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COURSE AND OUTCOME OF ECTOPIC PREGNANCY IN A GOVERNMENT TEACHING HOSPITAL

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ABSTRACT

Introduction: Ectopic pregnancy is defined as the implantation of the fertilized ovum at a site other than normal uterine cavity. Incidence ranges from 1-2 % of live births. Clinical presentation is varied and depends on acute or chronic rupture or unruptured ectopic pregnancy. Hence coming to a diagnosis can be difficult at times even for an experienced gynecologist. **Objective:** The present study involves a retrospective analysis of all cases of ectopic pregnancy who were admitted in the Department of Obstetrics and Gynaecology, Government Doon Medical College, Dehradun during April 2016 to April 2018. This study is aimed to find the incidence of ectopic pregnancy in the study population and evaluate clinical presentation, risk factors, age group, parity and outcome of ectopic pregnancy. **Methods:** A total of 52 patients who were diagnosed as ectopic pregnancy were retrospectively analyzed between the study periods. A detailed analysis of age, parity, presenting symptoms, high risk factors, findings on surgery and morbidity associated with ectopic pregnancy was done. **Results:** 52 patients admitted with ectopic pregnancy during the study period. The incidence was 2.78 per 1000 live births. 4 patients were excluded from study due to incomplete data. Majority of patients belonged to age group 20-29 years (62.5%) and were multigravida (64.58%). Majority of patients (43.75%) did not have any risk factors. Pain in abdomen was present in 89.2% cases, amenorrhea in 75.7 % cases and bleeding per vaginum in 43.2 % cases. In majority of cases (56.75%) no specific site was discovered at laparotomy. 72.9% patients had rupture ectopic, 18.91% were unruptured and 8.10% had tubal abortion. Almost all patients had intra and post-operative blood transfusions. Unilateral salpingectomy was the most common procedure done at laparotomy. There was no maternal mortality in our study. **Conclusion:** Ectopic Pregnancy is the leading cause of maternal mortality in the first trimester. The early diagnosis of ectopic pregnancy is of utmost significance as early diagnosis can give the lady a chance for conservative management and have a beneficial effect on her reproductive career.

KEYWORDS: Ectopic pregnancy, Salpingectomy, Laparotomy.

INTRODUCTION

Ectopic pregnancy is an obstetric emergency with high morbidity and mortality. It is the most Important cause of maternal mortality in the first trimester.[1,2] The word 'ectopic' means "out of place". It is derived from the Greek word "extopos". Ectopic pregnancy is defined as the implantation of the gestational sac outside the endometrial cavity of the uterus, i.e.; fallopian tubes, ovary, cervix and peritoneum.[3]

The incidence of ectopic pregnancy is increasing globally. It ranges from 1 -2 % of live births in developed countries and it is further high, as much as 4%, in pregnancies conceived by assisted reproductive technology.[4] A multitude of factors may be responsible for increased incidence of ectopic pregnancy like prevalence of sexually transmitted diseases, late marriages consequently leading to increase in age of conception, tubal sterilization, use of IUCD (Intrauterine contraceptivedevice), tubal reconstructive surgeries, assisted reproductive techniques and history of tuberculosis.[5]

The diagnostic modalities used currently like use of transvaginal ultrasound, quantitative serum beta hcg measurements have led to early detection of ectopic pregnancies even before any clinical symptoms appear. This has further increased the incidence of ectopic but decreased the incidence of rupture ectopic. Thus nowadays more conservative treatments are employed.

The risk of death by ectopic pregnancy has declined by 90%.[6]

Clinical presentation is varied and is related to acute or chronic rupture or unruptured ectopic pregnancy. The patient can be absolutely asymptomatic or come in shock with acute abdomen, so coming to the diagnosis can be challenging at times and you have to be ectopic minded if you don't want to miss out.[7] The classical clinical triad of amenorrhea, bleeding per vaginum and lower abdominal pain is found in less than 50% cases.[8]

AIM

This retrospective study is aimed to find the incidence of ectopic pregnancy in the study population and evaluate clinical presentation, risk factors, treatment and morbidity and mortality associated with it.

MATERIAL AND METHODS

This was a retrospective study of ectopic pregnancies at Government Doon Medical college, Dehradun during April 2016 to April 2018. All patients with a history suggestive of ectopic pregnancy and in whom diagnosis was confirmed clinically as well by ultrasound and at laparotomy were included in the study. The case sheets were traced through septic labor room registers and operation theatre records. Information regarding the total number of deliveries in the study period, demographic characteristics, clinical symptoms and signs, risk factors, diagnostic tools used, treatment given as well as associated morbidity and mortality were obtained. All the surgeries were done by laparotomy under spinal/general anesthesia. The analysis of this retrospective study was done using simple descriptive analysis and presented as percentages in tables and graphs. Clearance was taken by the hospital ethical committee.

RESULTS

In this study a total of 52 patients were admitted with ectopic pregnancy in our hospital in the study period. 4 patients were excluded from the study due to incomplete data. They were used only to calculate incidence of ectopic. The total number of deliveries in the study period was 18674. The incidence of ectopic pregnancy in the present study was 2.78 per 1000 live births.

It was seen that majority of patients (62.5%) belonged to the age group 20-29 years (Table 1).

Table 1: Age wise distribution of patients.

Age Group (In Years)	Number Of Patients	Percentage (%)
<20	1	2.08
20-24	12	25.00
25-29	18	37.50
30-34	11	22.91
35- 40	6	12.50
Total	**48**	**100**

It was observed in the study that (2.08 %) patient was unmarried, 11(22.91 %) were nulliparous, 5 (2.40%) were primiparous and 31 (64.58 %) were multiparous.

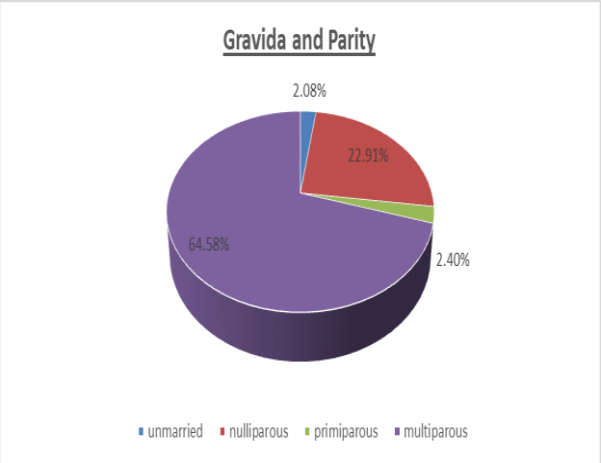

Figure 1: Gravida and Parity.

Table 2: Risk Factors for Ectopic Pregnancy.

Risk Factor	Number of cases	%
None	21	43.75
H/O LSCS	8	16.66
H/O Medical abortion	7	14.58
H/O Tubal ligation	2	4.16
Infertility	1	2.08

Table 3: Mode of presentation.

Presenting With Complaint Of	Number Of Cases	%
Pain abdomen	43	89.58
Amenorrhea	41	85.41
Bleeding per vaginum	26	54.16
Fainting	15	31.25
Abdominal distention	22	45.83
Nausea and vomiting	11	22.91
Shock	9	18.75

Patients presented with more than one complaint usually

Table 4: Distribution of patients according to management.

Medical management (15)	Expectant management - 9 lost in follow up -4
	Single dose Methotrexate – 6
Surgical management	37

As shown in Table 4, out of 52 patients diagnosed with ectopic pregnancy, 15 were treated with medical management and 37 patients underwent surgical treatment by laparotomy. Expectant management was given in 9 patients out of which 4 were lost in follow up records. Single dose methotrexate was given in 6 patients all of which had significant beta hcg decline in two weeks and resolution of adnexal complex in three months follow up. The criteria for putting patients in single dose methotrexate management was s. beta hcg

level <1500 iu/l and adnexal mass <=3.5 cm. the cut off for expectant management was serum beta hcg <1000 iu/l. Surgical management was offered to patients who were hemodynamically unstable with symptoms of an ongoing ruptured ectopic mass(such as pelvic pain), or signs of intraperitoneal bleeding.

Table 5: Condition of Tube.

Condition of tube	Number of cases	%
Acute Ruptured	15	40.54
Chronic ruptured	12	32.43
Unruptured	7	18.91
Tubal abortion	3	8.10
Total	37	100

Table 6: Site of Ectopic Pregnancy.

Site	Number of cases	%
Ampulla	6	16.21
Isthmus	4	10.81
Fimbriae	2	5.40
Unspecific site	21	56.75
Ovary	1	2.70
Adherent to bowel	3	8.10
Total	37	100

Table 7: Procedure done at Laparotomy.

Procedure	Number of cases	%
Unilateral Salpingectomy	27	72.97
Unilateral Salpingectomy + Contralateral Tubal Ligation	7	18.91
Unilateral Salpingo Oophorectomy	1	2.70
Unilateral Salpingo Oophorectomy With Contralateral Tubal Ligation	1	2.70
Unilateral Salpingectomy With Contralateral Ovarian Cystectomy	1	2.70

In the present study laparotomy was done in all cases presenting with features of acute abdomen, serum beta hcg > 10,000 miu/ml, adnexal mass >4 cm, and ultrasound showing ruptured ectopic.

Unilateral salpingectomy was the most common procedure done in 27(72.97 %) patients. Unilateral salpingectomy with contralateral tubal ligation was done in 7(18.91 %) patients. In one patient with ovarian ectopic pregnancy, unilateral salpingo oophorectomy was done conserving the other tube. In one patient the same procedure was done concomitant with contralateral tubal ligation as the patient was multiparous and did not wish for fertility. In one patient ectopic pregnancy was associated with contralateral ovarian cyst, so salpingectomy was done with contralateral ovarian cystectomy. Adhesions with bowel were present in three patients. All the patients had varying degrees of haemoperitoneum per operatively and were given blood transfusions pre and post operatively. There was no mortality. The post-operative period was uneventful in most patients except for one which had post-operative stich line infection due to anemia and poor nutrition. She was managed with blood transfusions and given protein rich diet. Daily dressing was done. She recovered fully and was discharged on 18thpost-operative day.

DISCUSSION

In the present study the incidence of ectopic pregnancy is 2.78 per 1000 live births. It is much lower than other studies as our hospital delivery rates are much higher than other hospitals.

Majority of the patients in our study belonged to the age group 20-29 years (62.5 %) which is comparable to other studies. Maximum incidence was seen in age group of 21-30 years (71.66%) in a study by Panchal et al.[15] Gaddagi etal[10] reported 70.2% cases in age group 21-30 years.

In the present study majority of patients were multiparous (64.58%) followed by (2.40%) were primiparous followed by (2.08%) nulliparous. (2.08%) patient was unmarried. This was similar to other studies in which multiparous women were found to have ectopic in 83.9 % cases in study by Shetty et al[9] and 62.2 % in study by Gaddagi et al.[10]

In our study the majority of patients (43.75 %) did not have any risk factor which is comparable to the study by Gaddagi et al [10]who found 37.83% had no risk factors. Also a study by Chate et al[11] showed 38.71% patients with no risk factors. Previous history of medical abortions and lower segment caesarean section was found in 31.24 % patients.

Pain abdomen (89.58%), bleeding per vaginum (54.16%) and amenorrhea(85.41 %) was seen in majority of patients. Nausea, vomiting was seen in 22.91 % patients, fainting episodes were seen in31.25 % patients. 18.75% patients presented in our study in a stage of shock. These findings are comparable to other studies. Gaddagi etal[10] observed that pain in abdomen was present in 89.2% of cases, amenorrhea was seen in 75.7% cases and bleeding per vaginum was found in 43.2 % cases. Similarly, Shetty S et al[9] and Porwal et al observed maximum cases with complaint of pain in abdomen.

In the present study, in majority of cases(56.75%) no specific site was discovered at laparotomy due to

extensive tubular damage and patients reporting at delayed stages when chronic rupture had made any delineation impossible. Next common sites were ampullary(16.21 %), isthmic(10.81 %), ovarian (2.70 %). In other studies, most common site was ampullary. Studies by Porwal et al showed40 % ampullary and 32.5% isthmic sites. Another study by Bouyer et al[14]showed ampullary (70%) and isthmic(12%), fimbrial 11% and ovarian 3.2%. Delay in arrival at hospital may be one of the reasons why patients had extensive tubular damage at the time of admission and laparotomy.

72.9% patients had rupture ectopic in our study. 18.91% were unruptured and 8.10% had tubal abortion. This was similar to study by Chate et al[11] who reported rupture incidence as 76.35%,with tubal abortion in 16.21% and unruptured in 7.53% cases.

Unilateral salpingectomy was the most common procedure done at laparotomy. In other studies, too, the commonest procedure was salpingectomy, 70.58% in study by Yadav et al, 75.26% in study by Chate et al[11], and 90.3% in study by Shetty et al.[9] RCOG(Royal College of Obstetricians and Gynaecologists) determined that salpingectomy was applied in 90 %- 95.8% of patients in different studies.[16]

There was no maternal mortality in our study as found similarly in other studies by Asuri et al[12], Priyadarshini et al[13] and Chate et al.[11]

This can be attributed to early diagnosis of patients on admission and prompt and proper management. Blood bank facilities in the hospital premises also lead to reduction in mortality and post-operative complications.

CONCLUSION

Since the incidence of ectopic pregnancy is rising nowadays, the best way to avoid any catastrophe is to make an early diagnosis and start interventions without any delay. Diagnostic modalities like transvaginal ultrasound and serum beta hcg measurements can lay the groundwork for early diagnosis of ectopic pregnancy even without any symptoms, so medical management can be started, thus preserving fertility of the women. In the end, it can be said that identification of potential risk factors and their prevention can further lead to decrease the incidence of ectopic pregnancy and contribute to reduction in maternal mortality worldwide.

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