

Spectrum of Ectopic Pregnancies in a Tertiary Care Hospital in Jammu

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ABSTRACT

Background: Ectopic pregnancy (EP) is a first-trimester pregnancy complication in which the embryo implants outside the uterus. The objective of the current study was to examine the clinical characteristics of ectopic pregnancies in a tertiary care facility.

Methods: The present study on ectopic pregnancies was carried out in department of obstetrics and gynaecology, GMC Kathua from June 2021 to May 2022. All patients admitted with diagnosis of ectopic pregnancy, either ruptured or unruptured were included in the study.

Results: Majority of patients accounting for 38.6% were belonging to the age group of (21-25) years followed by 26.3% falling in the age group of (26-30) years. Ampullary site of ectopic pregnancy was the commonest site of ectopic pregnancy accounting for 73.7% cases followed by (15.8%) patients with Isthmus site of ectopic pregnancy. Abdominal pain (84.2%), UPT positive (80.7%) amenorrhea (56.1%) were the commonest clinical features reflected by studied patients. Vaginal bleeding and shock features were respectively evident in 40.4% and 21.1% patients

Conclusion: For the diagnosis of ectopic pregnancy, a thorough clinical examination is completely sensitive. The best outcome of an ectopic pregnancy can be achieved if management is carried out as soon as possible.

Keywords: Ampulla, Ectopic, Emergency, Laparotomy, Pain in abdomen, Pregnancy

INTRODUCTION

An ectopic pregnancy happens when a fertilised egg implants and develops outside the uterus's main cavity. Ectopic pregnancy (EP) is a first-trimester pregnancy complication in which the embryo implants outside the uterus. According to a study conducted at a tertiary care facility in South India by Tahmina et al., the incidence of EP in pregnant women in India is 0.91 percent (without any maternal deaths).¹The most frequent risk factors reported are a history of abortions and pelvic inflammatory disease (PID).^{2,3} Because the triad of amenorrhea, abdominal pain, and vaginal bleeding is only present in 30 to 40 percent of cases of ectopic pregnancies, the diagnosis of EP requires a high index of clinical suspicion. If EP is not promptly identified and treated, it may result in significant morbidity and mortality. The EP spectrum includes asymptomatic cases as well as ruptured ones that go into shock. Increased morbidity and occasionally even mortality are consequences of delayed diagnosis.

Most ectopic pregnancies (93–97%) take place in the fallopian tube. Seventy-five percent of these are in the ampulla, 12% are in the fimbriae, and 13% are in the isthmus.⁴Nearly 2% of all ectopic pregnancies develop in other locations, such as the ovary, cervix, or intra-abdominal space.⁵ Methotrexate is a suitable substitute for surgery in the early management of an ectopic pregnancy.^{6,7} In cases where a

rupture has already taken place, surgical intervention is required. In these circumstances, a laparoscopy or laparotomy is performed, and either the affected fallopian tube is cut open with the pregnancy alone removed (salpingectomy), or the affected tube is removed along with the pregnancy (salpingectomy). The goal of the current study was to examine the clinical characteristics of ectopic pregnancies in a tertiary care facility.

MATERIAL AND METHODS

The present study was conducted at the department of obstetrics and gynaecology, GMC Kathua from June 2021 to May 2022. The study covered all ectopic pregnancies (ruptured, unruptured, and chronic) treated at our facility between January 2017 and December 2020. Through the labour room and operating room registers, the case sheets of patients with ectopic pregnancies were located. Various information was gathered using a data collection tool. The investigator used face-to-face interviews as a means of gathering data, as well as a thorough history taking and pertinent physical examination. The patient's history was carefully recorded (if the patient was in shock the history was taken retrospectively). After taking a history, a physical examination was conducted, paying particular attention to vital signs, the abdomen, the vagina, the cervical excitation test, and, as necessary, the culdocentesis. All patients underwent the fundamental examinations, which included haemoglobin, renal function testing, blood grouping and Rh typing, urine pregnancy testing, and ultrasound examinations. In cases of uncertain diagnosis, additional tests such as serum beta-hCG, doppler study, CT, and MRI were ordered. In patients with hemodynamic instability, culdocentesis and a urine pregnancy test were performed; in stable patients, USG was performed. Patients with hemodynamic instability who had a provisional diagnosis of a ruptured ectopic pregnancy underwent emergency laparotomies as a result. Under

spinal/general anaesthesia, laparotomies were used for all of the procedures. Following surgery, the pathology department provided HPE reports, and a final diagnosis was made. Analysis was done on data pertaining to the patient's profile, risk factors, sterilisation status, use of other forms of contraception, symptoms and signs present, physical examination, ultrasound findings, types of treatment, post-operative complications, number of transfusions, and length of hospital stay. Simple descriptive statistics were used to conduct a thorough analysis, which was then displayed as percentages in tables. Clinical information was recorded using a predetermined proforma.

Inclusion criteria

The study included all patients who were admitted with an ectopic pregnancy diagnosis, whether it had ruptured or not.

Exclusion criteria

Patients with intrauterine pregnancy diagnoses and all ectopic pregnancy cases treated medically were disqualified from the study. After receiving approval from the institutional ethics committee, the study was started.

Statistical Methods

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). Continuous variables were expressed as Mean±SD and categorical variables were summarized as frequencies and percentages. Graphically the data was presented by bar and pie diagrams

RESULTS

In this section the results of the study will be presented

Age (Years)	Number	Percentage
15-20	3	5.3
21-25	22	38.6
26-30	15	26.3
31-35	10	17.5
> 35	7	12.3
Total	57	100
Mean±SD (Range)=27.6±4.72 (17-42)		

We observe that the average age of studied patients was (27.6±4.72) years, ranging from 17 to 42 years. Majority of patients accounting for 38.6% were belonging to the age group of (21-25) years followed by 26.3% falling in the age group of (26-30) years.

Table 2: Showing parity of study patients

Parity	Number	Percentage
Nulliparous	23	40.4
Para 1	15	26.3
Para 2	9	15.8
Para 3	7	12.3
Para 4	3	5.3
Total	57	100

We observe that majority of patients accounting for 40.4% were nulliparous followed by 26.3% patients with Para 1. Around 15.8% patients had para 2 status, (12.3%) had para 3 status and only 5.3% patients had para 4 status.

Table 3: Risk factors of ectopic pregnancy

Risk Factor	Number	Percentage
Unknown	24	42.1
History of MTP	9	15.8
History of PID	6	10.5
Previous history of ectopic pregnancy	5	8.8
History of caesarean section	6	10.5
Infertility treatment	7	12.3
Total	57	100

We observe that around 42.1% patients had unknown risk factor ectopic pregnancy followed by 15.8% patients having MTP history. Infertility treatment, history of C-section and previous ectopic pregnancy risk factors were evident in (12.3%), (10.5%) and (8.8%)

Table 4: Distribution of study patients as per site of ectopic pregnancy

Site of ectopic pregnancy	Number	Percentage
Ampullary	42	73.7
Isthmus	9	15.8
Fimbrial	4	7.0
Cornoul	1	1.8
Ovary	1	1.8
Total	57	100

We observe that ampullary site of ectopic pregnancy was the commonest site of ectopic pregnancy accounting for 73.7% cases followed by (15.8%) patients with Isthmus site of ectopic pregnancy.

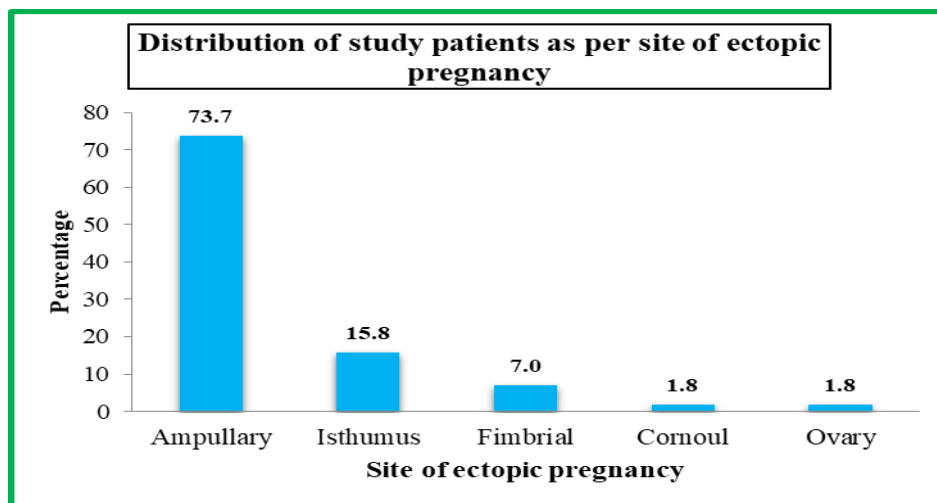


Table 5: Clinical features at presentation among study patients

Symptoms	Number	Percentage
Abdominal pain	48	84.2
Amenorrhea	32	56.1
Vaginal bleeding	23	40.4
Shock	12	21.1
UPT positive	46	80.7

Abdominal pain (84.2%), UPT positive (80.7%) amenorrhea (56.1%) were the commonest clinical features reflected by

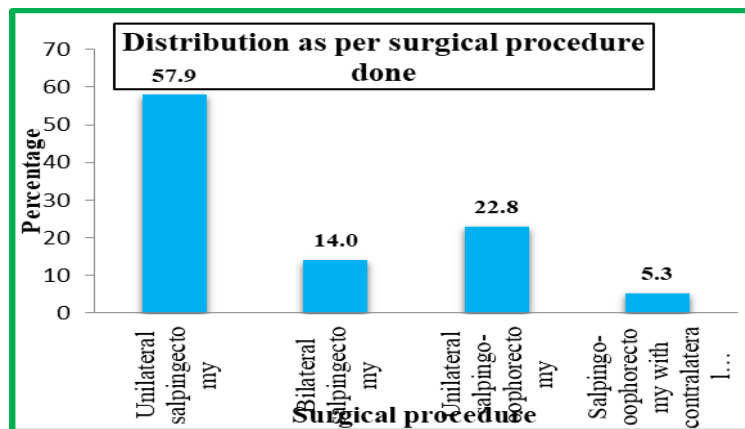
studied patients. Vaginal bleeding and shock features were respectively evident in 40.4% and 21.1% patients

Table 6: Side involvement of fallopian tube in study patients

Side of fallopian side	Number	Percentage
Right	34	59.6
Left	23	40.4
Total	57	100

We assessed the side involvement of fallopian tube among study subjects and found that around 59.6% had right

involvement and 40.45 had left side involvement of fallopian tube.



Surgical procedure	Number	Percentage
Unilateral salpingectomy	33	57.9
Bilateral salpingectomy	8	14.0
Unilateral salpingo-oophorectomy	13	22.8
Salpingo-oophorectomy with contralateral tubectomy	3	5.3
Total	57	100

Around 57.9% patients received unilateral salpingectomy, (22.8%) had unilateral salpingo-oophorectomy, 14% had bilateral salpingectomy and (5.3%) patients received salpingo-oophorectomy with contralateral tubectomy as surgical treatment

DISCUSSION

Ectopic pregnancy (EP) is a complication of first trimester of pregnancy in which embryo implants outside the uterine cavity. In the present study we observed that the average age of studied patients was (27.6±4.72) years, ranging from 17 to 42 years. Majority of patients accounting for 38.6% were belonging to the age group of (21-25) years followed by 26.3% falling in the age group of (26-30) years. Contemporary, to the literature similar age distribution of likewise patients has been reported. For instance, Meena et al in their study reported that the incidence of ectopic pregnancy was higher (63.46%) in the age group of 21-25 years of age.⁸ They likewise to our study reported that the youngest patient was 18 years and the oldest age limit was 45 years.⁸ Our results are also consistent with the study of Rakhi et al who

reported that the commonest age group affected with ectopic pregnancies was 20 to 25 years (68.57%).⁹ However, contrary to our study, Kumar A et al. and Poonam et al., reported the peak age incidence between 26 and 30 years old.^{10,11} In the present study, we observed that majority of patients accounting for (40.4%) were nulliparous followed by 26.3% patients with Para 1. Around 15.8% patients had para 2 status, (12.3%) had para 3 status and only 5.3% patients had para 4 status. In the present study, we observed that around 42.1% patients had unknown risk factor ectopic pregnancy followed by 15.8% patients having MTP history. Infertility treatment, history of C-section and previous ectopic pregnancy risk factors were evident in (12.3%), (10.5%) and (8.8%). Numerous scholars like Meena et al, Barhart et al, Yadav et al, Asuri et al, Priyadarshini et al and Saha et al.¹⁸⁻²¹ have reported the similar distribution of associated risk factors for ectopic pregnancies much.^{8, 12-16} For instance; Meena et al reported that previous medical abortions and previous lower segment caesarean section were present in 17.30% and 11.53% patients respectively,

which is quite comparable with our study.⁸ Similar to the studies of Asuri SS et al., we discovered that 12.3% of patients had a history of infertility treatment.¹³ Around 8.8% of the patients in our study had previously experienced an ectopic pregnancy, which is comparable to the findings of Meena et al and Priyadarshini et al.^{8,15} We evaluated the clinical symptoms among studied subjects and found that abdominal pain (84.2%), UPT positive (80.7%) amenorrhea (56.1%) were the commonest clinical features reflected by patients. Vaginal bleeding and shock features were respectively evident in 40.4% and 21.1% patients. The incidence of abdominal pain among such patients has been reported varying in the literature. According to numerous studies, symptom like abdominal pain is experienced in between 70.97% and 97.3 % of patients.¹⁷ In a likewise study by Meena et al, authors reported that 81% of the patients had pain in the abdomen, 54% had amenorrhea, 42% had vaginal bleeding which is in consonance with our study.⁸ In the study by Shaikh BN et al, around (38%) of the women experienced shock, and (77%) had a typical history of amenorrhea and abdominal pain.¹⁸ Abdominal pain (70.97%) and amenorrhea (51.61%), as well as irregular vaginal bleeding (25.81%), were all noted in the study by Hassan N et al.¹⁹ Among the studied subjects, we observed that ampullary region of the fallopian tube was the most frequent location of ectopic pregnancy accounting for 73.7% cases followed by (15.8%) patients with isthmus site of ectopic pregnancy. Ectopic pregnancy rates were found to be highest in multiparous women. It is very challenging to elicit a history of pelvic inflammatory disease because the majority of patients have a subclinical infection and do not seek treatment at a hospital. In our subjects, lower abdominal pain was the most typical clinical manifestation. We assessed the side involvement of fallopian tube among study subjects and found that around 59.6% had right involvement and 40.45 had left side

involvement of fallopian tube. Around 57.9% patients received unilateral salpingectomy, (22.8%) had unilateral salpingo-oophorectomy, 14% had bilateral salpingectomy and (5.3%) patients received salpingo-oophorectomy with contralateral tubectomy as surgical treatment. In the Verma et al. study, 93 percent of patients underwent salpingectomy, and 64.8% of patients had ruptured ectopic.¹⁷ Only certain patients with either an absent or abnormal contralateral tube underwent salpingostomy. Numerous studies have revealed comparable pregnancy rates following salpingectomy and salpingostomy if the contralateral tube is healthy.^{20,21} Similar to other studies, there was no maternal mortality attributable to ectopic pregnancy in the current study.^{15,18,22} Although we had no mortality and all patients were successfully managed despite the fact that 15% of referred patients arrived in hemorrhagic shock, however, it definitely added to the logistical burden in terms of the need for ventilator support and blood transfusions.

CONCLUSION

Regardless of the tubal ligation status, ectopic pregnancy should be suspected in any woman of reproductive age who presents with the triad of abdominal pain, amenorrhea, pelvic inflammation, history of induced abortion, and vaginal bleeding. For the diagnosis of ectopic pregnancy, a thorough clinical examination is completely sensitive. The best outcome of an ectopic pregnancy can be achieved if management is carried out as soon as possible. Patients arriving late to the hospital resulted in more surgeries being performed which in turn elevates the risk of mortality and associated morbidity.

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