

DOI: <http://dx.doi.org/10.18203/2320-1770.ijrcog20164334>

Original Research Article

A retrospective study of 100 cases of ectopic pregnancy: clinical presentation, site of ectopic and diagnosis evaluation

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Received: 23 September 2016

Accepted: 20 October 2016

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ABSTRACT

Background: Over the last few decades, the incidence of ectopic pregnancy has increased almost to the extent of an epidemic disease. Ectopic pregnancy is one of the commonest acute abdominal emergencies. Ectopic pregnancy remains the leading cause of maternal deaths in early pregnancy. The aim of the study was the clinical presentations, ultra sound features and diagnostic difficulties of all cases of ectopic pregnancy.

Methods: This is a retrospective study conducted at Government Medical College and Hospital, Rajkot from January 2013 to June 2016, in the three and half year study period, there were a total of 100 ectopic pregnancies.

Results: Most common symptom in our study was lower abdominal pain, in 90% cases. Amenorrhea was present in 100 cases, whereas vaginal bleeding in 48 cases. Nausea, vomiting observed in 26% of patients, cervical tenderness in 48%, and adnexal tenderness in 40% while shock was observed in 10% of patients.

Conclusions: Ampullary part of the fallopian tube is the most common site of ectopic pregnancy observed during our study. Complex adnexal mass was the most common finding on ultrasound. Surgical management by laparotomy and salpingectomy continues to be the preferred mode of management of ectopic pregnancy in our institution.

Keywords: Complex adnexal mass, Ectopic pregnancy, Laparotomy

INTRODUCTION

An ectopic pregnancy is one in which the fertilized ovum becomes implanted in a site other than the normal uterine cavity.¹ Over the last few decades, the incidence of ectopic pregnancy has increased almost to the extent of an epidemic disease. Ectopic pregnancy is one of the commonest acute abdominal emergencies.^{2,3} Ectopic pregnancy remains the leading cause of maternal deaths in early pregnancy.⁴ There is an overall increase in incidence of ectopic tubal pregnancy (ETP) and this is probably due to increased awareness, advanced diagnostic tools like transvaginal ultrasonography and estimation of beta subunit of human chorionic gonadotrophin (β -hCG) in serum.⁵ Several risk factors for ectopic pregnancy have been identified including pelvic inflammatory disease, smoking, and, previous ectopic pregnancy.^{4,5}

Aims and objectives

Clinical manifestations may be diverse and diagnosis of this condition is often mistaken and delayed leading to increased morbidity and even mortality in these patients. This study was undertaken to study the clinical presentations, ultra sound features and diagnostic difficulties of all cases of ectopic pregnancy that presented to our centre over a period of three and half years.

METHODS

This is a retrospective study conducted at Government Medical College and Hospital, Rajkot from January 2013 to June 2016. All women who presented to our hospital with ectopic pregnancy were analysed from the available hospital documents (bedside records, history, and

operation theatre records). The data collected was in respect to the following:

1. Age
2. Parity
3. Chief complaints
4. Period of amenorrhea
5. Any risk factors for ectopic pregnancy
6. Evidence of hypovolemia
7. Ultrasonographic Features
8. Operative findings

The data was analysed with simple descriptive statistics and presented in presented as percentages in charts and tables.

RESULTS

In the three and half year study period, there were a total of 100 ectopic pregnancies.

Table 1: Distribution of age.

Age (years)	N=100
<20	12
21-25	42
26-30	30
31-35	12
>36	04

Age ranged from 18 to 40 years. Mean age was 26.38 years. Around 84% of cases from 21-35 years.

Table 2: Parity distribution in present study.

Parity	N=100
Nulliparous	26
Primi	26
Second	28
Third	12
Fourth	02
Fifth	02

Parity ranged from nulliparous to 6th parity. 26% cases were nulliparous, 26% with parity 1, 28 cases with parity 2 and 12 cases with parity 3. Mean parity was 1.5.

Most common symptom in our study was lower abdominal pain, in 90% cases. Amenorrhea was present in 100 cases, whereas vaginal bleeding in 48 cases.

Table 5: Relation of amenorrhea to different sites of tubal ectopic pregnancies in present study.

Days of Amenorrhea	Total cases	Ampullary	Isthmic	Cornual	Fimbrial	Rudimentary horn	Abdominal pregnancy
29-42 days	19	08	06	01	04	00	00
43-56 days	56	40	02	04	10	00	00
57-70 days	25	08	06	04	04	02	01
Total cases	100	56	14	09	18	02	01

Nausea, vomiting observed in 26% of patients, cervical tenderness in 48%, and adnexal tenderness in 40% while shock was observed in 10% of patients.

Table 3: Clinical features at presentation.

Clinical features	N=100
Abdominal pain	90
Nausea, vomiting	26
Vaginal bleeding	48
Cervical tenderness	48
Adnexal tenderness	40
Guarding, rigidity	12
Giddiness	10
Shock	10

Classic triad of pain, bleeding and amenorrhoea was seen in only 42 cases.

Table 4: Sites of ectopic pregnancy in patients who underwent surgery.

Site of ectopic pregnancy	N=100
Ampulla	56
Fimbrial	18
Isthmic	14
Cornual	09
Rudimentary horn	02
Abdominal	01

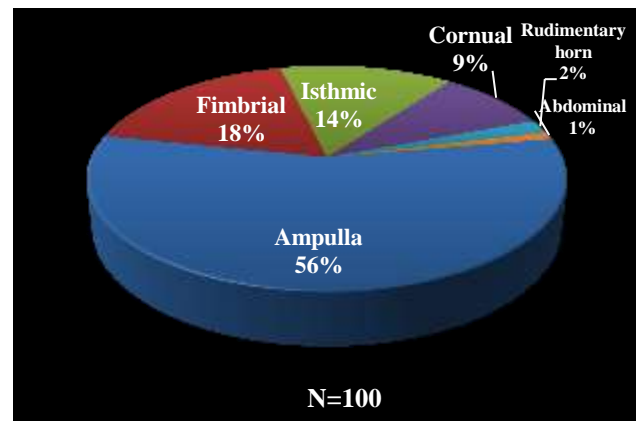


Figure 1: Sites of ectopic pregnancy.

Ampullary part of the fallopian tube is the most common site of ectopic pregnancy observed during our study, followed by fimbrial, isthmic and cornual pregnancy.

Table 6: Ultrasound features of ectopic pregnancy.

Ultrasound features	N=100
Complex adnexal mass	82
Significant free fluid	54
Hyperechogenic tubal ring	20

Complex adnexal mass was the most common finding, seen in 82 cases. Power Doppler showed increased vascularity in 27 cases on sonogram. 54 cases did have significant free fluid. Live fetal pole seen in 10 cases.

DISCUSSION

Ectopic pregnancy is an increasingly common and potentially catastrophic condition. Misdiagnosis of ectopic pregnancy is quite common. Delayed diagnosis may endanger the life of the patient but also decreases later the likelihood of a future successful pregnancy.⁶

There are a very few other disorders in obstetrics that has so many different presentations. The presentation of the patient may vary, some with minimal symptoms to a patient in a state of shock with massive haemoperitoneum. Some may present as a case of mass abdomen as in chronic ectopic. Vasomotor symptoms causing vertigo and syncope may be the presenting complaint.

Ectopic pregnancy is a nightmare to the patient and also to the treating obstetrician. In the present study the majority of the patients belonged to the age group 21-25 years. This is similar to the study by Rakhi et al and Poonam et al, in which the peak age incidence was 20-25 years.⁷ This is in contrast to the study by Arup Kumar et al in which the most common age group affected were 26-30 years (68.57%).⁸

Various studies have showed the symptom of abdominal pain was seen in 70.97% to 97.3% of the patients. In the study by Hassan N et al, abdominal pain was seen in (44) 70.97%, amenorrhea (32) 51.61% and irregular vaginal bleeding (16) 25.81%.⁹ In the study by Shaikh BN et al, typical history of amenorrhea and abdominal pain was found in 46 (77%) women, 23 (38%) were in a state of shock.¹⁰

Majority, 80.6% (75/93) presented with abdominal pain and 35.8% (33/93) presented with vaginal bleeding in study by AO Igwegbe et al.¹¹ In study by Perveen F et al, common presenting symptoms were amenorrhea and abdominal pain, both found in 27 (81.8%) patients and vaginal bleeding was present in 9 (27.3%) cases.¹² In contrast the study by Mishra S et al. most of the cases presented with lower abdominal pain (93.54%) followed by amenorrhea (79.03%).¹³ In the study by Shivakumar HC et al, of the symptoms 95% had pain abdomen, 80% had amenorrhea, 70% had bleeding per vaginum, 30% had vomiting and 5% had urinary complaints.¹⁴ In study

by Shah N et al, among the clinical features, the most common presenting symptom was abdominal pain in 37 (97.3%) patients whereas history of amenorrhea and vaginal bleeding were found in 28 (73.6%) and 22 (57.8%) patients respectively.¹⁵

In comparison to all these studies the present study had 90% of the patients had pain abdomen, 48% had vaginal bleeding, 48% had cervical tenderness and 26% had nausea and vomiting. Fainting and syncopal attack were present in 10% of the patients. Most of the cases presented with ruptured ectopic pregnancy making the scenario clear that still in India most of the patients present late, may be due to failure of making early diagnosis at various level of healthcare delivery system. As a result in our study majority of the women (66.67%) had a laparotomy because of unstable condition and hemoperitoneum. Laparotomy with salpingectomy was the most common modality of treatment in most of the other studies.

In a 10 year population based study of 1800 cases of ectopic pregnancy, Bouyer et al., suggested sites of ectopic pregnancy as ampullary (70%), isthmic (12%), fimbrial (11%), interstitial (2.4%), ovarian (3.2%) and abdominal (1.3%).³ The results of our study are comparable. However there were no cervical or ovarian pregnancies in our series. Our study also had 2 cases of rudimentary horn pregnancy. In our study, tubal rupture occurred in 56% of patients. Rate of tubal rupture varies greatly between various studies from 16%, 36%, 83.1%.¹⁶⁻¹⁸

Most of our patients belong to low socio economic status, thin built with pre-existing anemia, living in remote areas and being referred from, nearby government hospitals with established diagnosis of ectopic pregnancy. Around half of the patients were hemodynamically unstable at presentation. In our series laparotomy was the preferred mode of surgery in the presence of hemodynamic instability and previous surgery.

The decision to perform conservative versus radical tubal surgery is on the basis of patients' history, desire for future fertility and surgical findings.

Since most of our patients were referred with established signs of ruptured tubal pregnancy, and hemodynamic compromise, they needed emergency laparotomy and salpingectomy as life saving measures. High index of suspicion and awareness among clinicians, early use of routine transvaginal ultrasound to locate pregnancy and measuring hCG levels in any women in reproductive age who present with abdominal pain and vaginal bleeding, irrespective of amenorrhea is vital in diagnosing ectopic pregnancy at an early stage. This allows medical management and conservative tubal surgery with better reproductive potential.

Strength of this study is that all the data were collected by the principle investigator. Clinical data and surgical notes were complete in all cases. Surgical specimens of all cases were confirmed by histopathological study. Limitations of this study are that secondary data was collected retrospectively. Random sampling could not be adopted due to lack of proper follow up. Future prospective studies comparing different surgical techniques and fertility outcome and studies to analyze cases of sterilization failure are beneficial).

CONCLUSION

Incidence of ectopic pregnancy has increased over past few years. Around 84% of cases from 21-35 years. Most common symptom in our study was lower abdominal pain, in 90% cases. Amenorrhea was present in 100 cases, whereas vaginal bleeding in 48 cases. Ampullary part of the fallopian tube is the most common site of ectopic pregnancy observed during our study. Complex adnexal mass was the most common finding on ultrasound. Surgical management by laparotomy and salpingectomy continues to be the preferred mode of management of ectopic pregnancy in our institution.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Kumar P, Malhotra N. Ectopic pregnancy. *Jefcoat's principles of Gynecology.* 2008;142-59.
2. Challoner K, Incerpi M. Non traumatic abdomino surgical emergencies in the pregnant patients. *Emerg Med Clin North Am.* 2003;21(4):971-85.
3. Maymon R, Shulman A, Maymon BB, Bar-Levy F, Lotan M, Bahary C. Ectopic pregnancy, the new gynaecological epidemic disease: review of the modern work up and the non surgical treatment option. *Int J fertile.* 1992;37(3):146-64.
4. Department of Health. Why mothers die: a confidential enquiry into the maternal deaths in the United Kingdom. In Drife J, Lewis G (eds): Norwich, UK: HMSO. 2001;282.
5. Chatterjee S, Dey S, Chowdhury RG. Ectopic pregnancy in previously infertile women-subsequent perregnancy outcome after laparoscopic management. *Al A meen J Med Sci.* 2009;2(1):67-72.
6. Jones EE. Ectopic pregnancy: Common and some uncommon misdiagnosis. *Obstet Gynecol Clin North Am.* 1991;18:55-72.
7. Poonam Y, Uprety D, Banerjee B. Ectopic pregnancy-two years review from BPKIHS, Nepal. *Kathmandu University Med J.* 2005;3:365-9.
8. Rakhi, Mital PL, Nupur H, Agarwal A, Makkar P, Fatima A. Ectopic pregnancy: a devastating catastrophe. *Sch J App Med Sci.* 2014;2(3A):903-7.
9. Hassan N, Zaheen Z, Jatoi N. Risk factors, clinical presentation and management of 62 cases of ectopic pregnancy at tertiary care centre. *JLUMHS.* 2009;8(3):238-41.
10. Shaikh NB, Shaikh S, Shaikh F. A clinical study of ectopic pregnancy. *J Ayub Med Coll Abbottabad.* 2014;26(2):178-81.
11. Igwegbe AO, Eleje GU, Okpala BC. An appraisal of the management of ectopic pregnancy in a Nigerian tertiary hospital. *Ann Med Health Sci Res.* 2013;3(2):166-70.
12. Perveen F, Tayyab S. Ruptured ectopic pregnancy: clinical presentation & management. *J Surg Pak.* 2007;12(2):47-51.
13. Mishra S, Chaudhary V, Kaul Rajesh. Analysis of 62 cases of ectopic pregnancies in a rural medical college set up at Nalgonda Telangana, India. *Int J Sci Study.* 2015;3(6):103-6.
14. Shivakumar HC, Umashankar KM, Ramaraju HE. Analysis of forty cases of ectopic pregnancies in tertiary care hospital in South India. *Indian J Basic Appl Med Res.* 2013;3(1):235-41.
15. Shah N, Khan NH. Ectopic pregnancy: presentation and risk factors. *J Coll Physicians Surg Pak.* 2005;15(9):535-8.
16. Langer R, Bukovsky, Herman A. Conservative surgery for tubal pregnancy. *Fertil Steril.* 1982;38:427.
17. Deanna D, Caminiti MD, Kathleen L. Smith. An institutional review of the management of Ectopic pregnancy. *J Gynecol Surg.* 2006;22(2):47-56.
18. Lawani OL, Anozie OB, Ezeonu PO. Ectopic pregnancy: a life threatening gynecological emergency. *Int J Women's Health.* 2013;19(5):515-21.

Cite this article as: Patel M, Chavda D, Prajapati S. A retrospective study of 100 cases of ectopic pregnancy: clinical presentation, site of ectopic and diagnosis evaluation. *Int J Reprod Contracept Obstet Gynecol* 2016;5:4313-6.