Ectopic pregnancy in Nepalgunj Medical College

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Abstract

Background: Ectopic pregnancy is one of the major health problems. There is paucity of data regarding ectopic pregnancy from Nepal. This retrospective review was done to evaluate the incidence, commonest risk factors, site and the spectral types of ectopic pregnancy in western Nepal.

Methods: This was a retrospective review of all the case of ectopic pregnancy during the period of two years. The data was collected using a format. Total number of deliveries during that period was also recorded. Finally data was analyzed using SPSS (Version 17).

Results: The incidence of ectopic pregnancy was 1 in 87 deliveries**.** A total number of 21 cases of ectopic pregnancy were seen and managed during the study period. Mean age of the patient was 30.29 years ± 6.084 years. Pelvic inflammatory disease was the most common risk factor. Most of the patients had not used contraceptive methods. Type 3 spectral type of ectopic pregnancy was the most common type. All of our cases had tubal

pregnancy. Maximum patients had ampullary implantation. Nineteen patients had ruptured ectopic pregnancy.

Conclusions: Ectopic pregnancy is common in western Nepal with the incidence of 1 in 87 deliveries. Pelvic infection is the most common risk factor.

*Key words***:** Ectopic Pregnancy, Western Nepal, Incidence

Introduction

Ectopic pregnancy is one of the major health problems for women of childbearing age. It is defined as implantation of the blastocyst anywhere other than in the endometrial cavity, including the fallopian tubes, cervix, ovary, corneal region of uterus and the abdominal cavity. This abnormally implanted gestation grows and draws its blood supply from the site of abnormal implantation. As the gestation enlarges, it creates the potential for organ rupture. [1] Ectopic pregnancy (EP) was first described in the 11th century, and, until the middle of the 18th century, it was usually fatal. Approximately 2% of pregnancies are ectopic.[2]

EP may present as a surgical emergency, and therefore timely diagnosis is essential. Clinical manifestations are diverse. The classic triad of signs and symptoms of EP (present in less than 50% of patients) includes history of a missed menstrual period followed by abnormal vaginal bleeding, abdominal or pelvic pain, and a tender adnexal mass. [2]

Ultrasound is a useful tool in the diagnosis of ectopic pregnancy.

Both the surgical and the medical management exist for the ectopic pregnancy but the initial management decision is based on the patient's stability and the type of ectopic pregnancy.

Only few studies regarding ectopic pregnancy were done in the eastern Nepal and Kathmandu. No such studies were done in western Nepal. This study was carried with the aim to evaluate the incidence, commonest risk factors, site and the spectral types of ectopic pregnancy in western Nepal.

Materials and Methods

This is a retrospective review of ectopic pregnancies diagnosed and managed operatively at Nepalgunj Medical College Teaching Hospital Kohalpur from July 2006 to June 2008. An extensive retrospective review of case records and ultrasonography records of each patient was done and the data was collected using a format. Total number of deliveries during that period was also recorded. Finally data was analyzed using SPSS (Version 17).

Results

A total number of 21 cases of ectopic pregnancy were seen and managed during the period 1st July 2006 to 30th June 2008. Age of the patients ranged from 20 to 40 years with a mean age of 30.29 years ± 6.084 years. There were 1833 deliveries during the study period. So, the incidence of ectopic pregnancy is 1 in 87 deliveries. Maximum patients were in the age range of 30 to 34 years (Figure 1).

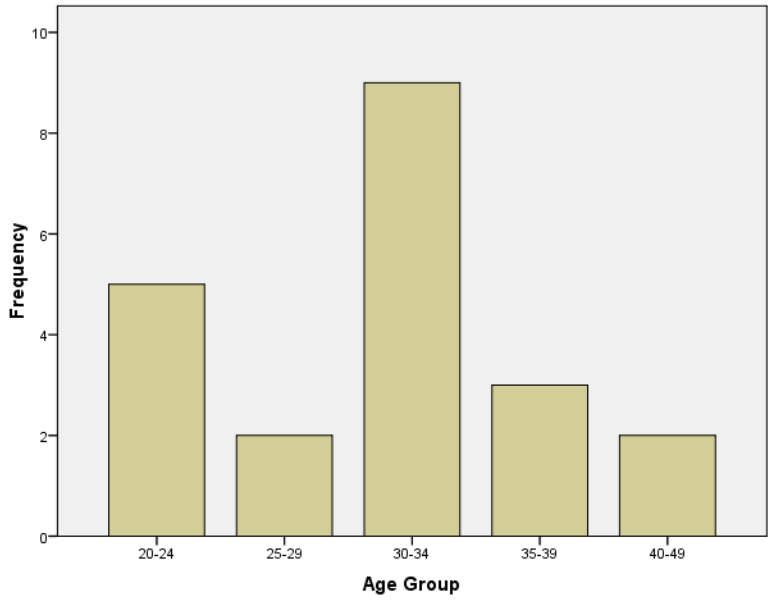

Figure 1: Distribution of patients according to age group

Patient's parity ranged from 2 to 6, with a mean of 3.1, maximum patients had second parity. Gestational age at presentation was 20 to 56 days. Fourteen patients were of *Aryan* origin whereas seven patients were of *Mongolian* origin.

Regarding the risk factors, five patients had history of pelvic inflammatory disease, four had infertility, and one each had tuberculosis and tubal surgery done.

Among the family planning methods, 18 patients had used none, one patient had tubectomy, one had oral contraceptive pills and one had used copper T device.

History of amenorrhoea was present in 18 patients whereas three had no history of amenorrhoea. Eleven patients had presented with bleeding per vaginum. Sixteen patients had haemoglobin of less than ten. Nineteen patients had positive urinary pregnancy test whereas two had negative test.

Ultrasonographically, Ruptured ectopic with blood in pelvis was the most common type detected in 19 patients. Unruptured live ectopic with cardiac activity was seen in one. Unruptured ectopic without embryonic structures, was seen in one case only (Figure 2).

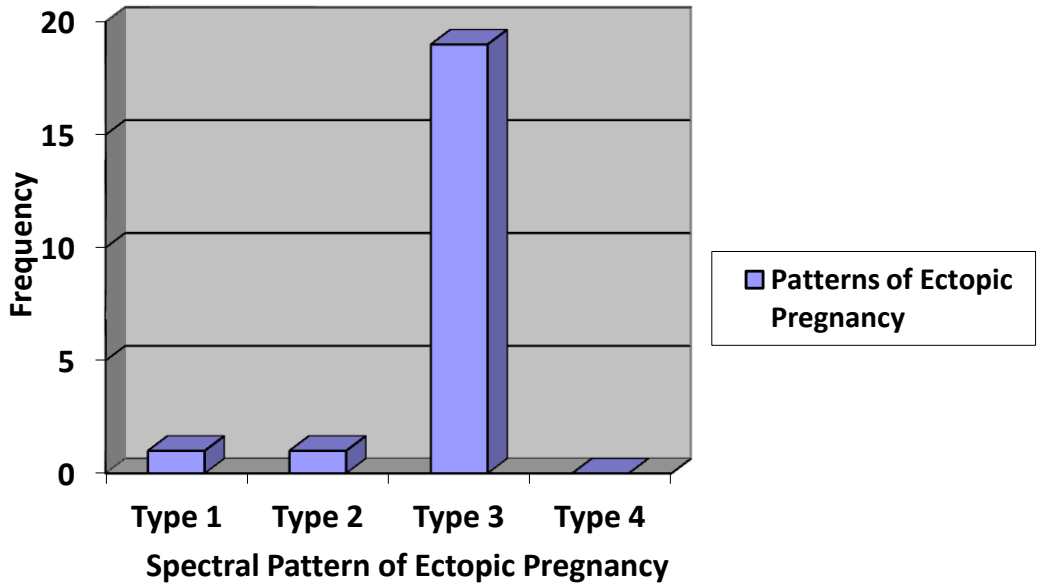

Figure 2: Distribution of Ectopic Pregnancy according to the spectral pattern

All of our cases had tubal pregnancy. Left side involvement was most commonly observed, in 12 patients. Maximum patients had ampullary implantation (16 patients), followed by isthmic (3patients) and fimbrial (2 patients). Nineteen patients had ruptured ectopic pregnancy.

Evidence of pelvic infection was present only in six patients. Most of the patients had blood loss of less than 500 ml (Table 1).

Table 1: Distribution of patients according to amount of blood loss

Amount of blood loss (ml)	Frequency	Percentage
<500	13	61.9
500-1000	2	9.5
1001-1500	2	9.5
1500-2000	4	19.0
Total	21	100.0

Discussion

Ectopic pregnancy is derived from the Greek word *ektopos,* meaning out of place, and it refers to the implantation of a fertilized egg in a location outside of the uterine cavity, including the fallopian tubes, cervix, ovary, cornual region of the uterus, and the abdominal cavity.[1] Ectopic pregnancy continues to be the leading cause of first-trimester maternal death.[3] Since 1970, the frequency of ectopic pregnancy has increased 6-fold, and it now occurs in 2% of all pregnancies.[1] Evidence also shows that this actual increased incidence is probably due to a sexually transmitted agent.[4]

The majority of our cases were in the age group between 31-35yrs. This is slightly higher than studies conducted in eastern and central Nepal. [5,6] Similar findings were seen in study from Nigeria .[7] Ectopic pregnancy has been reported to be more common in older

women but there is decreasing mean age and a rising incidence in young women this may be due to the fact that young women are sexually active .[4]

Mean parity of our patients was 3.1. This is more than in study done in central Nepal and similar to poonam *et al*. [8, 5] In contrast to these nulliparous patients were 49.3% in a Nigerian study.[7]

Most of our patients were of *Aryan* group in contrast to this Pradhan P *et al* [6] had found higher incidence of ectopic pregnancy in *Mongolian* group. This may be due to the difference in the study population between central and Midwestern region.

There are a number of risk factors that lead to tubal damage and dysfunction predisposing to ectopic pregnancy .While there is overlap, these can be generalized as mechanical and functional factors. Mechanical factors like prior tubal surgery, prior ectopic pregnancy, Salpingitis, prevents or retard passage of the fertilized ovum into the uterine cavity. Functional factors like changes in serum level of estrogens and progesterone, smoking, delay passage of the fertilized ovum into the uterine cavity by altering tubal motility.[9] Six out of 21 patients in our study had pelvic inflammatory disease as the risk factors, but most of the others had no risk factors. Other studies from different parts of the world had also shown pelvic inflammatory disease as a significant risk factor. [5,6 10,11] According to the American College of Obstetricians and Gynecologists, prior pelvic inflammatory disease, especially that caused by *Chlamydia trachomatis*, is the most common risk factor.[9] *Chlamydia* case reports are increasing globally despite higher levels of awareness and improved prevention and control efforts. [12]

Previous salpingitis causes agglutination of the mucosal arborescent folds with luminal narrowing or formation of blind pockets. Reduced ciliation due to infection also may contribute to tubal implantation.[13]

The classic clinical triad of ectopic pregnancy is pain, amenorrhea, and vaginal bleeding. Unfortunately, only 50% of patients present typically.[2] similar findings were noted in our study.

Ultrasonography, either transvaginal or transabdominal was used in our study. Pelvic ultrasound and especially an endovaginal examination must be the fist line of imaging investigation. There are four spectral patterns of ectopic pregnancy [8]

Type 1: Unruptured live ectopic with heart beat

Type 2: early embryonic demise without rupture/embryonic structures/heartbeat

Type 3: Ruptured ectopic with blood in pelvis

Type 4: No sonological sign of ectopic

In our study type three was the most common spectral pattern.

Findings of an extrauterine ectopic pregnancy include the following: [14]

- Live, extrauterine embryo
- Absence of an intrauterine gestational sac
- Free fluid (particularly hemorrhagic) in the pelvis or peritoneum
- Adnexal mass
- Hematosalpinx
- Adnexal ring sign and a “ring of fire’ sign on colour Doppler study
- Absence of low resistence endometrial arterial flow

In our study, commonest site of ectopic pregnancy was the ampulla followed by isthmus and the fimbria .This findings at laparotomy were similar to those in other series.[5,6]

Magnetic Resonance Imaging (MRI) of the pelvis can be used in only as a problem-solving tool in the patient who is in stable condition. In our study none of the patient underwent MRI.

In Nepal, maternal mortality rate due to ectopic pregnancy is 1.1%.[15] However there was no mortality in our study.

Conclusions

In conclusion, Ectopic pregnancy is a common problem in western Nepal with pelvic inflammatory disease as a commonest risk factor. Ampullary region is the most common site and Type three is the most common spectral type.

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