

Original Articles

A prospective study on ectopic pregnancy: a one year study

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ABSTRACT:

Background: Diagnosis of ectopic pregnancy was frequently missed, Aim of the study was to determine the incidence, clinical presentation, and treatment associated with ectopic pregnancy.

Methods: This is a prospective study which was carried out at Obstetrics & Gynaecology department, GMERS SOLA civil hospital from August 2017 to October 2018. 50 patients diagnosed with ectopic pregnancy were enrolled in the study and information was collected and analysed.

Results: 80% patients were between the age group of 21-30 years. 56% patients were nulliparous. Amenorrhea (92%) with lower abdominal pain (94%) is the most common presenting symptom. 26% of patients show typical triad of amenorrhea, abdominal pain and bleeding per vagina. UPT and USG were most commonly performed investigations. 96% cases showed UPT positive. 100% USG showed adnexal pathology. Serum beta-hCG was done in 37 patients as an aid for diagnosis and to decide the line of management. Conservative medical management with Injection MTX was done in 4 patients of which 1 patient required laparotomy later on. Surgical management was done in 90% of patients. Laparoscopic management was done in 54% of cases.

Conclusions: Early diagnosis, and timely intervention in the form of conservative or surgical treatment will help in reducing the morbidity and mortality associated with ectopic pregnancy.

INTRODUCTION

Ectopic pregnancy is a life-threatening disease in which prevalence has increased and mortality has declined. This may be due to technological advances that allow the diagnosis of pregnancy before menses are missed, combined with awareness and increased availability of ultrasound for early diagnosis.

The term "Ectopic Gestation" is applied to pregnancy where a fertilized ovum becomes implanted at a site other than the endometrial lining of the normal uterine cavity¹.

Ectopic gestation is an unmitigated disaster of human reproduction. Ectopic pregnancy is the leading cause of maternal morbidity in the first trimester and is a major cause of reduced child-bearing potential. The incidence of ectopic pregnancy is approximately 1.5-2% worldwide². Rates for recurrent ectopic pregnancy varied between 4.2% and 5%².

Some associated risk factors are considered to be partially responsible for the rise in incidence of ectopic

pregnancy to its epidemic proportions in the western world. Increased use of intrauterine devices for contraception and use of assisted reproductive technologies (ART) are responsible factors for the ectopic pregnancy³⁻⁷. Incidence after conceiving by use of ART is 2-2.5%³.

Till today ectopic pregnancy has always challenged the ingenuity of the obstetrician and gynecologist by its bizarre clinical picture. If it is not attended in time, it may lead to maternal morbidity and mortality. It is one, which can mimic practically each and every gynecological disorder as well as many surgical catastrophes.

Due to advance in modern technology like diagnostic laparoscopy, radioimmunoassay of HCG and ultrasonography diagnosis has become less difficult. Yet each method has its own limitation. An accurate history and physical examination and its correlation to the modern diagnostic technology are believed to be the most important in the diagnosis.

Modern anesthesia, blood transfusion facilities, transport facilities, immediate resuscitation as well as adequate and

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proper surgery are the keystone of success in reducing the maternal morbidity and further successful obstetric career.

High resolution ultra sonography and serum β -hCG level are useful for early detection of ectopic pregnancy in un ruptured state. Early diagnosis allows options for treatment by minimally invasive surgery or medical treatment under care of skilled personnel.

In the last decade, management options have shifted towards conservative surgical and non-surgical treatment of un ruptured ectopic pregnancy. Consequently, there has been improvement in fertility rate after a previous ectopic pregnancy.

Maternal morbidity and mortality has been greatly reduced because of early diagnosis and recent advances in surgical techniques, anaesthesia, availability of blood and broad spectrum antibiotics.

Rapidly changing diagnostic and therapeutic approaches makes ectopic pregnancy an exciting and dynamic field for study.

AIMS AND OBJECTIVES

The subject of Ectopic Pregnancy management is selected with following Aims & Objectives :

- To study demographic characteristics of patients.
- To study different modes of clinical presentation of patient with ectopic pregnancy.
- To study role of different diagnostic modalities.
- To study different sites of ectopic pregnancy.
- To study different modalities of management and its success rate.

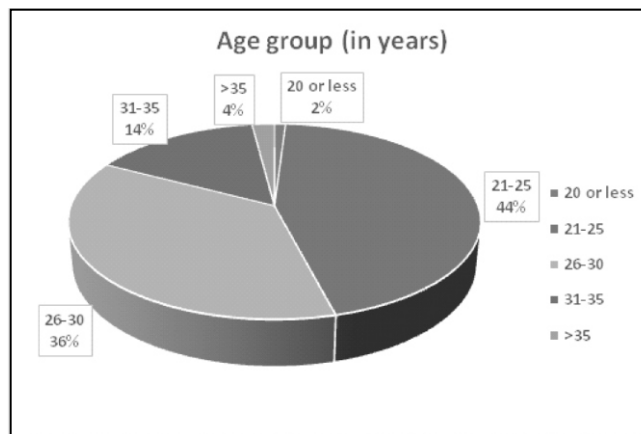
MATERIAL AND METHODS

This is a prospective study which was carried out at Obstetrics & Gynaecology department, GMERS SOLA civil hospital from August 2017 to October 2018. 50 patients diagnosed with ectopic pregnancy were enrolled in the study and information was collected and analysed.

OBSERVATIONS AND DISCUSSION

Table-1 : Age Distribution Of Patients

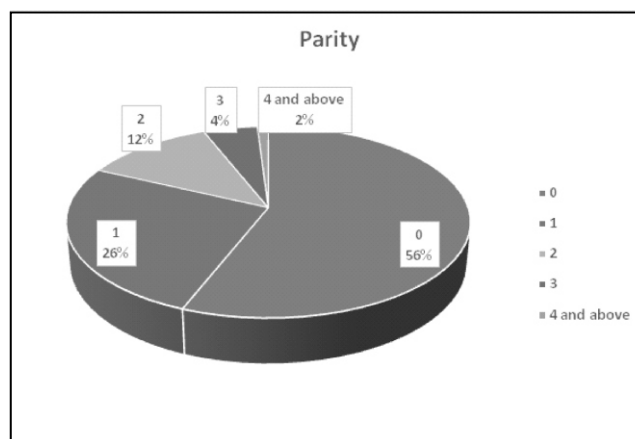
Age group (years)	No. of patients (%)	samiya et al ³⁸ (%)
Less than 20	1(2%)	-
21-25	22(44%)	20.1%
26-30	18(36%)	55.2%
31-35	7(14%)	16.6%
>35	2(4%)	7.8%



- In present study, 80% patients were between the age group of 21-30 years.
- The higher incidence in this age group was due to maximum fertility during 21-30 years of reproductive age.

Table-2 : Parity Distribution of Ectopic Pregnancy

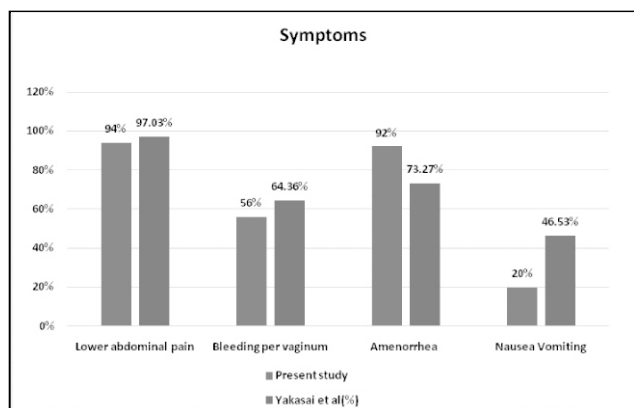
Age group (years)	No. of patients (%)	kemal et al ³⁸ (%)
Nullipara	28(56%)	38.1%
1	13(26%)	21%
2	6(12%)	19.7%
3	2(4%)	13.1%
4+	1(2%)	6%



- As per study, 56% patients were nulligravida and 26% were primipara.
- This suggests that incidence of ectopic pregnancy decrease with increase in parity which is comparable to kemal et al.

Table-3 : Symptoms

Symptoms	Present study Number of patients (%)	Yakasai et al ⁴¹ (%)
Lower abdominal pain	47(94%)	97.03%
Bleeding per vaginum	28(56%)	64.36%
Amenorrhea	46(92%)	73.27%
Nausea and vomiting	10(20%)	46.53%



- Patients presented with more than one symptom.
- Lower abdominal pain is the most common presenting symptom in 94% of cases.
- 92% of patients had amenorrhea while in 56% of patients had history of bleeding or spotting per vaginum with abdominal pain 2-3 days before diagnosis which were considered as normal menses by patients but pregnancy tests were positive in those cases.
- 26% of patients presented with classical triad of abdominal pain, amenorrhea and bleeding per vaginum.

Table-4 : Clinical Signs

Signs	No. of patients (%)	Yakasai et al ⁴¹ (%)
Syncope/collapse	6(12%)	11.88%
Pallor	22(44%)	-
Tachycardia	13(26%)	-
Abdominal tenderness	36(72%)	73.27%
Forniceal tenderness	33(66%)	93.07%
Mass in fornix	23(46%)	-

- More than one sign was present in each patient.
- History of syncope or collapse found in 12% of cases, which indicate massive blood loss with intraperitoneal collection.

- Abdominal and forniceal tenderness were present in 72% and 66% of cases respectively. This is due to peritoneal inflammation or irritation.
- The severity of the symptoms and signs depends on the stage of condition, but in unruptured ectopic gestation, symptoms are less predictive than in ruptured ectopic pregnancy.

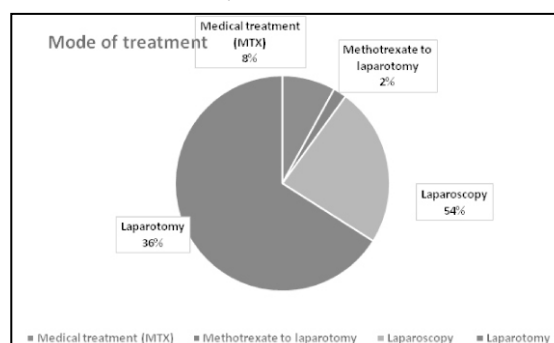
Table-5 : Investigation

Investigations	Done (No. of patients)	Positive (no of pts)	Accuracy (%)	Lozeau et al ⁴² (%)
UPT	48	46	95.83%	-
USG	100	100	100%	100%
S. beta hCG	37	37	100%	71%

- Urine pregnancy was done 48 patients, it was positive in 46 patients.
- USG was conclusive in 100% of cases but sometimes it cannot differentiate between early ruptured or unruptured ectopic pregnancy accurately.
- RCOG guidelines 2016 suggest that transvaginal ultrasound has reported sensitivities of 87.0–99.0% and specificities of 94.0–99.9% for the diagnosis of ectopic pregnancy³³.

Table-6 : Mode Of Treatment

Treatment	No. of patients (%)	Camini et al ⁴² (%)
Medical treatment with MTX	4(8%)	21%
Methotrexate to laparotomy	1(2%)	-
Laparoscopy	27(54%)	26%
Laparotomy	18(36%)	54%

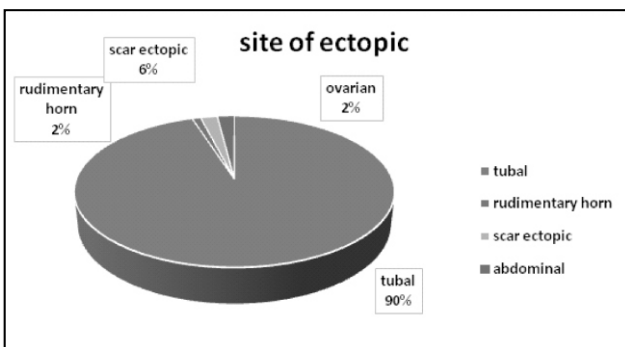


- 8% of clinically stable patients having unruptured ectopic pregnancy and mass of ectopic gestation <3.5 cm were treated with medical management with multidose methotrexate therapy and serial beta-hCG monitoring.

- 2% patients was initially managed by MTX but later on laparotomy performed due to rupture of ectopic mass after single dose of inj. Methotrexate.
- Emergency laparotomy was done in 36% of patients who were referred to our institute from private hospitals or peripheral centres or came as emergency patients and presented with ruptured ectopic pregnancy and were haemodynamically unstable.
- Laparoscopic salpingectomy was done in 54% of patients.

Table-7 : Site Of Ectopic Pregnancy

Site	No. of patients (%)	Yakasai et al ⁴¹ (%)
Tubal	45(90%)	89.11%
Rudimentary horn	1(2%)	1.98%
Scar ectopic	3(6%)	-
Ovarian	1(2%)	-



- The fallopian tube is by far most common site of ectopic implantation, accounting for 90% of all ectopic pregnancy in present study. It is comparable to Yakasai et al.
- One case of rudimentary horn (non-communicating) pregnancy was found during laparotomy which was managed by excision of horn with ectopic mass.
- Three patients presented with scar ectopic pregnancy. two was managed surgically and the other by methotrexate. one cases of ovarian pregnancy were managed surgically.

Table-8 : Success Rate of Treatment

Mode of treatment	Success rate (%)	Hoover et al ⁴⁵ (%)
Methotrexate	80%	94.7%
Laparoscopy	100%	91.4%
Laparotomy	100%	100%

- Success rate of medical treatment was 80% as 1 patients out of 4 required laparotomy.
- Laparoscopy and laparotomy were performed on 54% and 36% cases successfully respectively, which is comparable to hoover et al study.

CONCLUSION

Ectopic pregnancy still remains potentially the most critical obstetrical emergency. Early diagnosis and management is now possible due to advanced diagnostic techniques like serum beta-hCG, high resolution ultrasonography & laparoscopy. Serum beta hCG values and high resolution transvaginal ultrasonography play an important role for diagnosis and management of ectopic pregnancy. Due to increased availability and reliability of serum beta hCG values with increased availability of expertise in TVS has made it possible to shift towards medical management in patients with unruptured ectopic pregnancy. TVS has sensitivity of 87-99% for the diagnosis of ectopic pregnancy.

Women should be encouraged regarding early reporting of missed periods and made aware of complications of ectopic pregnancy and necessity of seeking urgent medical help as early as possible so that early diagnosis and prompt conservative surgical or medical management of ectopic pregnancy can be done. This will not only help in reducing maternal mortality and morbidity rates but also go a long way in preservation of future fertility.

Early diagnosis, better health care facilities, good operative techniques and availability of blood and blood products help in reducing morbidity & mortality associated with ectopic pregnancy.

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