

Clinical Study of Ruptured Ectopic Pregnancy at a Tertiary Care Hospital

Jyosna Devi R¹, Lakshminarayanamma V², Hima Bindu P³

¹Assistant Professor, Government Maternity Hospital, Tirupathi, India

²Assistant Professor, Department of OBG, SV Medical College, Tirupathi (Corresponding Author)

³Associate Professor, Department of OBG, Siddhartha Medical College, Vijayawada, India

Abstract: Ruptured ectopic pregnancy is an acute emergency condition and is associated with maternal mortality and morbidity especially in developing countries. The present study aims to study the incidence, socio demographic risk factors, clinical risk factors and to assess the maternal outcome in ruptured ectopic pregnancy. **Material and Method:** The study population is cases of ruptured ectopic pregnancy admitted to the department of Obstetrics & Gynecology, SV. Medical college, Tirupati. The material for the present study was collected from patients who were admitted in the department of OBG with ruptured ectopic gestation. **Results:** In this study most of cases are between 26-30 years, low socioeconomic status, multiparity, educated, rural population, with 4-12 weeks of gestation, most common presentation pain abdomen, with surgical intraoperative and post operative complications and the most common risk factor is pelvic inflammatory disease. **Conclusion:** The incidence, parity, site, surgery, complications correspond to other studies but most common risk factor in this study is pelvic inflammatory disease, In this study most of the patients were pallor and in shock at time of admission so any women in the reproductive age presenting with in explained pallor or collapse, with or without history of amenorrhoea should be presumed to have an ectopic pregnancy until otherwise proved.

Keywords: Ruptured Ectopic Pregnancy

1. Introduction

An ectopic pregnancy is one in which the fertilized ovum is implanted in a site other than the uterine cavity.

Frequency

Fallopian tubes-95-98%

Uterine cornu-2-2.2%

Ovary, cervix and abdominal cavity-<1%

Ectopic pregnancy is more common on the right side¹

Ruptured ectopic pregnancy is an acute emergency condition and is associated with maternal mortality and morbidity especially in developing countries, where the majority of patients present late in a hemodynamically compromised state. At present the overall incidence is increasing world wide

But the case fatality rate has decreased. The causes for rising incidence of ectopic pregnancy are increase in pelvic inflammatory disease, ovulation induction, Assisted Reproductive technology and improved diagnostic modalities. Other risk factors are failed tubectomy, tubal recanalization and tuberculosis of genital tract².

In developed countries cases present early and are managed conservatively whereas in India, late presentation with rupture in more than 80% of the cases is the problem³. Salpingitis and pelvic inflammatory diseases increases the risk by six fold to tenfold⁴. Half of the women have none of the risk factors⁵. In this context, the present study is undertaken to know the risk factors so as to formulate interventions to reduce the incidence of this life threatening condition.

2. Aims & Objectives

- 1) To study the incidence of ruptured ectopic pregnancy
- 2) To study the socio demographic risk factors of ruptured ectopic pregnancy
- 3) To study the clinical risk factors of ruptured ectopic pregnancy
- 4) To assess the maternal outcome in ruptured ectopic pregnancy

3. Material and Methods

Study Population: cases of ruptured ectopic pregnancy admitted to the department of Obstetrics & Gynecology, SV. Medical college, Tirupati.

The material for the present study was collected from patients who were admitted in the department of OBG with ruptured ectopic gestation. The study was conducted over a period of 1 year from October 2015 to October 2016.

Inclusion Criteria

- 1) All women admitted with ruptured ectopic gestation at Government Maternity Hospital, Tirupati.

Exclusion Criteria

- 1) All other causes of intra peritoneal hemorrhage.

A detailed history was taken in the prescribed proforma. History regarding presenting complaints, past obstetric history, menstrual, medical history, infertility treatment, and contraceptive methods used, Tuberculosis, pelvic surgery like tubal ligation and appendectomy were recorded.

Diagnosis was made based on history, general physical examination and pelvic examination, urine pregnancy test,

Volume 9 Issue 3, March 2020

www.ijsr.net

Licensed Under Creative Commons Attribution CC BY

ultra sonogram (Trans abdominal/Trans vaginal), paracentesis, culdocentesis and routine investigations, associated comorbidities were recorded.

Resuscitative measures, findings at laparotomy and the outcomes of management were noted.

All the patients were well informed about the study in all aspects and informed written consent was obtained. The study was approved by Hospital research and ethical committee.

4. Observations and Results

Table 1: Analysis of ectopic gestation in relation to age, socioeconomic status, parity, education level, habitation, of the patient

S.No	Age				Socioeconomic status		parity		Education level		habitation	
	<20yr	21-25yrs	26-30yrs	>30yrs	Low	middle	Primi	multi	educated	illiterate	rural	urban
No. of patients	5	12	20	9	39	7	10	36	40	6	33	13
Percentage (%)	10.86	26.09	46.49	19.97	84.8	15.2	21.7	78.3	87	13	71.7	28.3

Table 2: Analysis of ectopic gestation in relation to period of amenorrhoea and clinical presentation

Period of amenorrhoea	S.no	No. of patients	Percentage		
	1	Less than 4 weeks	1		
	2	4-12 weeks	44		
	3	More than 12 weeks	1		
Clinical presentation And diagnostic tests	1	Pain abdomen	29		
	2	Pain abdomen and vaginal bleeding	12		
	3	Vaginal bleeding	3		
	4	Giddiness and vomitings	1		
	5	Fainting	1		
			Positive (%)	Negative (%)	
	1	Urine pregnancy test	46	28 (60.86%)	18 (39.14%)
	2	Paracentesis	37	23 (62.16%)	14 (37.84%)
	3	Culdocentesis	25	16 (64%)	9 (36%)
	4	Ultrasonogram	46	44 (95.65%)	2 (4.35%)
	5	Laparoscopy	0	0	0

Table 3: Analysis of ectopic gestation in relation with complications and site

Surgery	Intra op complications	Post op complications	No. of patients	Percentage
1	Salpingectomy		40	86.96%
2	Salpingoopherectomy		5	10.87%
3	Subtotal hysterectomy		1	2.17%
Site of ectopic				
1	Ampulla		29	63.00%
2	Fimbria		2	4.30%
3	Interstitial		1	2.20%
4	Isthmus		13	28.30%
5	Ovarian		1	2.20%
Haemoperitoneum in ml				
1	Less than 500 ml		9	19.54%
2	500-1000 ml		14	30.44%
3	1000-1500 ml		10	21.77%
4	More than 2000 ml		13	28.25%
Blood Transfusions (in units)				
1	One		16	34.79%
2	Two		19	41.30%
3	Three		7	15.21%
4	Four		1	2.17%
5	Five		2	4.35%
6	Six		1	2.17%
Post operative complication				
1	Nil		38	82.61%
2	ICU care		2	4.34%
3	Fever		4	8.70%
4	Abdominal distension		2	4.34%

Table 4: Analysis of ectopic gestation in relation to risk factors

S.No.	Risk factors	No. of patients	Percentage
1	Pelvic inflammatory disease (PID)	13	23.27%
2	Previous history of abortion (Spontaneous/Induced)	8	17.39%
3	Tubectomy failure	5	10.87%
4	Tuboplasty	1	2.17%
5	Past history of IUCD use	1	2.17%
6	History of Infertility treatment	1	2.17%
7	History of previous ectopic pregnancy	1	2.17%
8	History of Pulmonary Tuberculosis	2	4.34%
9	History of previous caesarean section	6	13.05%
10	History of Abdominal surgery (Appendicectomy)	1	2.17%
11	No risk factors	8	17.40%

5. Discussion

Incidence: Incidence of ectopic gestation in the present study was about 3.77/1000. There were 46 cases of ruptured ectopic gestation reported during the study period of October 2015 to October 2016. In the same period, there were 12000 deliveries in the hospital. Incidence of 3.77/1000 deliveries in the present study was comparable to K. Saritha et al., series, who reported the incidence as 3.73/1000³. Bandana Pradhan et al., reported a lower incidence of 1.2%⁶. Studies from Nigeria showed a high incidence of 21/1000.

Age: High incidence of ectopic gestation in the present study was in the age group of 26-30 years (43.4%) followed by 20-25 years (26.04%). This is comparable to other studies Oshani L Lawani et al., reported a incidence of 70% of patients were in the age group of 20-29 years², Rashmi et al., reported a incidence of 70% in the age group of 21-30 years⁷. High incidence during 20-30 years can be explained by increased incidence of sexually transmitted infections and pelvic inflammatory diseases during this age period and also most women become pregnant in this age group.

Socio Economic Status: Most of the patients (39 out of 46 i.e., 84.8%) belong to low socio economic status and 29 patients (63.04%) with low educational standards, similar to Bandana Pradhan et al., series who reported 81.25% incidence in low socio economic status people⁶. This corresponds to the socio economic status of the obstetric population attending the hospital.

All the studied patients were unbooked cases and majority were referred from other hospitals. 71.7% (33 out of 46) were referred from rural areas surrounding this tertiary care hospital. Low socioeconomic status with illiteracy and poor education were mainly responsible for late presentation after the rupture of the ectopic gestation.

Parity: In the present study incidence of ruptured ectopic pregnancy was more common in multi gravida (78.3%) with highest incidence in gravida 3 (47.8%). This is similar to other studies.

In the present study majority of patients (58.8%) reported at 4-8 weeks of gestational age. 17 patients (36.94%) presented at 9-12 weeks of gestational age. Sreelakshmi U et al., and K. Saritha et al., reported lower incidence of 16.27% and 12.05% in their studies⁸, during this gestational age. 1 patient (2.17%) in the present study reported before a missed period with pain abdomen and irregular bleeding. Another patient (2.17%) presented at 16 weeks of gestational age with corneal rupture. These results correlate with those of other studies.

The commonest risk factor in the present study was pelvic inflammatory disease 23.27%. This finding is similar to other studies. 8 patients (17.39%) in the present study had a history of abortion in the past obstetrics data, among them 5 patients had spontaneous abortion and 3 patients underwent medical termination of pregnancy. Several studies had identified history of previous abortion as a risk factor for ectopic pregnancy. There was no identifiable risk factor noted in 8 patients (17.39%) in the present study as well as other studies. Probably many cases of chlamydia salpingitis were indolent and cause asymptomatic tubal damage which could not be identified by routine investigations, may subsequently lead to tubal pregnancy¹⁰. 5 patients (10.87%) presented with ectopic gestation after tubectomy in the present study of them 4 (8.7%) underwent tubectomy by mini lap and 1 patient (2.17%) by laparoscopic sterilization. All 5 cases presented within the 3 years of sterilization

Other studies reported incidence ranging from 4-35% for ectopic pregnancies after failed tubectomy. In the present study 1 patient (2.17%) had recurrent ectopic gestation. She

was G4, P2, L2 with 8 weeks of amenorrhea came to emergency room with chief complaint of vaginal bleeding. She underwent Laparoscopic salpingotomy 2 years back for ectopic gestation in the left fallopian tube. Now again she was found to have ectopic gestation in left fallopian tube. Salpingectomy with concurrent tubectomy done in the patient. History of tubal surgery was present in one patient (2.17%). This incidence is similar other studies. One patient (2.17%) Primi (30 years) presented with 8 weeks of amenorrhea having past history of pulmonary tuberculosis completed antitubercular treatment 6 months back. She had also taken 2 cycles of clomiphene citrate from a private practitioner for primary infertility, now she presented with ruptured ectopic gestation in left ampullary region. Salpingectomy was done for this patient. Tubercularsalpingitis and treatment for ovulation induction are known risk factors for ectopic pregnancy. Majority of the patients 41 out of 46 (63.05+26.08=89.13%) presented with pain abdomen, of them 12 patients (26.08%) had associated vaginal bleeding as their chief complaint. 3 patients (6.52%) presented with vaginal bleeding as their main symptom. 1 patient (2.17%) presented with giddiness and vomiting and 1 patient (2.17%) with fainting. Presenting complaints are similar to other studies.

In the present study majority of the patients i.e., 43 out of 46 (93.47%) had pallor, 12 patients (26.1%) were in shock at the time of admission. This was comparable to Saritha K et al., series who reported 30.43% of patients presented in a state of shock to the emergency room.

So, any women in the reproductive age presenting with explained pallor or collapse, with or without history of amenorrhoea should be presumed to have an ectopic pregnancy until otherwise proved.

Fallopian tube was the commonest site (97.8%) of ectopic gestation in the present study. Ampulla is the commonest site (63%) followed by Isthmus (28.3%), fimbrial end (4.3%) and 2.2% at interstitial portion of the fallopian tube. Other studies have shown similar results.

Immediate resuscitation with intravenous fluids and blood transfusion along with emergency laparotomy is the management of choice for women presented with ruptured ectopic gestation, since majority of patients were presented with haemoperitoneum. Salpingectomy (86.96%) was the commonest life saving procedure performed in studied patients. Salpingoophorectomy was done in 5 patients (10.87%). Reason for performing Salpingoophorectomy was presence of dense adhesions or tubo-ovarian mass⁹.

Salpingectomy was the commonest operation done in all comparative studies which is similar to the present study.

Subtotal hysterectomy was done in 1 patient (2.17%) for ruptured ectopic gestation at interstitial portion of left fallopian tube. As hemostasis couldn't be achieved from the ruptured ectopic site so, subtotal hysterectomy was done for this patient.

Haemoperitoneum was present in all cases (100%). Among them 50% of cases presented with haemoperitoneum of

more than 1000 ml. In patients where haemoperitoneum was less than 500ml, both paracentesis and culdocentesis were negative, Rashmi A et al., reported 86.4% of patients with haemoperitoneum on laparotomy.

Majority of the patients (38 out of 46, 82.61%) had no significant post operative complications except slight morbidity. 1 patient (2.17%) G5P4L3D1 with interstitial pregnancy who underwent subtotal hysterectomy, was haemodynamically unstable after the operation, required ICU care for 3 days.

1 patient (2.17%) with gross anemia developed convulsions due to hypoxia during surgery and required ventilator support for 7 days. She recovered later and discharged after 11 days. Total duration of hospital stay was 18 days. She was clinically stable at the time of discharge.

4 patients (8.7%) had post operative fever which subsided within 3 days and 2 patients (4.34%) had abdominal distension which subsided with conservative management. Complications in the present study are similar to the other studies.

There was no maternal mortality in the present study.

Reference

- [1] Jeffcoats principles of Gynecology 7th edition Chapter 9, Pg No.142-159.
- [2] Ectopic pregnancy : a life threatening gynecological emergency. International journal of womens Health 2013pg No.515-521.
- [3] Outcome of Ectopic pregnancy: A prospective clinical study in teaching hospital, published in Jemds/Vol.4/issue 93/Nov.19, 2015
- [4] DCDutta textbook of obstetrics 8thedition chapter 16 Pg. No.207-221.
- [5] Clinicalgynaecology, endocrinology and infertility by MARC A FRITZ and LEON SPEROFF, 8th edition chapter 33, pg no 1383-1412.
- [6] A clinical study on Ectopic Pregnancy in RIIMS from June 2013-2015 July, Published inIOSR Journal of Dental and Medical sciences, Volume 15, Issue 1 Ver.III, PP08-12
- [7] A Clinical study of Ectopic gestation published in Journal of Clinical and diagnostic Research, 2012, June, Vol.6?issue.5?Pg no.867-869
- [8] The outcome of ectopic gestation –A Tertiary care hospital experience, published in J of Evolution of Med and Dent Sci /Eissn-2278-4802, Pissn-2278-4748/Vol.3/Issue21/May 26, 2014, Pg no5775-5780.
- [9] Retrospective study of ectopic pregnancy in a teaching hospital published in JEMDS, 2014, Vol.3/issue 63/Pg No.13817-13822.
- [10] Ectopic pregnancy in adolescents by Michelle vichnin Current opinion in obstetrics and gynecology 2008, 20:475-478.