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Risk factors and clinical presentation of ectopic pregnancy in women attending a tertiary care hospital

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Abstract---Background: Ectopic pregnancy is one of the nightmare and a life threatening condition. The rising incidence of ectopic pregnancy in the past few years is due to a number of risk factors which include pelvic inflammatory disease and availability of better diagnostic techniques Objective: To study the ectopic pregnancy risk factors and their clinical presentation in ectopic pregnancy attending to a tertiary care center. Material and methods: It was a prospective study with 50 cases of ectopic pregnancy conducted in the Department of Obstetrics and Gynecology, in a Tertiary care Hospital for a period of 1 years were included. Detailed history suggestive of risk factors for ectopic pregnancy, menstrual and obstetric history was taken. General, systemic, abdominal and vaginal examination was done. SPSS (Version 22.0) was used for analysis. Results: A total of 2750 pregnancies were confirmed during the study period, of which 50 cases of ectopic pregnancies were diagnosed, giving an incidence of 1.8%. 84% of women were multigravidae and 16% were primigravidae. 80% of the patients had identifiable risk factors, of which past history of PID in 7.5%, usage of IUCD and OCP in 2.5% each and tubectomy in 6% were noted. 88% had amenorrhea, followed by pain abdomen in 80%, bleeding PV in 68% of the patients. Pallor in 88% of the cases. Percentage of haemoglobin was <7gm% in 28% observed. Evidence of 40 patients with ruptured ectopic were recorded. But there was no significant difference seen. Conclusion: Increasing awareness regarding safe sexual practices and contraception decrease abortions and reduces the risk of ectopic pregnancy.

Keywords---Ectopic pregnancy, Pelvic Inflammatory disease, IUCD, OCP, Amenorrhea, ruptured ectopic, anaemia.

Introduction

Ectopic pregnancy is one of the nightmare and a life threatening condition. The rising incidence of ectopic pregnancy in the past few years is due to a number of risk factors which include pelvic inflammatory disease and availability of better diagnostic techniques. There is increased frequency of ectopic after IVF and related techniques. Tubal pregnancy may be due to factors that retard the passage of fertilized ovum, conditions which increase tubal receptivity and factors intrinsic in the conceptus.[1]

PID is the commonest cause of ectopic pregnancy. It may be due to STI, mainly chlamydia and gonorrhea and others being post-abortion, puerperal or secondary to an extra genital pelvic infection or surgery [1]. According to ACOG (1998), prior PID due to Chlamydia Trachomatis is the most common risk factor. It has been reported by Westrom that chances of ectopic after one episode of salpingitis is 12.8%, 30% after two episodes and nearly 75% after three episodes of salpingitis [2].

Salpingitis Isthmica Nodosa is a non-inflammatory pathologic condition of the tube. The tubal epithelium extends into the myosalpinx forming a true diverticulum. There will be abnormal myometrial electrical activity over the diverticula favours ectopic implantation. The risk of tubal pregnancy after any sterilization procedure is 5% to 16% [3].

Smoking causes ectopic by delayed ovulation, altered tubal and uterine motility and or altered immunity. DES exposure causes the tubal abnormalities like shortened and convoluted tubes, constricted fimbria, and paratubal cysts favours ectopic implantation.[4] The risk of ectopic pregnancy increases in women who conceive via ART. The rationale behind the study was designed to evaluate risk factors for ectopic pregnancy and their clinical presentation.

Materials and Methods

It was a prospective study conducted in the Department of Obstetrics and Gynecology in a Tertiary care Hospital for a period of 1 years (October 2020 – September 2021). 50 cases of ectopic pregnancy were diagnosed and recruited for the study after taking their consent for participation.

Inclusion criteria

All the cases diagnosed as ectopic pregnancy admitted to Hospital during the study period of 1 years.

Exclusion criteria

All intrauterine pregnancies.

Methodology

Detailed history including age, socioeconomic status, and history suggestive of

risk factors for ectopic pregnancy, menstrual and obstetric history were taken. General, systemic, abdominal and vaginal examination was done. Informed consent was taken and data were recorded on the proforma. TVS / TAS were done. Apart from routine surgical profile, β -hCG assay, UPT, coagulation profile, Renal function tests, Liver function tests.

Statistical Analysis

Analysis of data was done by using SPSS software ver. 22. Data were statistically described in terms of mean (\pm SD), frequencies (number of cases) and percentages when appropriate. Comparison of quantitative variables between the study groups was done using Student t test for independent samples if normally distributed. For comparing categorical data, Chi square test was performed. A probability value (p value) less than 0.05 was considered statistically significant.

Results

Table 1- Socio-Demographic profile of Patients

Variables	Number (%)	p-value
Incidence	2750/50 (1.8)	-
Age (Mean \pm SD)	24 \pm 6 years	-
SES	Low	0.11
	High	
Gravida	Multi	0.13
	Primi	

As per table 1 there were total 2750 pregnancies in the year and about 50 were ectopic pregnancy which suggest the incidence of 1.8%. The most common age group belonged to 21-30 years. 70% of women belonged to Low SES. And 80% were multigravids and their was no significant difference.(p>0.05)

Table 2- Risk Factors for Ectopic pregnancy

Risk factors	Number (%)	p-value
no risk factor	10 (5)	0.11
PID	15 (7.5)	0.01*
h/o abortion	10 (5)	0.11
IUD	5 (2.5)	0.21
OCP	3 (1.5)	0.14
Infertility	5 (2.5)	0.12
Uterine anomalies	2 (1)	0.18

As per table 2 the most common risk factor was PID seen in 7.5% of females which was statistically significant, followed by history of abortion in 5%. 5% females has no risk factors while IUD and infertility comprises 5% of risk factors which was not significant.

Table 3- Clinical Presentation and Investigation in patients

Variables	Number (%)	p-value
Symptoms		
Amenorrhea	44 (88)	0.11
Pain abdomen	40 (80)	
Bleeding per vagina	34 (68)	
General physical Exam		
Palor	44 (88)	0.21
Low blood pressure	40 (80)	
Hemoglobin		
<7	14 (28)	0.21
>7	36 (72)	
Urine Pregnancy test		
Positive	48 (96)	0.43
Negative	02 (4)	
USG		
Ruptured ectopic	40 (80)	0.47
Unruptured	10 (20)	

As per table 3 In the present study group, 88% of women had history of amenorrhea, followed by pain abdomen in 80%, history of bleeding per vagina (PV) in 68%, pallor was present in 88% of the cases. Hb% was <7 gm% in 28% of the patients and 72% had >7 gm% of hemoglobin. UPT was positive in 48 cases (96%) and negative in only 2 cases (4%). USG showed evidence of rupture in 40 patients and 10 were diagnosed as unruptured ectopic. All presentation were not significant.

Discussion

The incidence of ectopic pregnancy in the present study was 1.8%. The present study is correlating with the study done by Musa, et al. [5] (1.74%). Rising incidence of Sexually Transmitted Infections, induced abortions, social and life style changes, late child bearing in career women, Assisted Reproductive Technologies and advances in diagnostic techniques are the contributing factors for rising incidence of ectopic pregnancy globally. Majority of women (74%) in our study group belonged to the age group of 21-30 years, which is close to the studies done by Samiya Mufti, et al. [6] (75.4%), Panchal D, et al. [7] (71.66%) and Rashmi A Gaddagi, et al. [8] (70.2%).

In the present study group, majority of women with ectopic pregnancy were multigravidae (84%). This correlates with the studies done by Shraddha Shetty K, et al. [9] (83.9%), Panchal D, et al. [7] (81.66%). The higher incidence in multigravidae is probably due to previous miscarriages and infections resulting in tubal damage.

In the present study PID was seen in 7.5% of cases this is correlating with the study done by Bhavna, et al. [10] 22.7% of the cases with ectopic pregnancy. 2.5% of women with IUCD had ectopic pregnancy which correlates with the studies

done by Shraddha Shetty K, et al. [9] (6.4%), Shrestha, et al. [11] (5%) and W.M. Fageeh [12] (5.8%). IUCD has no effect on ovulation; it prevents intrauterine pregnancy but not tubal and ovarian pregnancy. The risk of tubal pregnancy is more if a woman conceives with IUCD in situ.

Gupta R, et al. [23] in which amenorrhea was present in 90%, pain abdomen in 87.5% and bleeding PV in 67.5% of the patients. Urine pregnancy test was positive in 96% of the cases which correlated with the study done by Rashmi A Gaddagi, et al. [8] (97.3%) and W.M. Fageeh [12] (96%).

Conclusion

Despite many advances in the diagnostic techniques, ectopic pregnancy is still a diagnostic dilemma because of its varied clinical presentation. All high risk women should be screened at the earliest with serum β -hCG and TVS. Increasing awareness among sexually active women and men regarding safe sexual practices and contraception decrease abortions and reduces the risk of ectopic pregnancy.

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