



RESEARCH ARTICLE

CLINICAL STUDY OF ECTOPIC PREGNANCY AT TERTIARY CARE CENTER IN MUMBAI

¹*Dr. Prasannajeet H. Kokate, ²Dr. Vilas Kurude and ³Dr. Balkrishna Ahire

¹Associate Professor, Department of Obstetrics and Gynaecology, Grant Government Medical College, Mumbai

²Associate Professor, Department of Obstetrics and Gynaecology, Grant Government Medical College, Mumbai

³Junior Resident, Department of Obstetrics and Gynaecology, Grant Government Medical College, Mumbai

ARTICLE INFO

Article History:

Received 27th October, 2016

Received in revised form

25th November, 2016

Accepted 06th December, 2016

Published online 30th January, 2017

Keywords:

Ectopic Pregnancy,
Amenorrhoea

ABSTRACT

An ectopic pregnancy is one in which the fertilized ovum is implanted and develops outside endometrial cavity. It is a life threatening emergency. It complicates 0.25-2.0% of all pregnancies world wide. Aim of this study is to determine incidence, clinical presentation, risk factors, diagnosis and management in tertiary care hospital.

Methods: This retrospective observational study was conducted over the period of December 2015 to November 2016 for 1 year. Total 51 cases were found. Data was collected, tabulated and analyzed.

Results: The incidence of ectopic pregnancy was 1.33% in our study. Most patients were in the age group of 20-24 years. The most common presenting clinical presentation was amenorrhoea, abdominal pain and vaginal bleeding (88.23%, 74.50% and 62% respectively). Around 19.60% cases presented in shock status. 11.76% cases required 1 blood transfusion and 19.60% cases required 2 or more than blood transfusion. Majority of the patients had previous history of pelvic inflammatory disease (31.37%). History of previous abortion was found in 23.52% of patients. In 27.45% of patients conservative management (single dose methotrexate) was given successfully and in 72.54% emergency laparotomy was done.

Conclusion: Heightened awareness in physician, use of ultrasonography will lead to early diagnosis and more of a conservative management.

INTRODUCTION

An ectopic pregnancy is one in which the fertilized ovum is implanted and develops outside the normal endometrial cavity. It is a life threatening emergency. It complicates 0.25-2.0% of all pregnancies worldwide (Thonneau *et al.*, 2002). Many factors like pelvic inflammatory disease, intrauterine device, tubal surgeries, sexually transmitted diseases, infertility are found to be associated with ectopic pregnancy (Shaw *et al.*, 2010). Diagnosis is mainly made by clinical history, examination, serial serum beta -human chorionic gonadotropin and ultrasound examination (Home *et al.*, 2010). Now a days early diagnosis is possible due to ultrasound. If ruptured ectopic pregnancy is diagnosed, many times we have to go for surgical option of management. But if unruptured with pretreatment mass size less than 3.5 cm and human chorionic gonadotropin level less than 5000mIU/ml we can go for medical management with methotrexate. Aim of this study is to determine incidence, clinical presentation, risk factors, diagnosis and management in tertiary care hospital.

MATERIALS AND METHODS

This retrospective observational study was conducted in the department of obstetrics and Gynaecology, Cama and Allbless Hospital, Grant Government Medical college, Mumbai Maharashtra, India during the period of December 2015 to November 2016 for the period of 1 year. Total of 51 cases were found. The case sheets of the patients with ectopic pregnancy were traced through the labour ward registers and operation theatre registers and medical record department. Information regarding the total number of ectopic pregnancies in the study period, details of demographic characteristics, clinical symptoms and signs, diagnostic tools used, treatment, risk factors for the ectopic pregnancy as well as associated morbidity and mortality were obtained. Data were collected, tabulated and analyzed.

RESULTS

The incidence of ectopic pregnancy was 1.33% in our study. Most patients were in the age group of 20-24 years (Table 1). In the present study group, majority of women (47.05%) with ectopic pregnancy were nullipara (Table 2).

*Corresponding author: Dr. Prasannajeet H. Kokate,
Associate Professor, Department of Obstetrics and Gynaecology,
Grant Government Medical college, Mumbai.

Table 1. Distribution of cases according to age

Age (years)	Number	Percentage
<20	02	3.92
20-24	21	41.17
25-29	10	19.60
30-34	11	21.56
>35	07	13.72

Table 2. Distribution of cases according to parity

Parity	Number	Percentage
0	24	47.05
1	14	27.45
2	08	15.68
3 or >3	05	9.80

Table 3. Distribution of cases according duration of amenorrhoea

Gestational age (weeks)	Number	Percentage
5-7	35	68.62
8-10	16	31.37

Table 4. Distribution of cases according to clinical presentation

Symptom at presentation	Number	Percentage
Amenorrhoea	45	88.23
Pain abdomen	38	74.50
Bleeding per vaginum	32	62.74
Shock	10	19.60

Table 5. Distribution of cases according to risk factors

Risk factor	Number	Percentage
Previous abortion	12	23.52
Pelvic inflammatory disease	16	31.37
Intrauterine device	4	7.84
Previous ectopic pregnancy	3	5.88
Infertility	8	15.68
Previous abdominopelvic surgery	6	11.76

Table 6: Distribution of patients according to site of ectopic pregnancy

Site	Number	Percentage
Ampulla	28	54.90
Isthmus	12	23.52
Fimbriae	8	15.68
Ovary	3	5.8

Table 7. Management done for ectopic patients

Management	Number	Percentage
Unilateral salpingectomy	29	56.86
Unilateral salpingoopherectomy	3	5.8
Milking of tube	5	9.8
Conservative (single dose methotrexate)	14	27.45

Table 3 presents the most common presenting clinical presentation was amenorrhoea, abdominal pain and vaginal bleeding (88.23%, 74.50% and 62% respectively). Most of the cases had amenorrhoea ranging from 5-7 weeks.

Around 19.60% cases presented in shock status. 11.76% cases require 1 blood transfusion and 19.60% cases required 2 or more than blood transfusion. Table 5 presents at glance the major risk factors among the study patients. Majority of the patients had previous history of pelvic inflammatory disease (31.37%). History of previous abortion was found in 23.52% of patients.

Table 6 presents distribution of site of ectopic pregnancy. Most common site was found ampullary part of tube (54.90%). Ovarian ectopic pregnancy was found in 5.80% of patients. Table 7 presents type of management. In 27.45% of patients conservative management (single dose methotrexate) was given successfully and in 72.54% emergency laparotomy was done.

DISCUSSION

The incidence in this present study was 1.33% and in increasing trend which is comparable to other studies (Wakankar, 2015; Prasanna *et al.*, 2016; Gaddagi *et al.*, 2012; Tuli *et al.*, 2015). Majority of woman (60.75%) in our study group belonged to the age group of 20-29 years, which is close to the other studies (Shagufta *et al.*, 2012; Panchal *et al.*, 2012). Marriage at an early age and completing their family at an early age is common in India (Gaddagi, 2012). In the present study group, majority of women (47.05%) with ectopic pregnancy were nullipara. 23.52% patients had previous history of abortion. This correlates with the studies done by Shradha Shetty *et al.* (83.9%) Panchal *et al.* (81.66%) and Poonam *et al.* (83.6%) and other studies (Prasanna *et al.*, 2016; Panchal *et al.*, 2011; Shetty, 2014; Poonam *et al.*, 2005; Igwegbe *et al.*, 2013; Shetty, 2014). The higher incidence in nullipara is probably due to previous abortions and infection resulting in tubal damage.

In the present study group history of pelvic inflammatory disease was present in 31.37% of the cases with ectopic pregnancy. This is correlating with the study done by Yakasai *et al.* (31.68%) (Yakasai *et al.*, 2012) and Bhavna, *et al.* (22.7% of the cases with ectopic pregnancy (Gupta *et al.*, 2014). Endosalpingitis damages the mucosa and may entrap the migrating embryo, leading to ectopic implantation; Exosalpingitis give rise to peritubal adhesion, impairing peristaltic movements, giving rise to inadequate transportation. Lack of knowledge regarding sexual health predisposes women to sexually transmitted diseases. Health education regarding safe sexual practices is very much needed. In our study group, 15.68% of the women with ectopic pregnancy were infertile which is correlating with the studies done by Panchal D, *et al.* (11.66%) and Samiya Mufti, *et al.* (8.77%) (Shagufta *et al.*, 2012; Panchal *et al.*, 2011). The association between infertility, previous pelvic infection and tubal pathology is the possible explanation. In our study group 5.88% of the women had history of previous ectopic pregnancy which is correlating with the studies done by Dr. Samiya Mufti, *et al.* (5.26%) and Uzma Shabab, *et al.* (5%) (Shagufta *et al.*, 2012; Shabab, 2013). There is increased risk of ectopic with previous ectopic pregnancy because it reflects the underlying tubal pathology which is almost always bilateral. 7.84% woman with IUCD had ectopic pregnancy which correlates with the studies done by Shradha Shetty *et al.* (6.4%) Shrestha *et al.* (5%) and WM Fageeh (5.8%) IUCD prevents intrauterine pregnancy but not tubal and ovarian pregnancy (Shetty, 2014; Shrestha, 2012; Fageeh, 2008). The risk of tubal pregnancy is more if a woman

conceives with IUCD in situ. The commonest presenting complaints were abdominal pain, amenorrhea and abnormal vaginal bleeding. Clinical signs included abdominal tenderness, cervical motion tenderness. In Porwal Sanjay *et al* study, 87.5% reported with pain abdomen, bleeding per vaginumenter in 67.5% and 90% of case had history of amenorrhea ranging from 6 weeks to 7 weeks. These features help in early diagnosis of ectopic pregnancies (Prasanna *et al.*, 2016; Majhi *et al.*, 2007). The urinary pregnancy test, serum human chorionic gonadotropin and ultrasound were the diagnostics tools used for diagnosis of ectopic pregnancy. Studies have shown that ultrasonography should be the initial investigation for symptomatic women in their first trimester. When the results are indeterminate, the serum human chorionic gonadotropin concentration should be measured. Serial measurement of human chorionic gonadotropin and progesterone concentrations may be useful when the diagnosis remains unclear (Murray *et al.*, 2015). The commonest site of location of the ectopic pregnancy was in the ampulla of the fallopian tube. Ampullary part of the tube was commonly involved in most of the ectopic pregnancies in other studies (Swenda *et al.*, 2008). As medical management needs extremely close follow up and hospitalization, surgical management is still the method of choice in our country. Emergency laparotomy was done in 72.55% of patients for ruptured ectopic. Medical management (single dose methotrexate) was given in 27.45 % of patients. Laparoscopy and medical therapy have now emerged as the widely used therapeutic modalities with great success in terms of reduced morbidity, shorter hospital stay and conservation of fertility (Jurkovic *et al.*, 2007). However choice depends upon early identification of ectopic pregnancy and stable condition of patients (Shah *et al.*, 2012). Similar findings were also noted in different studies (Igwegbe *et al.*, 2013; Majhi *et al.*, 2007).

Morbidity included anemia, blood transfusion and wound infection. By reducing and identifying the risk factors and catching the patients at the earliest it is possible to improve the prognosis so far as morbidity, mortality, and fertility are concerned (Majhi *et al.*, 2007). No maternal mortality found in our study, consistent with Abbas A *et al.*, 2011.

Conclusion

Health education regarding safer sexual practices, personal hygiene is required to reduce the incidence of ectopic pregnancy. Widespread use of condom to reduce the incidence of sexually transmitted disease is needed. Heightened awareness in physician, use of ultrasonography will lead to early diagnosis and more of a conservative management.

Acknowledgement

We specially thank to the patients whose data was collected for the study.

REFERENCES

- Abbas, A., Akram, H. 2011. Ectopic Pregnancy: Audit at Maula Bakhsh Teaching Hospital Sargodha, Prof, *Med J*, 18(1):24-7.
- Fageeh, W.M. 2008. Diagnosis and Management of Ectopic pregnancy in King Abdul Aziz University Hospital, a Four year Experience, *Medical Science*. 15(2). 17.
- Murray H, Baakdah H, Bardell T, Tuland T. Diagnosis and treatment of ectopic pregnancy. *CMAJ*. 2005; 173(8):905-12.
- Gaddagi, R.A., Chandrashekar, A.P. 2012. A Clinical Study of Ectopic Pregnancy. *J Clin Diagn Res*, 6(5):867-9
- Gupta, B.K., Pathania, B.K., Jindal, M., Vohra, R., Ahmed, M. 2014. Risk Factors For Ectopic Pregnancy; A case Control study in Tertiary care Centre, *Journal of Dental and Medical Sciences*. 13(3):23-7.
- Home, A.W., Duncun, W.C., Critchley, H.O. 2010. The need for serum biomarker development for diagnosis and excluding tubal ectopic pregnancy. *Acta Obstet Gynaecol Scand*. 89:299-301.
- Igwegbe, A.O., Eleje, G.U., Okpola, B.C. 2013. An appraisal of the management of ectopic pregnancy in Nigerian Tertiary Hospital. *Ann Med Health Science Res*. 3(2):166-70.
- Jurkovic, D. 2007. Ectopic pregnancy, IN: Edmonds DK, Editor, Dew Hurst textbook of obstetrics and Gynecology 7ed, USA: Blackwell Publishers.
- Majhi, A.K., Roy, N., Karmakar, K.S., Banerjee, P.K. 2007. Ectopic pregnancy - An analysis of 180 cases J, *Indian Med Assoc*: 105(6):310-2.
- Mufti, S., Rather, S., Rangrez, R.A. 2012. Wasiqa, Khalida. Ectopic pregnancy: an analysis of 114 cases *JK Practitioner*. 17(4):20-3.
- Murray, H., Baakdah, H., Bardell, T., Tuland, T. 2005. Diagnosis and treatment of ectopic pregnancy. *CMAJ*. 173(8):905-12.
- Panchal, D., Vasihanav, G., Solanki, K. 2011. Study of Management inpatient with Ectopic pregnancy. *National journal of Integrated Research in Medicine*. 2(3):91-4.
- Poonam, Y., Uprety, D., Banerjee, B. 2005. Ectopic Pregnancy- two years review from BPKHIS, Nepal. Kathmandu Uni. *Med J*, 3:365-9.
- Prasanna, B., Jhansi, C.B., Swathi, K., Shaik, M.V. 2016. A study on risk factors and clinical presentation of ectopic pregnancy in women attending a tertiary care centre. *IAIM*, 3(1):90-6.
- Shabab, U., Hasmi, H.A. 2013. Different pattern of presentation of ectopic pregnancy and its management journal of surgery Pakistan (International). 18:1.
- Shagufta, S.M., Samina, M., REyaz, A.R., Wasiqa, K. 2012. Ectopic pregnancy; an analysis of 114 cases. *JK-practitioner*. 17(4):20-3.
- Shah, N., Khan, N.H. 2005. Ectopic pregnancy, presentation and risk factors, *J coll physicians Surg Pak*. 15:535-8.
- Shaw, J.L., Dey, S.K., Critchley, H.O. 2010. Current knowledge of the aetiology of human tubal ectopic pregnancy. *Human Reprod Update*. 16:432-44.
- Shetty, S., Shetty, A. 2014. A clinical study of Ectopic pregnancies in a Tertiary care hospital of Mangalore, India. *Innovative Journal of Medical and Health Science*. 4(1):305-9.
- Shrestha, J., Saha, R. 2012. Comparison of laparoscopy and laparotomy in the surgical management of ectopic pregnancy: *J coll physicians Surg Pak*. 22:760-4.
- Swenda, T.Z., Jogo, A.A. 2008. Ruptured tubal pregnancy in Makurid, North Central Nigeria. *Niger J Med*, 17(1):75-7.
- Thonneau, P., Hijazi, Y., Goyaux, N., Calvez, T., Keita, N. 2002. Ectopic pregnancy in Conakry, Guinea. *Bull World Health Organ*, 80:365-70