspected clinically to have ectopic pregnancies which were subsequently confirmed by pregnancy test and ultrasonography (*n*=17). The following parameters: age and parity of the patient, relevant past medical and surgical history, significant clinical findings at presentation, management done and outcome of the management were noted. **Results**: Most patients 13 (76.47%) were in the age group of 20-25 years and 16 (94.11%) of them presented with acute pain abdomen. In all cases, emergency laparotomy was performed. There were 16 cases of tubal ectopic and one of ovarian pregnancy. Right side was affected in 14 (82.35%) cases including one right sided ovarian ectopic. Tubal rupture was found in 10 (58.82%) patients. The most common 12 (75%) site of tubal pregnancy was ampullary. Salpingectomy was performed in 14 (82.35%) cases. All patients were discharged by seventh postoperative day. **Conclusion**: Ectopic pregnancy can be suspected clinically by history and associated risk factors. Women presenting with acute pain abdomen with a positive urine β-hCG test should be promptly diagnosed and treated without undue delay to reduce maternal morbidity and mortality.


**Keywords: ectopic pregnancy • emergency laparotomy • salpingectomy**

## INTRODUCTION:

Pregnancy which occurs outside its normal location in the uterine cavity has always presented as an interesting problem. At the same time its management often demands emergency operative procedures. These facets of the condition, coupled with the knowledge that this disease, if unrecognized and inadequately treated, may terminate fatally, makes it one of the most challenging gynecological subjects.

Ectopic pregnancy means a pregnancy that develops outside the uterus, usually in one of the fallopian tubes, but might also occur in the cervix, ovary or the abdominal cavity. The increasing incidence of this condition is concerning because of an associated increase in pregnancy-related morbidity and mortality rates during the first trimester in women of childbearing age. In spite of the comparatively high incidence of ectopic pregnancy, early detection can be difficult. Unless considered in the differential diagnosis, ectopic pregnancy can go unidentified at the initial medical evaluation. This study was done to determine the clinical features, risk factors, treatment and outcome associated with ectopic pregnancy in a tertiary care hospital.

## METHODS:

A propective study between July 2012 to June 2013 was carried out with ectopic pregnancies that presented at Lumbini Medical College, obstetrics and Gynaecology Department, either through emergency or outpatient department.

Data was collected on chief presenting

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complaints, age and parity of the patient, relevant past medical and surgical history, significant clinical findings at presentation, management and outcome. The data was analyzed using SPSS version 9.0.

## RESULT:

During our study period of one year, we found 17 ectopic pregnancies out of total 1317 deliveries with a proportion of 1.3%. The incidence being 12.9 per thousand deliveries per year. Mean age at presentation was 27 years (*SD*=3.12) with 13 (76.47%) in the age group of 20-25 years. Nine (52.94%) patients were multiparous and the remaining eight (47.05%) were nulliparous. None of the patients were using any form of contraceptives, and seven cases (41.17%) revealed secondary subfertility as the major predisposing factor. Mean marital years was 9.8 (*SD*=1.2).

Three (17.6%) out of 17 patients had history of previous surgeries. One (5.88%) of them had history of laparotomy for tubal ectopic on the opposite side two years back. In one patient, the histopathological report of the removed tube (present ectopic site) showed chronic salpingitis, thus suggesting pelvic inflammation as the causative factor. One patient had undergone caesarean section eight years back for breech presentation and one patient had history of laparotomy for which indication was not known. Regarding the symptoms, 15 (88.23%) patients gave history of varying periods of amenorrhea with a mean of 10 weeks (*SD*=1.1) in comparison to no history of amenorrhea in two cases. All of them presented with pain abdomen. Pain was of acute onset in 16 cases, of which 8 (47.05%) explained pain to be of tearing type, while only one had pain of insidious onset. All of them had tenderness over suprapubic region, 13 (76.47%) cases had abdominal rigidity and 10 (58.8%) cases had rebound tenderness. Ill defined mass was felt in eight (47.05%) of them. On per vaginal examination, boggy masses of variable sizes were palpable in 10 (59%) patients and cervical motion tenderness could be elicited in 14 (82%) cases. β HCG was positive in urine in all cases and ultrasound was diagnostic in all 17 patients.

All cases were treated surgically. They underwent laparotomy under general anesthesia except for one who received spinal anesthesia. This patient had prolonged spinal hypotension in the post operative period. Intraoperative details are listed in Table 1.

*Table* 1*: Intraoperative details of women undergoing laparotomy*

| **Intraoperative findings** | ***n* (%)** |
|---|---|
| Haemoperitoneum | 10 (58.82) |
| <3000ml | 9 |
| >3000ml | 1 |
| Tubal rupture | 10 (58.82) |
| Tubal abortion | 5 (29) |
| Unruptured | 1 (6) |
| Site of ectopic pregnancy | |
| Fallopian Tube | 16 (94.11) |
| Ampulla | 12 (75.0) |
| Isthmus | 3 (18.75) |
| Interstitial | 1 (6.25) |
| Fimbrial | 0 |
| Ovary | 1 (5.89) |
| Procedure done | |
| Salpingectomy | 14 (82.35) |
| Salpingo-Oophorectomy | 2 (11.77) |
| Partial Oophorectomy | 1 (5.88) |

*Table* 2*: Post operative management*

| **Variables** | ***n* (%)** |
|---|---|
| ICU admission | 5 (29.41) |
| ≤24 hours | 4 |
| >24 hours | 1 |
| Blood transfusion | 17 (94.12) |
| ≤2 units | 16 |
| >2 units | 1 |

During our study we found that the right fallopian tube was affected in 14 (82.35%) of them including one right sided ovarian ectopic pregnancy. The post operative period details are listed in Table 2.

One patient had to be kept in the ICU for five days due to spinal hypotension where her blood pressure was corrected with intravenous dopamine. All the patients were discharged by seventh post operative day after removing the skin sutures.

## DISCUSSION:

The incidence of ectopic pregnancy is on the rise. It is thought to be related to increasing maternal age, tubal surgery, pelvic inflammatory disease, practice of induced abortion, assisted reproductive techniques and perhaps more importantly increased ability to accurately ascertain the condition.[1]

According to the American College of Obstetricians and Gynaecologists (2008), two percent of all first trimester pregnancies in the United

States are ectopic.[2] Various other studies also show that the prevalence of ectopic pregnancy is 2% of all pregnancies in the United States which is consistent with our study where the incidence is 1.2%.[3-5] There was one case of ovarian ectopic, which is a rare entity with incidence of 0.75/1000 deliveries. The reported incidence is in between 1/2000 and 1/3500 deliveries in other studies.[4]

The suspicion of an ectopic pregnancy should be raised from history of risk factors and triad of symptoms: pain in lower abdomen (95- 100%), amenorrhea (75%) and vaginal bleeding (70%). This may vary in intensity from a dull aching or occasional sharp stabbing pain to a recurrent crampy labor-like discomfort. In our study, 16 (94.11%) women presented with acute pain abdomen and 15 (88.23%) with amenorrhea which is consistent with these findings. In its more extreme form it is a sudden, severe pain coming on acutely and often associated with syncope or the onset of shock.[6] Dorfman and associates reported that with more advancing gestation, gastrointestinal symptoms and dizziness were common.[7] With rupture, pain may be anywhere in the abdomen.[7] In this study, all women presented with pain abdomen of varying severity.

While a great variety of causes have been suggested to explain ectopic pregnancy, most authorities agree that mechanical obstruction of the tubal lumen is the most common cause. This may be the result of previous inflammatory disease or may be due to various types of external pressure causing distortion or pocketing in the tube. The problem of pre-existent pelvic inflammation may be intimately associated with abortions and previous pelvic or abdominal operations.[8] In the present study three out of 17 patients (17.6%) had history of previous surgeries.

Most ectopic pregnancies are located in the ampullary region of the tube, so are seen above and medial to ovary.[9] In our study too, ampullary site was the most common 12 (75%). Though unruptured isthmic pregnancy is rare, there are cases reported in Nepal with isthmic pregnancy upto 11 weeks of gestation.[10] In our study there was one unruptured isthmic pregnancy at 6 weeks of gestation.

Vaginal examination still has a role where there is no facility for timely ultrasound and clinical decision has to be made regarding the emergency surgery or where clinical picture and ultrasound diagnosis do not correspond.[2] In this study also, clinical suspicion was made by findings of vaginal examination followed by confirmation on ultrasonography.

The aim of modern management of ectopic pregnancy should be to diagnose ectopic pregnancy accurately, so that women can seek prompt treatment and optimize their future fertility. The first reported open salpingectomy was performed in 1920, but it was not until 1950 that salpingostomy was considered an alternative to salpingectomy for preserving fertility.[2]

In our study, salpingectomy was performed in 82.35% because most cases were of ruptured ectopic and most women were multipara with no desire for future fertility. Till date there has been no clear consensus on the type of surgery that should be performed either salpingectomy or salpingostomy. Salpingostomy should be reserved for those women with pathology in contralateral tube or with only one tube.[11] Salpingectomy is the treatment of choice where tube is extensively damaged and contralateral tube is healthy. If tube is not removed serial measurement of β-hCG is necessary.[12]

Ectopic pregnancy can be managed both medically and surgically. In present study laparotomy was done in all cases as 16 women presented as acute ectopic and one with intact sac of more than 6cms. Though laparoscopy is the gold standard on diagnosis and management of ectopic pregnancy, the facility for laparoscopy was not available in our institution during the study period.

Ectopic pregnancy is the fifth common cause of maternal mortality according to the most recent triennial report and most common cause of death in first trimester, hence the utility of prompt diagnosis and accurate treatment.[13]

## CONCLUSION:

Ectopic pregnancy is common in young women in reproductive age group. The suspicion of an ectopic pregnancy should be roused by clinical history and associated risk factors. Diagnosis should be confirmed using sensitive β-hCG testing and ultrasonography. The clinical signs and symptoms take precedence over biochemical results. The maternal morbidity and mortality decreases if early diagnosis and prompt treatment is done.

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