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Original Research Article

Evaluating clinical outcomes associated with ectopic pregnancies

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ABSTRACT

Background: Ectopic pregnancy refers to the implantation of a fertilized ovum outside the endometrium. There is no doubt that ectopic pregnancy is a common cause of morbidity; however, the associated mortality has declined significantly over the years due to early diagnosis and timely intervention.

Methods: This prospective study was conducted at Lala Ded Hospital, Srinagar from April 2016-March 2017. All the patients with ectopic pregnancies admitted through accident and emergency unit and through gynaecology out-patient department were included in the study. The data on several factors was analyzed like; parity, clinical presentation, risk factors, management and findings at laparotomy, to draw a valid inference. All the patients were managed as per hospital protocol and followed till discharge from the hospital.

Results: The present study revealed that the commonest age group affected with ectopic pregnancies is 20-24 years with majority of patients having previous spontaneous abortion as being high risk factor associated with ectopic pregnancies followed by pelvic inflammatory disease. The most dominant clinical presentation among the study subjects was pain and the commonest site of ectopic pregnancy was ampulla region of fallopian tube. Most of the patients were successfully managed with the help of salpingectomy

Conclusions: We suggest that the possibility of ectopic pregnancies should not be ignored in the reproductive age group especially in patients presenting with severe abdominal pain because delayed diagnosis often halts timely intervention which in turn invite serious health consequences.

Keywords: Ectopic pregnancy, Salpingectomy, Ampulla region

INTRODUCTION

Ectopic pregnancy refers to the implantation of a fertilized ovum outside the endometrium.¹⁻³ There is no doubt that ectopic pregnancy is a common cause of morbidity; however, the associated mortality has declined significantly over the years due to early diagnosis and timely intervention. Although there is no precise aetiology for ectopic pregnancy, however, a number of causal factors have been identified which include; the integrity of the oviduct, inflammatory insults, intrauterine devices, surgical manipulation, tubal ligations, salpingitis isthmica nodosa, DES exposure, and induced abortions. Sometimes the quality of ovum and hormonal environment is

disturbed due to ovulation induction, fertilization *in vitro*, delayed ovulation, and transperitoneal ovum migration and the associated risk of attaining ectopic pregnancy increases.

The incidence of ectopic pregnancy varies significantly from time to time and country to country; in Europe, the incidence increased from 11.2 to 18.8 per 1,000 pregnancies from 1976 to 1993 and in US, the ectopic pregnancies increased from 17,800 in 1970 to 88,400 in 1989.^{5,6} In UK there were around 11,000 reported cases of ectopic pregnancy per year with an incidence of 11.5 per 1000 pregnancies and the associated mortality rate was 0.4 per thousand ectopic pregnancies.⁴ The ectopic pregnancy

can be managed surgically, medically or expectantly. Management to individual patients is tailored on the basis of their presentation and on the severity of their condition, suitability of treatment options and more importantly patient preference. Whatever will be the mode of management, the key is the early diagnosis, resuscitation, timely treatment, and follow-up. Early diagnosis of EP is difficult and needs high index of suspicion by treating physician. The present study has been conducted to determine incidence and clinical profile of patients presenting with EP.

METHODS

The present prospective study on all cases of ectopic pregnancies has been conducted at Lala Ded Hospital, an associated GMC Hospital, Srinagar from April 2016-March 2017. All the patients with ectopic pregnancies admitted through accident and emergency unit and through gynaecology out-patient department were included in the study. A detailed history, clinical examination and urinary pregnancy testing was performed in all patients suspected of having ectopic pregnancy.

In suspected cases of ruptured ectopic pregnancy, culdocentesis was performed. Patients presenting with adnexal mass and biochemical pregnancy were examined through transvaginal ultrasonography to localize gestational sac, size of ectopic mass, presence of cardiac activity and any evidence of free fluid in pouch of Douglas. The diagnosis of ectopic pregnancy was precisely made on the basis of several factors like; history, clinical examination, urine pregnancy test, culdocentesis and ultrasound examination. The data on several important and relevant factors was analyzed like; parity, clinical presentation, risk factors, management and findings at laparotomy to draw a valid conclusion. All the patients were managed as per hospital protocol and followed till discharge from the hospital.

RESULTS

The recorded data was compiled and entered in a spreadsheet (Microsoft excel) and then exported to data editor of SPSS version 20.0 (SPSS Inc., Chicago, Illinois, USA).

Statistical software SPSS (version 20.0) and Microsoft Excel were used to carry out the statistical analysis of data. Continuous variables were expressed as mean±SD and categorical variables were summarized as percentages.

In the present study, we observed that there were 53 patients included in the study and the average of patients was observed as (25.7±2.71) years with majority of patients (54.7%) falling in the age interval of (20-24) followed by (26.4%) falling in (25-29) years. Majority of the patients (37.7%) were having 2nd parity followed by (24.5%) patients with first parity and (15.1%) with 3rd parity. Only 5 patients (9.4%) were having a 4th order

parity or beyond; however (13.2%) were nulliparous. We observe that among studied patients, the most common clinical presentation was abdominal pain (94.3%) followed by amenorrhea (81.1%), dizziness (79.2%), vaginal bleeding (52.8%), shock (20.8%), shoulder tip pain (13.2%) and (5.7%) had diarrhoea as clinical presentation. We observed that the most common site of ectopic pregnancy was ampulla accounting for (60.4%) cases followed by isthmus in (24.5%) patients.

We observed that the most common risk factor among studied patients was previous spontaneous abortion (73.6%), pelvic inflammatory disease (52.8%), previous tubal surgery (24.5%) and previous induced abortion (20.8%).

Almost 70% patients were managed with the help salpingectomy, (11.3%) received medical management, salpingostomy treatment was given to (11.3%) and (3.8%) patients were managed with salpingo-oophorectomy. Expectant management was exploited on (3.8%) patients.

Table 1: Demographic characteristics of study patients.

Variables	N	%	
Age (years)	<20	2	3.8
	20-24	29	54.7
	25-29	14	26.4
	30-34	7	13.2
	≥35	1	1.9
Parity	Nullipara	7	13.2
	Para 1	13	24.5
	Para 2	20	37.7
	Para 3	8	15.1
	≥ Para 4	5	9.4

Note: Mean±SD (range)=25.7±2.71 (19-38); N=53.

Table 2: Clinical presentation of study patients.

Presentations	N	%
Abdominal pain	50	94.3
Amenorrhea	43	81.1
Vaginal bleeding	28	52.8
Dizziness	42	79.2
Shock	11	20.8
Shoulder tip pain	7	13.2
Diarrhoea	3	5.7

Table 3: Site of ectopic pregnancy among study patients.

Sites	N	%
Ampulla	32	60.4
Isthmus	13	24.5
Fimbriae	4	7.5
Tubo-ovarian	2	3.8
Interstitial/cornual	1	1.9
Broad ligament	1	1.9
Total	53	100

Table 4: Risk factors of ectopic pregnancy among study patients.

Risk factors	N	%
Previous induced abortion	11	20.8
Pelvic inflammatory disease	28	52.8
Previous tubal surgery	13	24.5
Recanalisation	1	1.9
Previous spontaneous abortion	39	73.6
Previous ectopic pregnancy	2	3.8
Intrauterine contraceptive device	3	5.7

Table 5: Distribution according to treatment among study patients.

Treatments	N	%
Expectant management	2	3.8
Medical management	6	11.3
Salpingectomy	37	69.8
Salpingostomy	6	11.3
Salpingo-oophorectomy	2	3.8
Total	53	100

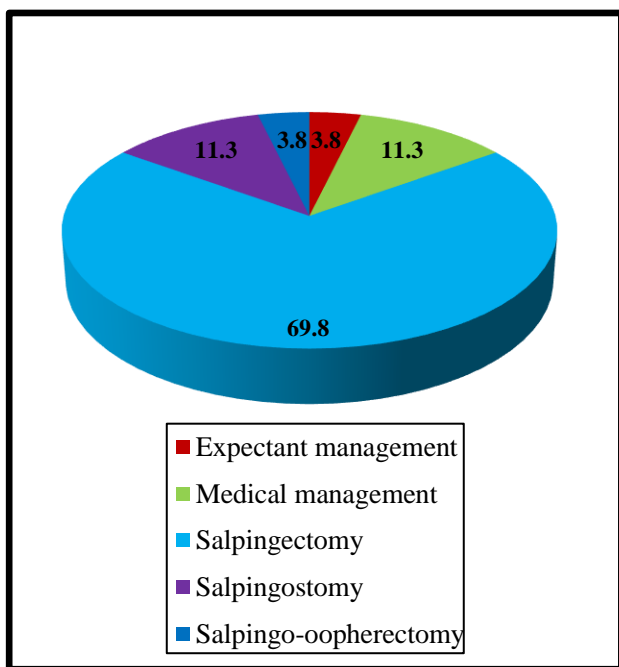


Figure 1: Distribution according to treatment among study patients.

DISCUSSION

In the present study, we aimed to evaluate the clinical profile of ectopic pregnancies.

We thoroughly analyzed patients data based on demographic, clinical, radiological, surgical, histopathological aspects and follow up data of patients. We randomly included 53 women patients in the study who qualified the inclusion criteria and gave a written consent.

We observed that the average of studied patients was (25.7±2.71) years with majority of patients (54.7%) falling in the age interval of (20-24) followed by (26.4%) falling in (25-29) years.

This finding on prevalent age group of ectopic pregnancies patients was not surprising because it always has high risk sexual behavior. In a likewise study by Malik et al, it was reported that the commonest age group affected with ectopic pregnancies is 20-24 years which is quite similar to our result.⁷ However, they reported the average of such patients as (27±3) years which is contrarily different to their reported prevalent age group of 20-24 years. Contemporarily to the literature, we found that history of previous spontaneous abortion, pelvic inflammatory disease, history of tubal surgery and previous induced abortion are the most common risk factors linked with ectopic pregnancies.

Malik et al have reported the associated risk factors of EP in order of predominance are; history of spontaneous and induced previous abortion, history of pelvic inflammatory disease and tubal surgery which is inconsonance to our observations.⁷ In the present study we found that majority of the patients, accounting for (37.7%) were having 2nd parity followed by (24.5%), (15.1%) patients with first and 3rd parity respectively. Only 5 patients (9.4%) were having 4th order parity or beyond; however (13.2%) were nulliparous. Sindos et al reported that ruptured ectopic pregnancies are associated with parity and previous history of ectopic pregnancy.⁸ With respect to parity, they found that only (27.1%) of ruptured cases are nulliparous women (39/144), whereas the respective percentage corresponding to the unruptured cases was (44.3%, 35/79) and the difference was highly significant with a (p value=0.009).⁸

Authors also reported a positive association of borderline statistical significance between previous history of ectopic pregnancy and parity was observed.⁸ In the present study, the most common clinical presentation was abdominal pain (94.3%) followed by amenorrhea (81.1%), dizziness (79.2%), vaginal bleeding (52.8%), shock (20.8%), shoulder tip pain (13.2%) and (5.7%) had diarrhea as clinical presentation. The most common site of ectopic pregnancy was ampulla accounting for (60.4%) cases followed by isthmus in (24.5%) patients.

Similar kind of observations were made by Malik et al and Stubo et al who reported the commonest site of ectopic pregnancy as ampullary region of fallopian tube.^{7,9} In the present study, most of the patients who had ruptured ectopic pregnancy were managed with emergency laparotomy.

We observed that (70%) patients were managed with the help salpingectomy, (11.3%) were managed medically, few patients (11.3%) received salpingostomy treatment and (3.8%) patients were managed with salpingo-oophorectomy. Conservative expectant management was exploited on (3.8%) patients.

Similar to our observation, in a study by Malik et al the commonest surgical procedure performed was also salpingectomy (65.68%) and reportedly all of them were having ruptured ectopic pregnancy and likewise to our study they also reported the use medical management in (10.78%) patients. Some ectopic pregnancies resolve spontaneously through either regression or tubal abortion, without causing harm to the patient. Expectant management is a conservative strategy consisting of observation and assessment of whether the ectopic pregnancy is continuing to resolve spontaneously and successfully without intervention.¹⁰ In the present study, the conservative expectant management was exploited on only (3.8%) patients which is almost similar to (4.8%) reported by Malik et al.⁷

CONCLUSION

The present study revealed that the commonest age group affected with ectopic pregnancies is 20-24 years with majority of patients having previous spontaneous abortion as being high risk factor associated with ectopic pregnancies followed by pelvic inflammatory disease. The most dominant clinical presentation among the study subjects was pain and the commonest site of ectopic pregnancy was ampulla region of fallopian tube. Most of the patients were successfully managed with the help of salpingectomy. We suggest that the possibility of ectopic pregnancies should not be ignored in the reproductive age group especially in patients presenting with severe abdominal pain because delayed diagnosis often halts timely intervention which in turn invite serious health consequences.

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