VOLUME-8, ISSUE-11, NOVEMBER-2019 • PRINT ISSN No. 2277 - 8160 • DOI : 10.36106/gjra

Original Research Paper | Obstetrics and Gynecology

ECTOPIC PREGNANCY: CLINICAL FEATURES, MANAGEMENT AND COMPLICATIONS

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ABSTRACT

Background: An ectopic pregnancy (EP) occurs when a fertilized ovum implants outside the normal uterine cavity. The incidence of EP varies with the population, but it has been accounted for 1-2% of all reported pregnancies. EP is one of the few medical conditions that can be managed expectantly, medically or surgically. Surgical methods are still the mainstay in the management of EP, and in developed societies, laparoscopic surgery is currently the gold standard.

Methods: This is a retrospective observational study conducted in a tertiary care centre in Ahmedabad from November 2017 to November 2018. All patients diagnosed with ectopic pregnancy (by clinical examination, USG and/or B hCG) were included in the study. The aims and objectives of the study were to determine the demographic distribution, risk factors, clinical features, treatment modalities and complications in patients presenting with EP.

Results: The incidence of ectopic pregnancies in one year was 1.17%. The commonest age of presentation of EP was between 35-40 years, most of the patients were Gravida 4 (28.57%). Majority of patients presented at a gestational age between 6-8 weeks. Most patients (64.28%) were found to have ruptured ectopic. 28.57% patients had a previous history of abortion. 14.28% of each EP were cornual and heterotopic as found intra-operatively. There was 1 interstitial and 1 scar ectopic pregnancy. The most common associated risk factor in these patients were a history of some form of pelvic surgeries in the past. Most of these patients presented with pain in abdomen and were found to be anaemic. 64.28% of cases were diagnosed by combination of TVS and serum BhCG levels. Two cases were managed medically, and obstetric hysterectomy was needed in the patient with ruptured scar ectopic gestation.

Conclusion: Ectopic pregnancy has a rising incidence in today's world. With the use of better diagnostic modalities, ectopic pregnancies can be detected early and treated appropriately. Also, because of its subtle presentations, patients often present late in the course of the disease, wherein management of the condition can be sometimes life - saving. Treatment however is easy and patients respond wonderfully with both medical and surgical management.

KEYWORDS : BhCG, Ectopic pregnancy, Tubal pregnancy, Ultrasonography

INTRODUCTION

An ectopic pregnancy (EP) occurs when a fertilized ovum implants outside the normal uterine cavity.[1] Ectopic pregnancy (EP) is a condition presenting as a major health problem for women of childbearing age.[2] The incidence of EP varies with the population, but it has been accounted for 1-2% of all reported pregnancies.[3-4] Ectopic pregnancy (EP) is the leading cause of maternal death during the first trimester of pregnancy, accounting for approximately 10 % of all pregnancy-related deaths.[5] It has been shown to reduce subsequent fertility and increase the chances of subsequent EP.[6] Over recent decades, there has been a rise in the incidence of EP.[7]

Approximately 1/100 pregnancies are ectopic, with the conceptus usually implanting in the fallopian tube.[8] Approximately 75.0% of deaths in the first trimester and 9.0% of all pregnancy-related deaths are due to EP.[9]

Almost all EPs occur in the fallopian tube (98.0%), the ampulla is the most common site of implantation (80.0%), followed by the isthmus (12.0%), fimbria (5.0%), cornua (2.0%), and interstitial (2.0-3.0%).[10,11] The etiology of EP remains uncertain although a number of risk factors have been identified.[12]

A common factor for the development of such ectopics is the presence of a pathologic fallopian tube.[13] EP may be asymptomatic, and the most common clinical presentation is first trimester vaginal bleeding and/or abdominal pain.[14] In current practice, in developed countries, diagnosis relies on a combination of ultrasound scanning and serial serum beta-human chorionic gonadotropin (-hCG) measurements.[15]

METHODS

This is a retrospective observational study conducted in a tertiary care centre in Ahmedabad from November 2017 to November 2018. All patients diagnosed with ectopic pregnancy (by clinical examination, USG and/or B hCG) were included in the study.

The aims and objectives of the present study were to determine the demographic distribution of patients presenting with EP, determine the risk factors associated with the patients presenting with ectopic pregnancy, to describe the various locations and stats (ruptured/unruptured/tubal abortion) of ectopic pregnancies to describe the various modalities of treatment used in EP.

RESULTS

The incidence of ectopic pregnancies over one year was 1.17%. The commonest age of presentation was between 35-40 years (Table 1).

Table 1: Age at presentation.

Age in years	Number of cases	Percentage
Less than 20	1	7.14
20-25	3	21.42
25-30	3	21.42
30-35	1	7.14
35-40	4	28.57
≥40	2	14.28

Table 2: Obstetric score at presentation.

Gravida	Number of cases	Percentage
G1	4	28.57
G2	3	21.42
G3	2	14.28
G4	4	28.57
G5	-	-
G6	1	7.14

Most patients presented at a gestational age between 6-8 weeks (Table 3).

Table 3: Gestational age at presentation.

Gestational age (weeks)	Number of cases	Percentage
4-6	4	28.57
6-8	8	57.14
8-10	1	7.14
≥ 10	1	7.14

Table 4: Intra-op (Ruptured/Unruptured).

	Number of cases	Percentage
Ruptured ectopic	5	35.71
Unruptured ectopic	8	57.15
Tubal abortion	1	7.14

There was 1 interstitial and 1 scar ectopic pregnancy. 8 other EP were found in other parts of the fallopian tube (Table 5).

Table 5: Location of ectopic.

Location	Number of patients	Percentage
Cornual	2	14.28
Interstitial	1	7.14
Other sites on tube	8	57.14
Heterotopic	2	14.28
Scar ectopic	1	7.14

42.85% of patients have had some form of pelvic surgeries in the past. There were two cases (14.28%) of EP after tubal ligation (Table 6).

Table 6: Risk factors.

Risk factor	Number of patients	Percentage
Infertility	1	7.14
Pelvic surgery	6	42.85
History of tubal ligation	2	14.28
None	5	35.71

Table 7: Management Modalities.

Management modality	Number of cases	Percentage
Surgical	12	85.71
Medical	2	14.29

Maximum cases (85.71%) were managed surgically and only 14.29% cases managed medically.

DISCUSSION

The incidence of ectopic gestation in our study was 1.17%. The incidence of ectopic pregnancy is on a rise due to better diagnostic technologies, IUCDs, increased incidence of PID and earlier diagnosis and management.

In this study, the commonest age group of presentation was between 35-40 years. Shafquat et al, showed the peak age of incidence as 26-30 years which was consistent with by Igbarese et al.[16,17] Aging may result in progressive loss of myoelectrical activity along the fallopian tubes. Age related changes in tubal function and tubal diverticula which increases with age, predispose patients to ectopic pregnancy.[18]

A study conducted at Department of the General Hospital "George Gennimatas" in Athens, Greece proved statistically significant positive association between ectopic pregnancy rupture and parity.[19]

The average gestational age at presentation, in this study was between 6-8 weeks. Mean gestational age at diagnosis of EP was 7.1 in the study conducted by Tahmina S et al .[20]

The incidence of ruptured ectopic in our study was 35.71% and Unruptured ectopic was 57.15%. However, in a study conducted by Jani S et al, 35% of women had an unruptured tubal pregnancy and 26% had a ruptured tube.[21] Thus, the incidence of ruptured ectopic pregnancy is lower as compared to unruptured ectopic pregnancy. The reason for this is the early detection and management of cases due to better diagnostic modalities.

The incidence of heterotopic pregnancy in this study was 14.28%. Heterotopic pregnancy was present in 4.2% of the ectopic pregnancies as per Yeasmin et al.[22]

The commonest predisposing factors in EP were tubectomy, spontaneous and induced abortion and history of infertility, prior history of Copper-T insertion and previous LSCS in this study. Similar risk factors were noted in various other studies.[23]

There has been one case of Caesarean scar ectopic in our study. Jurkovic et al. and Seow et al. have estimated that the prevalence of Caesarean scar pregnancy in their local population of women attending the early pregnancy assessment unit is~1:1800 and 1:2216 respectively. Its true incidence, however, has not been determined because so few cases have been reported in the literature: only 18 cases appeared in the literature between 1978 and 2001 (Fylstra, 2002).[24-26]

Serum β-hCG and ultrasound were the diagnostic tools used for diagnosis of ectopic pregnancy in our study. Studies have shown that Ultrasonography should be the initial investigation for symptomatic women in their first trimester; when the results are indeterminate, the serum β human chorionic gonadotropin concentration should be measured. The positive identification of a non-cystic adnexal mass with an empty uterus has a sensitivity of 84-90% and a specificity of 94-99% for the diagnosis of an ectopic gestation. In one large prospective study of 6621 patients, ectopic pregnancy was correctly diagnosed by TVS with a sensitivity of 90.9% and specificity of 99.9%. [27]

In our study, two cases were managed medically. Both these cases were of primigravidae for whom medical management was considered for fertility sparing. It was found that the overall success rate for women treated with methotrexate for an ectopic pregnancy was 89% [27]

Surgical management was done in 12 cases which included total salpingectomy. Canis M et al in their study concluded that the surgical treatment should be performed if the patient is hemodynamically unstable, ß-hCG is >10 000 mIU/mL, the ectopic pregnancy is 4cm in diameter, if there is a medical contraindication to methotrexate, and if the patient may not be followed adequately after treatment.[28] No maternal mortality found in our study, consistent with Abbas and H. Akram study.[29]

CONCLUSION:

Ectopic pregnancy has a rising incidence in today's world. With the use of better diagnostic modalities, ectopic pregnancies can be detected early and treated appropriately. Also, because of its subtle presentations, patients often present late in the course of the disease, wherein management of the condition can be sometimes life - saving. Treatment however is easy and patients respond wonderfully

with both medical and surgical management. Wider availability of diagnostic modalities leads to early diagnosis and prompt management of ectopic pregnancy.

REFERENCES

1. Berek JS. Early pregnancy loss and ectopic pregnancy. Berek and Novak's Gynecology. 14th ed. Philadelphia, PA: Lippincott Williams & Wilkins. 2007:533-34.
2. Zane SB, Kieke BA, Jr, Kendrick JS, Bruce C. Surveillance in a time of changing health care practices: Estimating ectopic pregnancy incidence in the United States. Matern Child Health J. 2002;6(4):227-36.
3. Shaw JL, Dey SK, Critchley HO, Horne AW. Current knowledge of the aetiology of human tubal ectopic pregnancy. Hum Reprod Update. 2010;16(4):432-44.
4. Vichnin M. Ectopic pregnancy in adolescents. Curr Opin Obstet Gynecol. 2008;20(5):475-8.
5. Farquhar CM. Ectopic pregnancy. Lancet. 2005;366 (9485):583-91.
6. Chow WH, Daling JR, Cates WJ, Greenberg RS. Epidemiology of ectopic pregnancy. Epidemiol Rev. 1987;9(1):70-94.
7. Walker JJ. Ectopic pregnancy. Clin Obstet Gynecol. 2007;50(1):89-99.
8. Bouyer J, Coste J, Fernandez H. Sites of ectopic pregnancy: a 10 year population-based study of 1800 cases. Hum Reprod. 2002;17:3224-30.
9. Marion LL, Meeks GR. Ectopic pregnancy: history, incidence, epidemiology, and risk factors. Clin Obstet Gynecol. 2012;55(2)376-86.
10. Bouyer J, Coste J, Fernandez H, Pouly JL, Job-Spira N. Sites of ectopic pregnancy: a 10 year population- based study of 1800 cases. Hum Reprod. 2002;17(12):3224-30.
11. Stein JC, Wang R, Adler N, Boscardin J, Jacoby VL, Won G, et al. Emergency physician ultrasonography for evaluating patients at risk for ectopic pregnancy: a meta-analysis. Ann Emerg Med. 2010;56(6):674- 83.
12. Shaw JL, Dey SK, Critchley HO, Horne AW. Current knowledge of the aetiology of human tubal ectopic pregnancy. Hum Reprod Update. 2010;16(4):432-44.
13. Shetty P, Sharma N. Medical management of ectopic pregnancy. Apollo Med. 2012;9(3):198-201.
14. Alkatout I, Honemeyer U, Strauss A, Tinelli A, Malvasi A, Jonat W, et al. Clinical diagnosis and treatment of ectopic pregnancy. Obstet Gynecol Surv. 2013;68(8):571-81.
15. Varma R, Gupta J. Tubal ectopic pregnancy. BMJ Clin Evid. 2009:1406.
16. Shafquat T, Wahab S, Bawar S, Rahim R. Relation of age, parity and duration of subfertility as risk factors for ectopic pregnancy, Gomal J Med Sci. 2013;11:171-3.
17. Igbarese GO, Ebeigbe PN, Igbekoyi OF, Ajufoh BI. Ectopic pregnancy: an 11 years review in a tertiary centre in the Niger Delta. Trop Doct. 2005;35(3):175-7.
18. Majhi AK, Roy N, Karmakar KS, Banerjee PK. Ectopic pregnancy - an analysis of 180 cases. J Indian Med Assoc. 2007;105(6):308-12.
19. Anorlu RI, Oluwole A, Abudu OO, Adebajo S. Risk factors for ectopic pregnancy in Lagos, Nigeria. Acta Obstet Gynecol Scand. 2005;84(2):184-8.
20. S Tahmina, Mary Daniel and Preethy Solomon. Clinical Analysis of Ectopic Pregnancies in a Tertiary Care Centre in Southern India: A Six-Year Retrospective Study. J Clin Diagn Res. 2016; 10(10):QC13-
21. Jani R, Munshi D, Jani S, Munshi S. Study of 50 cases of modern management of ectopic pregnancy. Int J Reprod Contracept Obstet Gynecol. 2014;3(2):374-9.
22. Yeasmin MS, Uddin MJ, Hasan E. A Clinical Study of Ectopic Pregnancies in a Tertiary Care Hospital of Chittagong, Bangladesh. Chattagram Maa-O-Shishu Hospital Med College J. 2014: 28;13(3):1-4.
23. Gupta R, Porwal S, Swarnkar M, Sharma N, Maheshwari P. Incidence, trends and risk factors for Ectopic Pregnancies in a tertiary care hospital of Rajasthan. JPBMS. 2012;16(07):1-3
24. Jurkovic D, Hillaby K, Woelfer B, Lawrence A, Salim R and Elson CJ. First-trimester diagnosis and management of pregnancies implanted into the lower uterine segment Cesarean section scar. Ultrasound Obstet Gynecol. 2003;21(3):220-7.
25. Seow KM, Huang LW, Lin YH, Lin MY, Tsai YL and Hwang JL (2004) A Cesarean scar pregnancy: issues in management. Ultrasound Obstet Gynecol. 2004;23(3):247-53.
26. Fylstra DL. Ectopic pregnancy within a cesarean scar: a review. Obstet Gynecol Surv. 2002;57(8):537-43.
27. Kadar N, Romero R. HCG assays and ectopic pregnancy. Lancet. 1981;317(8231):1205-6.
28. Canis M, Savary D, Pouly JL, Wattiez A, Mage G. Ectopic pregnancy: criteria to decide between medical and conservative surgical treatment? J Gynecol Obstet Biol Reprod. 2003;32(7):S54-63.
29. Abbas A, Akram H. Ectopic Pregnancy; Audit at Maula Bakhsh Teaching Hospital Sargodha. Prof Med J. 2011;18(1):24-7.