

Clinico-Pathological Study of Tubal Ectopic Gestation and Evaluation of Associated Risk Factors in A Tertiary Care Centre.

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ABSTRACT

Background: Ectopic gestation is an obstetric emergency with high morbidity and mortality. Most common site for ectopic pregnancy is fallopian tube. Predisposing risk factors include pelvic inflammatory disease (PID) that is acute and chronic salpingitis, previous abortion, Salpingitis Isthmica Nodosa (SIN); and treatment for infertility. This study was done to identify the common risk factors.

Method: This was a retrospective study carried out for the period of 6years (January 2013- December 2018) in M.G.M. Medical college, Aurangabad. 110 cases of tubal ectopic gestations were studied.

Results: Out of 110 ectopic gestations, commonstage of presentation was 25-35years (90.9%), and weremultiparous (85.3%). Right sided tubewas mostly affected (70.2%), with the risk factors of PID(32%) and previous abortion(30%). Most of the patients presented with pain in abdomen(40.90%)andamenorrhea(31.81%).Predominant histopathological findings were chronic salpingitis with follicular salpingitis (40.90%), acute salpingitis (27.27%) andSIN(22.7%).

Conclusion: Pelvic inflammatory disease, Salpingitis Isthmica Nodosa, acute and chronic salpingitis are predisposing factors for tubal ectopic gestation. Early diagnosis, identification of risk factors and timely intervention will reduce the incidence of ectopic pregnancy and also will help in reducing morbidity and mortality associated with it.

Keywords: Ectopic Gestation, Salpingitis Isthmica Nodosa, Pelvic Inflammatory Disease, Salpingitis.

Introduction

Ectopic pregnancy is defined as any intra or extra uterine pregnancy in which the fertilized ovum implants at an aberrant site outside the uterus.^[1] It is an obstetric emergency with high morbidity and mortality;^[2] especially in developing countries where most of the patients present late with rupture or hemodynamic compromise. Along with foetal wastage, ectopic pregnancy is also associated with recurrence of ectopic gestation and impairment of subsequent fertility.^[3]

The most common site for ectopic pregnancy is fallopian tubes (90-95%).^[4] Amongst its multifactoral pathogenesis, pelvic inflammatory disease (PID) is one of the important predisposing factors followed by other causes like tubal defects, endometriosis, pervious surgery, use of intrauterine contraceptive device (IUCD) and treatment for infertility. Whilst the incidence of ectopic pregnancies has a rising trend, the incidence of ruptured ectopic has declined. Early diagnosis reduces the risk and allows more conservative medical treatment.^[5] This study was conducted to recognize the predisposing risk factors which will help in early diagnosis and also prevention of tubal ectopic gestation, thus reducing the morbidity and mortality.

Materials and Methods

This was a retrospective study carried out for a duration of six years (Jan 2013-Dec 2018) at M.G.M. Hospital, Aurangabad, Maharashtra. The case sheets of the patients with tubal ectopic pregnancy were traced through the data noted in the Pathology department, labour ward, OT registers and record section. Information regarding total number of deliveries in the study period was noted. A complete analysis regarding age, parity, gestational age, associated risk factors, clinical presentation, diagnostic tools used, treatment options and associated risk of morbidity and mortality was made. All the surgeries were partial/total salpingectomies done by open laparotomy; and spinal/general anaesthesia was used in all the cases. Histopathological correlation was considered as final diagnostic tool. Sections from fallopian tube were studied for presence of chorionic villi to confirm tubal gestation. Features of acute salpingitis, chronic salpingitis with follicular salpingitis, Salpingitis isthemica nodosa (SIN), tuberculosis and walthard nests were screened. The data was analyzed with simple descriptive statistics. The data was represented in the form of tables and charts. The study was approved by institutional ethical committee.

Results

During the study period of 6 years, there were 11,250 deliveries in our hospital and 110 cases of tubal pregnancies were operated giving the incidence of 9.7/1000 deliveries (0.97%). The majority patients were in the age group of 25-29 years (Table-1), followed by age group of 30-34 years. 14.7% patients were primipara and 85.3% were multipara. The incidence was more in 7-9 weeks of gestation (90%). There was a rising trend of incidence of tubal ectopic pregnancy (Fig-1).

Pelvic inflammatory disease was the most common risk factor (29%), followed by previous abortions (27.27%). 9% had history of previous tubal ectopic pregnancy, 10% had history of lower segment cesarean section (LSCS), while 4.5% used IUCD, had a history of tubal surgery and were treated for infertility. 10.9% of cases had unknown etiology. (Table-2). The incidence of right sided tubal

ectopic (70.2%) was more than left side (29.8%). Ampulla of fallopian tube was the common site of tubal ectopic (55%), followed by fimbrial site (35%).

In all the cases salpingectomy was done; unilateral salpingectomy being more common (90.2%). The morbidity included anemia (40.4%), blood transfusion (55.5%) and wound infection (4.1%). Most of the cases presented with abdominal pain (40.9%). The second common symptom was amenorrhea (31.81%). 16.36% patients presented with bleeding per vagina, 9.09% with shock and 1.8% with adnexal mass (Table-3). The most common associated pathologic finding was chronic follicular salpingitis (40.90%), followed by acute salpingitis (27.27%) and SIN (22.7%). 9.09% showed presence of walthard nests. There was no case of tuberculosis presenting with tubal ectopic pregnancy (Table-4).

Table 1: Distribution of cases according to age.

Age(years)	Number	Percentage
<20	2	1.8
20-24	10	9
25-29	56	50.9
30-34	54	40
35-40	08	7.2

Table 2: Risk factors for ectopic pregnancy

Risk factors	Number	Percentage
Unknown	12	10.9
Previous ectopic	10	9
PID	32	29.0
Previous abortion	30	27.27
Infertility treatment	05	4.5
Tubal surgery	05	4.5
IUCD	05	4.5
H/o LSCS	11	10

PID: Pelvic inflammatory disease

IUCD: Intrauterine contraceptive device

LSCS: Lower segment cesarean section

Table 3: Distribution according to clinical presentation

Clinical presentation	Number	Percentage
Pain in abdomen	35	40.9
Amenorrhea	45	31.81
Bleeding per vagina	18	16.36
Shock	10	9.09
Adnexal mass	02	1.8

Table 4: Pathological findings of the patients with ectopic gestation

Associated abnormalities	Number	Percentage
Acute salpingitis	30	27.27
Chronic salpingitis + follicular salpingitis	45	40.90
SIN	25	22.7
Tuberculosis	NIL	-
Walthards nest	10	9.09

SIN: Salpingitis Isthmica Nodosa

Statement of informed consent: Not required as it was a retrospective study.

Statement of human and animal rights: Not applicable for this study

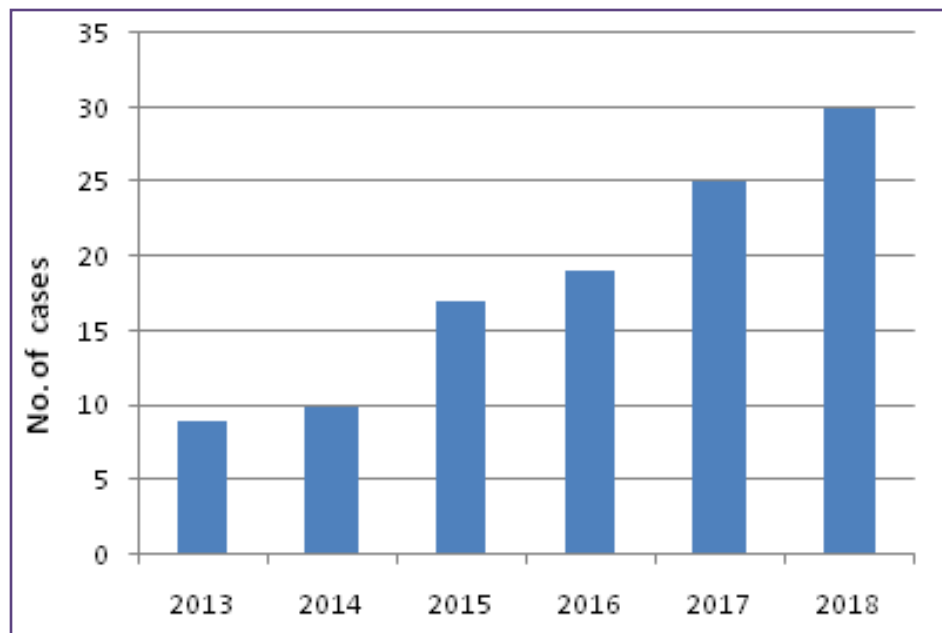


Fig. 1: Showing rising trend in incidence of tubal ectopic pregnancy.

Discussion

Ectopic pregnancy continues to be significant cause of morbidity and mortality in women of reproductive age group throughout the world. Ruptured tubal ectopic pregnancy is also implicated in maternal death during the first trimester of pregnancy⁶.

The incidence of ectopic pregnancies (0.97%) in our study is compatible with study done by Arupkumar et.al^[3,10] (0.6%) and ICMR multicenter study (0.4%)^[3,11]. However, this incidence is lower as compared to studies done by Olarewaju et. al. (1.7%).^[3,6]

The most frequent gestational age group in our study was 7-9 weeks which is compatible with study carried out by Khaleeqe et. al. (6-8weeks).^[5,12]

Also right sided tubal ectopic was more common (70.2%) than left sided in present study, which is again compatible

with studies done by Khaleeqe et. al (60%). Our study shows the most common age group of 25-34 yrs, which is compatible with study done by Smita kumari et. al. (25-35 yrs).^[8]

A significant rise in the incidence of tubal ectopic pregnancies from 9/1000 to almost 30/1000 pregnancies in the span of 6years was observed in our study and is compatible with studies done by Dahiya et. al.^[6] This rise has been attributed to pelvic inflammatory disease (salpingitis) and abortions^[6,8] and availability of better diagnostic facilities. Though the incidence of tubal ectopic due to IUCD was high (11%) in studies done by Smita Kumari et. al.^[8]; our study showed a low incidence of 4.5%. It has been studied that IUCD has no effect on ovulation; it prevents intrauterine pregnancy but not tubal or ovarian.^[8,13]

Our study depicts the most common clinical presentation of abdominal pain which is compatible with studies done

by Rajendra Wakankar et. al.^[5,9] This was attributed to the presentation of ruptured ectopics. In our study 40.90% patients had chronic salpingitis; 27.27% had acute salpingitis; 22.7% had salpingitis isthmica nodosa and 9% had Walthards nests. This was compatible with studies done by Savitri Ravindra et. al.^[4], Dahiya et. al.^[6] and Mohd. Irshad Ahmed et. al.^[7] Studies in Sweden have shown that reduction in PID is associated with a decline in the incidence of ectopic pregnancy.^[4,14] Hence appropriate treatment with antibiotics will lower the incidence of PID and thus tubal ectopic pregnancy.

SIN is the microscopic presence of tubal epithelium in the myosalpinx or beneath the tubal mucosa. The most serious clinical and pathological complications of SIN are infertility and strong association with ectopic pregnancy.^[4,15,16] The incidence of SIN in our study was 22.7% which is higher as compared to Dahiya et. al. (8%) ; hence explaining the rising trend of tubal ectopic pregnancies in our study.

There is no significant association of Walthard nests with ectopic pregnancies as it was an incidental finding.

Conclusion

Awareness of possible risk factors; early recognition of signs and symptoms of pelvic inflammatory disease will help in adequate antibiotic treatment in acute phase of the disease. Timely intervention by medical and conservative surgical measures can help in reducing the morbidity and mortality associated with tubal ectopic pregnancy.

Abbreviations

PID: Pelvic inflammatory disease

IUCD: Intrauterine contraceptive device

SIN: Salpingitis Isthmica Nodosa

LSCS: Lower segment cesarean section

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