

Research Article**Ectopic Pregnancy: A Devastating Catastrophe****Rakhi¹, Mital Prem Lata^{2*}, Hooja Nupur³, Anuradha Agarwal⁴, Priyanka Makkar⁵, Andleeb Fatima⁶**¹Ex P.G. Student, Department of Obstetrics and Gynaecology, Zenana Hospital, S.M.S. Medical College, Jaipur-302012, Rajasthan, India^{2,3}Professor, Department of Obstetrics and Gynaecology, Zenana Hospital, S.M.S. Medical College, Jaipur-302012, Rajasthan, India⁴Senior Resident, Department of Obstetrics and Gynaecology, Zenana Hospital, S.M.S. Medical College, Jaipur-302012, Rajasthan, India^{5,6}PG resident, Department of Obstetrics and Gynaecology, Zenana Hospital, S.M.S. Medical College, Jaipur-302012, Rajasthan, India***Corresponding author**

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Abstract: Ectopic pregnancy is the most devastating catastrophe in early pregnancy. The clinical presentation of ectopic pregnancy has changed from a life-threatening disease, necessitating emergency surgery, to a benign condition in frequently asymptomatic women for whom non-surgical treatment options are available. The purpose was to study the profile of the patients with ectopic pregnancy. The present study was conducted in the Department of Obstetrics and Gynaecology, Zenana Hospital, SMS Medical College, Jaipur during a period of 1 year from January 2013 to December 2013. 70 cases of ectopic pregnancy were analyzed in terms of demographic profile, clinical presentation, management, morbidity, mortality and risk factors for ectopic pregnancy. Most common age and parity affected by ectopic pregnancy were 20-25 yrs (68.57%) and para 1 (45.71%) respectively. No age and parity were immune to ectopic pregnancy. More than one clinical feature was present in most of the patients. Most common site of ectopic pregnancy was ampullary region of the tube. Salpingectomy was the most common surgical procedure performed (82.86%). Few patients had more than one complication. 35 cases had no complication. No maternal mortality occurred during this period. Around 85.71% women (n = 60) received blood transfusion. It is a disastrous condition and early diagnosis and prompt conservative surgical or medical treatment is required in reducing maternal morbidity and mortality but also go a long way in preservation of future fertility. Hence, if any sexually active women presents with acute abdomen with anaemia, one should always consider the possibility of ectopic pregnancy in mind.**Keywords:** Early pregnancy, Ectopic pregnancy

INTRODUCTION

Ectopic pregnancy is the most common life threatening emergency in early pregnancy. The multitude of presentations to the primary care physician on first contact can be misleading in the absence of a high index of suspicion. It is still a major health problem among the women of child-bearing age in our country and continues to be an important cause of morbidity and mortality in women [1]. The rate of ectopic pregnancy is 11 per 1000 pregnancies, with a maternal mortality of 0.2 per 1000 estimated ectopic pregnancies [2]. The incidence of ectopic pregnancy varies from country to country and within the same geographical region depending on the risk factors in the population concerned [3]. Incidence of ectopic pregnancy is increasing due to rising frequency of STDs, use of IUCDs, tubal surgeries and assisted reproductive techniques. The strong risk of ectopic

pregnancy in women with a previous EP, previous tubal surgery, documented tubal pathology, or in utero DES exposure justifies screening for EP among these women [4].

Improvement in non-invasive diagnostic methods, such as sensitive pregnancy tests in urine and serum and high-resolution transvaginal sonography, has enabled early diagnosis of ectopic pregnancy [4-6]. As a consequence, the clinical presentation of ectopic pregnancy has changed from a life-threatening disease, necessitating emergency surgery, to a benign condition in frequently asymptomatic women for whom non-surgical treatment options are available.

As ectopic pregnancy has variable presentations from asymptomatic to life threatening condition, the aim of this study was to determine the clinical profile of

patients presenting with ectopic pregnancy and to determine the risk factors, so as to make recommendations on interventions to reduce the incidence of this life-threatening condition.

MATERIALS AND METHODS

The present prospective study was conducted in the Department of Obstetrics and Gynaecology, SMS Medical College, Jaipur during a period of one year from January 2013 to December 2013. 70 cases of ectopic pregnancy admitted in the hospital were analyzed in terms of demographic profile, clinical presentation, management, morbidity, mortality and associated risk factors.

RESULTS

The most common age group and parity affected were 20-25 years (68.57%) and primipara (45.71%) but none of the age and parity was immune to ectopic pregnancy. 88.57% women were Hindu and 80% women belong to urban dwelling (Table 1).

As shown in the table 2, more than one clinical feature was present in most of the patients. Amenorrhoea (84.29%) and pain abdomen (80%) were the common presenting symptoms while tenderness in fornices (91.43%), tender cervical movement (87.14%) and adnexal mass (60%) were the common signs. 22.86%

women presented in shock. 85.71% patients presented with ruptured ectopic pregnancy.

The most common site of ectopic pregnancy was tubal (92.85%) of which ampullary region of the tube was most commonly affected. Rudimentary horn pregnancy was seen in 2 cases. One case of each ovarian, heterotopic and abdominal pregnancy was seen (Table 3).

Salpingectomy was the most common surgical management modality (82.86%). Salpingoophorectomy was performed in 4.29% and salpingostomy, fimbriectomy and milking of tube was done in one case each (Table 4).

Few patients had more than one complication. Anemia was seen in 37.14% cases.

35 cases had no complication. No maternal mortality occurred during this period. Around 85.71% (n = 60) received blood transfusion (Table 5).

The history of previous induced abortion (34.29%) was the commonest risk factor followed by previous tubal surgery (25.71%) and history of PID (24.29%). Previous history of ectopic pregnancy was present in 5.71% women (Table 6).

Table 1: Demographic profile of patients

Age (yrs)	15 – 20	20 – 25	25-30	30-35	> 35
	7 (10%)	48 (68.57%)	10 (14.29 %)	4 (5.71%)	1 (1.43%)
Parity	Nullipara	Para 1	Para 2	Para 3	Para 4 & >
	16 (22.86%)	32 (45.71%)	11 (15.71%)	5 (7.14%)	6 (8.58%)
Religion	Hindu	Muslim	Others		
	62 (88.57%)	6 (8.57%)	2 (2.86 %)		
Residence	Urban	Rural			
	56 (80%)	14 (20%)			

Table 2: Distribution of Cases According to Clinical Presentation

Clinical Feature	Number of Cases	%
Pain	56	80.00
Amenorrhoea	59	84.29
Pallor	26	37.14
Fainting attacks	11	15.71
Tachycardia	37	52.86
Vaginal Bleeding	29	41.43
Shock	16	22.86
Tender Cervical Movements	61	87.14
Adnexal Mass	42	60.00
Tenderness in Fornices	64	91.43

Table 3: Distribution of Cases According to Site of Ectopic Pregnancy

Site of Ectopic Pregnancy	Number of Cases	%
Tubal Pregnancy	65	92.85
Ampullary	52	80.00
Isthmic	6	9.23a
Fimbrial	2	3.08
Tubal Abortion	5	7.69
Ovarian	1	1.43
Abdominal	1	1.43
Rudimentary Horn	2	2.86
Heterotopic	1	1.43

Table 4: Distribution of Cases According to Management

Management	Number of Cases	%
Surgical		
Salpingectomy	58	82.86
Salpingotomy	1	1.43
Salpingoophorectomy	3	4.29
Milking of Tube	1	1.43
Fimbrectomy	1	1.43
Segmental Resection	4	5.71
Medical		
Inj. Methotrexate	2	2.86

Table 5: Distribution of Cases According to Maternal Morbidity

Maternal Morbidity	Number of Cases	%
Anemia	26	37.14
Shock	9	12.86
Speticaemia	7	10.00
Wound Sepsis	3	4.29

Table 6: Distribution of Cases According to Predisposing Risk Factors

Predisposing Risk Factors	Number of Cases	%
Previous Induced Abortion	24	34.29
Pelvic Adhesions / PID	17	24.29
IUCD	7	10.00
Previous Tubal Ligation	12	17.14
Infertility	9	12.86
Previous Other Tubal Surgery	6	8.57
Previous Ectopic Pregnancy	4	5.71

DISCUSSION

Ectopic pregnancy, especially when ruptured, is a devastating gynecological catastrophe. 70 cases of ectopic pregnancy occurred over 1 year, were analyzed. Incidence of ectopic pregnancy has been increasing worldwide. In our study majority of women (68.57%) were in the 20-25 years of age followed by 25-30 years (14.29%). Mean age of the woman was 23.5 ± 3.6 years. This is because of early marriage in our state. Most common age group involved was 20-25 years for ectopic pregnancy as reported by various studies [7-9]. Udigwe *et al.* [10], Etuknwa *et al.* [11] and Panti A *et al.* [12] reported that majority of cases occurred in 26-30 years of age while the study done by S.Y.Chew [17]

observed that maximum cases of ectopic pregnancy (56.6%) occurred in women over the age of 30.

Majority of cases were nullipara or primipara (68.57%). Similar parity range was observed by various authors [7-9,14].

Early and accurate detection of ectopic pregnancy is critical to decrease morbidity and mortality Majority of the patients presented with amenorrhoea with tender fornices (91.45%), tender cervical movements (87.14%) and pain abdomen (80%). More than one clinical feature was present in most of the patients in our study. In a study by Priti S Vays *et al.* [7]. 90.82% had

abdominal pain varying in intensity from mild to severe; amenorrhoea was present in 78.57%, forniceal tenderness (71.43%) and tender cervical movements in 69.89% cases. Around 85.71% patients presented with ruptured ectopic pregnancy in our study highlighting the importance of early diagnosis and management thereby decreasing the mortality and morbidity. Our diagnosis was mainly based on history, physical examination and Culdocentesis, which was used to aid diagnosis in this series, was considered positive following aspiration of dark non-clotted blood [8, 9]. This procedure though controversial, (because it is unreliable in early unruptured or slow leaking cases and may give false positive in many acute disorders simulating ectopic pregnancy), was a useful diagnostic tool in this study. Pregnancy tests were used as supportive diagnostic investigations, with diagnosis confirmed by transabdominal ultrasound scan. Ultrasound is useful in evaluating patients with suspected ectopic pregnancy, mainly by documenting the presence or absence of an intrauterine pregnancy [13].

In our study, tubal pregnancy (92.85%) was the commonest ectopic pregnancy and the ampullary region of fallopian tube (74.29%) was most commonly involved. Similar results were observed in various studies where ampullary tubal pregnancy was common [10-18].

Majority of cases were of ruptured ectopic pregnancies with massive hemoperitoneum, where repair of tube was not possible, hence salpingectomy (82.86%) was the commonest life-saving surgical procedure performed. Similarly various studies also reported that salpingectomy was the commonest operative procedure performed [13, 15, 16].

In developing countries like Nigeria, where the majority of patients present after rupture, emergency surgical interventions remain the mainstay of treatment [19-20]. Salpingo-oophorectomy was performed in 4.29% cases. This is probably because Jeffcoate's postulate, [8] that removal of ipsilateral ovary doubles the chances of subsequent pregnancy because ovulation must then take place from the contralateral ovary, which still has an oviduct, is no longer popular. Nowadays we try to conserve ovary as far as possible because of the assisted reproductive technologies which can be advised to woman in future. The only indication for the removal of ipsilateral ovary along with the tube is when it is diseased or involved in 'ectopic complex', in which haemostasis is best achieved by excising it [12].

There was a significant degree of morbidity associated with ectopic pregnancy in this study, as shown by the results. This may be attributed to the delay in diagnosis and seeking treatment, and may have

contributed to the slightly longer duration of hospitalization recorded. Anemia, which was the commonest complication in this study, was due to excessive blood loss from the rupture site, necessitating blood transfusion.

Over the years, however, the therapy for ectopic gestation has evolved from a radical procedure to conservative treatment aimed at the preservation of fertility [21]. The most recent development in the treatment of ectopic pregnancy is the use of agents such as methotrexate, actinomycin-D, potassium chloride, hyperosmolar glucose, prostaglandins and mifepristone [14]. These agents may be directly injected into the ectopic sac or in some cases systemically *via* the oral, intramuscular or intravenous routes. Injection methotrexate was used in two cases only as majority of cases presented after rupture of ectopic pregnancy.

Out of various risk factors, previous history of induced abortion (34.29%) and pelvic inflammatory disease (24.29%) were the major risk factors in our subjects. This could be related to the illegal abortion as well as sepsis following abortions. Similar results were observed by other studies [7, 10-13].

CONCLUSION

High degree of clinical suspicion of ectopic with any of the risk factors must be considered ectopic unless proved otherwise and must be monitored with serial β hCG and ultrasonography until localisation of pregnancy is confirmed. Hence, if any sexually active women presents with acute abdomen with anaemia, one should always consider the possibility of ectopic pregnancy in mind as it is a disastrous condition and early diagnosis and prompt conservative surgical or medical therapy help in reducing maternal morbidity and mortality.

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