

# Management of Ectopic Pregnancy

Safia Bibi,<sup>1</sup> Khanda Gul,<sup>1\*</sup> Fozia Muhammad Bukhsh

## ABSTRACT

**Objective** To determine the frequency, and management modalities of ectopic pregnancy.

**Study design** Retrospective study.

**Place & Duration of study** Department of Obstetrics and Gynaecology Unit-4, Bolan Medical Complex Hospital Quetta, from January 2013 to December 2017.

**Methodology** Clinical records of patients with ectopic pregnancy were reviewed. Variables analyzed included site of ectopic pregnancy, treatment provided and its outcome. Data were presented in number and percentages using descriptive statistics.

**Results** There were 168 patients of ectopic pregnancy managed during the study period. The frequency of this condition turned out to be 0.44% or 1 in 228 deliveries. Most (75%) of the patients were multipara. The commonest site of ectopic pregnancy was fallopian tube (91.8%). The ampullary region of fallopian tube was involved in 73.2% cases. Laparotomy was the main surgical procedure performed. Salpingectomy was done in 87% and salpingo-oophorectomy in 9.5% cases.

**Conclusion** Most of the patients presented at late stage, so conventional surgical treatment by laparotomy and salpingectomy were performed.

**Key words** Ectopic pregnancy, Multiparty, Salpingectomy, Salpingo-oophorectomy.

## INTRODUCTION:

Ectopic pregnancy (EP) is defined as implantation of a fertilized ovum in a site other than the uterine endometrium. The incidence of ectopic pregnancy ranges between 0.25% and 1.5% of all pregnancies and has been increasing during the last few decades worldwide.<sup>1</sup> In Pakistan, the reported frequency in different series is 1 in 112 to 1 in 130 pregnancies but actual figures are not known.<sup>2</sup> Most common site of ectopic pregnancy is fallopian tubes in which ampullary segment is the commonest (80%) site followed by isthmic segment (12%), fimbrial end

(5%) and interstitium (2%). Other sites are abdominal (1.4%), ovarian (0.2%) and cervical (0.2%).

Classical signs and symptoms of ectopic pregnancy are abdominal pain and vaginal bleeding but fewer than 50% have both these symptoms. Ruptured ectopic pregnancy presents as sharp, dull or crampy pain spreading to the shoulder. In acute cases patient presents with tachycardia, syncope or shock. The fetus usually never survives except if it embeds in abdomen and end up as abdominal pregnancy.<sup>1,3</sup>

Number of risk factors have been identified that cause EP. Risk factors include pelvic inflammatory disease, infertility, use of intrauterine device, previous exposure to DES, smoking, tubal ligation, tuboplasty, use of assisted reproduction techniques, previous history of EP, endometriosis, Asherman syndrome, tuberculosis and low socioeconomic class. However, in half of the patients, no risk factors can be identified.<sup>1,3</sup>

A ruptured ectopic pregnancy is a life threatening emergency and the leading cause of death in first

<sup>1</sup> Department of Obstetrics & Gynaecology Unit 4, Bolan Medical College Hospital Quetta

## Correspondence:

Dr. Khanda Gul <sup>1\*</sup>

Department of Obstetrics & Gynaecology Unit 4  
Bolan Medical College Hospital  
Quetta

Email: khandagul76@yahoo.com

trimester of pregnancy.<sup>4</sup> The risk of death in developed countries is 0.1 to 0.3% while in developing world it is 1 to 3%. Due to early diagnosis by quantitative beta hCG measurements and transvaginal ultrasonography, the frequency of rupture ectopic pregnancy has declined in developed countries but these modalities are not freely available, therefore ruptured ectopic pregnancies are still causing morbidity and mortality in developing countries. Booking antenatal visit not only helps in early diagnosis but allows more conservative medical management and laparoscopic treatment,<sup>4</sup> but in Pakistan gynecologists are still challenged by late presentation and rupture in most cases. The purpose of this review was to contribute to literature experience of management of EP from an underdeveloped province of Pakistan.

**METHODOLOGY:**

This was a retrospective study of ectopic pregnancies managed at Bolan Medical Complex Hospital Quetta Gynaecology unit –IV, from January 2013 to December 2017. Clinical records of patients, site of ectopic pregnancy and management modalities were obtained from labor ward and operation theater registers. All the surgeries were open laparotomy under general anesthesia. Results were presented in numbers and percentage.

**RESULTS:**

There were 168 cases of ectopic pregnancy managed during the study period. Total number of deliveries conducted during the same years was 38,368, giving a frequency of ectopic pregnancy as 0.43% or 1 in 228 deliveries. Forty-two (25%) patients were nullipara, 36 ( 21%) para one (table I). Most common site of ectopic pregnancy was fallopian tube (91.8 %), in which 73.2% were in ampullary segment, 8.3% in corneal or interstitial segment, 5.3% in isthemic region and 5% at fimbrial region. Thirteen (7.7%) case were ovarian and only one patient had abdominal EP which was diagnosed at 16 weeks of gestational age (table II). There were 45% ectopic pregnancies in left side and 55 % in right side tube. In our study, salpingectomy was done in 146 (87%) patients and salpingo-oophorectomy in 16 (9.5%). This is given table III.

Parity	Number	Percentage
P0	42	25%
P1	36	21%
P2	28	17%
>P3	62	37%

No patient was treated conservatively or medically as most of the patients came with acute presentation. There were 81% acute ruptured ectopic and 19% old or chronic ruptured ectopics presented with a mass in abdomen and constant pain in lower abdomen.

Site	Number	Percentage
Fallopian tube		
Ampullary segment	123	73.2%
Interstitial segment	14	8.2%
Isthemic segment	09	5.3%
Fimbrial end	08	5%
Ovarian	13	7.7%
Abdominal	1	0.6%

Surgical Procedure	Number	Percentage
Salpingectomy	146	87%
Salpingo-oophorectomy	16	9.5%
Partial oophorectomy	06	3.5%

**DISCUSSION:**

Ectopic pregnancy is a major cause of maternal morbidity and mortality. The frequency of ectopic pregnancy is 0.44% in our study which is comparable to the studies in which the frequency of EP was 0.6% and 0.58% respectively.<sup>5,6</sup> The rate of EP is increasing during the last few decades throughout the world because of earlier diagnosis of cases by hormonal tests, transvaginal ultrasound and laparoscopy and also due to the advent of assisted reproduction techniques. Higher incidence from 1.9% to 2.4% has been found in some studies.<sup>7-10</sup>

Age was once considered a risk factor for EP but its actually a confounder to risk factors that are acquired over years. In our study 75% of patients were multipara which is comparable with other study in which 75.3% of patients were multipara.<sup>11</sup> Due to lack of proper antenatal care in our study, patients presented late and almost all of them had ruptured EP when reached hospital. Out of this 19% were old or chronic rupture. In one study there were 71.76% cases of ruptured ectopic pregnancy of which 8.62% were chronic ectopic.<sup>12</sup>

Laparotomy was the main surgical procedure performed in all the patients. Salpingectomy was done in 87% cases which is comparable with other studies.<sup>5,12</sup> Salpingotomy is also an option to save the tube if EP is diagnosed early before rupture.

Gharoro et al in their study also performed laparotomy in all patients. In 54.6% patients right salpingectomy and in 34.9% left salpingectomy was performed which is comparable with our study.<sup>13</sup> Right sided EP occurs more commonly compared to left, and it is being attributed to the anatomy of right and left ovarian veins. The commonest site of ectopic pregnancy in our study was fallopian tube (91.8%) and ampulla (73.2%). These figures are same as reported in other studies.<sup>14</sup>

A number of treatment options have been defined to treat EP depending on its presentation. Expectant management is opted in patients with no or mild symptoms and with pregnancy of unknown location. Such pregnancies are expected to resolve spontaneously. Injection methotrexate is also an option to stop EP from growing in case expectant treatment poses a risk. Tube conservation with laparoscopic salpingotomy is another option in cases of unruptured ectopic pregnancy.<sup>15</sup>

#### CONCLUSIONS:

EP is a life threatening emergency if not diagnosed in time and managed vigilantly. Antenatal visit in first trimester is crucial for the diagnosis with transvaginal ultrasound scan and serial beta HCG measurement. It may not be a preventable pregnancy but early diagnosis does prevent patient from risks of anesthesia, surgery, blood transfusion, future subfertility due to loss of tube and mortality. Patients with identifiable risk factors should be made cautious to make early visit in case of pregnancy.

#### REFERENCES:

1. Shaw RW. Ectopic Pregnancy. In: Potdar N, Konje JC editors. *Gynaecology*. Fourth edition. London: Elsevier. 2011;361-81.
2. Mahboob U, Mazhar SB. Management of ectopic pregnancy: A two year study. *J Ayub Med Coll Abbottabad*. 2006;18:34-7.
3. Bouyer J, Coste J, Fernandez H, Pouly JL, Job-Spira N. Sites of ectopic pregnancy: a 10 year population-based study of 1800 cases. *Hum Reprod*. 2002; 17:3224-30.
4. Bowyer L. The confidential enquiry into maternal and child health (CEMACH). Saving Mothers live: reviewing maternal deaths to make mother hood safer 2003-2005. The Seventh Report of Confidential Enquiry into Maternal Deaths in United Kingdom, London (CEMACH). *Obstet Med*. 2008;1:54.

5. Majhi AK, Roy N, Karmakar KS, Banerjee PK. Ectopic pregnancy – An analysis of 180 cases. *J Indian Med Assoc*. 2007;105:308-12.
6. Ayaz A, Emam S, Farooq MM. Clinical course of ectopic pregnancy: a single center experience. *J Hum Reprod Sci*. 2013;6:70-3.
7. Lozeau AM, Potter B. Diagnosis and management of ectopic pregnancy. *Am Fam Physician*. 2005;72:1707-14.
8. Bangash N, Ahmad H. A study of 65 cases of ectopic pregnancy in one-year period in military hospital. *Pak Armed Forces Med J*. 2004;54:205-8.
9. Waseem T. Proportionate morbidity and risk factors of ectopic pregnancy. *Ann King Edward Med Univ*. 2004;10:298-300.
10. Pati BK. Ectopic pregnancy: one-year retrospective study on clinical, investigational and operative correlation in a tertiary care hospital. *Int J Reprod Contracept Obstet Gynecol*. 2017;6:5519-22.
11. Khan B, Deeba F, Khan W. A 10 year review of 255 cases of ectopic pregnancy. *J Androl Gynaecol*. 2013;1:4.
12. Deeba F, Khan B, Khattak SN. Ectopic pregnancy management in Ayub Teaching Hospital Abbottabad: a ten year survey. *J Ayub Med Coll Abbottabad*. 2012;24:78-81.
13. Gharoro EP, Igbafe AA. Ectopic pregnancy revisited in Benin City, Nigeria: analysis of 152 cases. *Acta Obstet Gynecol Scand*. 2002;81:1139-43.
14. Agarwal N, Odejinmi F. Early abdominal pregnancy: challenges, update and review of current management. *Obstet Gynecol*. 2014;16:198-8.
15. Ploska AC, Glaz AC, Kuzniak S, Menkiszak J. Ectopic pregnancy treatment by combination therapy. *Open Med (Wars)*. 2016;11:530-6.

Received for publication: 21-12-2018

Accepted after revision: 20-02-2019

**Author's Contributions:**

Safia Bibi: Conception, design and data collection.

Khanda Gul: Conception, manuscript writing and final approval.

Fauzia Muhammad Bukhsh: Drafting and data collection.

**Conflict of Interest:**

The authors declare that they have no conflict of interest.

**Source of Funding:**

None

**How to cite this article:**

Bibi S, Gul K, Bukhsh FM. Management of ectopic pregnancy.

J Surg Pakistan. 2018;23 (4):150-3. Doi:10.21699/jsp.23.4.8.