www.jmscr.igmpublication.org
Index Copernicus Value: 79.54
ISSN (e)-2347-176x ISSN (p) 2455-0450
crossref DOI: https://dx.doi.org/10.18535/jmscr/v7i6.139

Journal Of Medical Science And Clinical Research
An Official Publication Of IGM Publication

Original Research Article

A one year study of Ectopic Pregnancy in a Tertiary Care Centre

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Abstract
Background: *Ectopic pregnancy is an obstetric emergency with high morbidity and mortality. The incidence of ectopic pregnancy is on a rise globally. The early diagnosis increases the chances of success of medical treatment and minimizes morbidity, mortality and financial burden of the patient.*
Methods: *This is a prospective observational study conducted in the Department of Obstetrics and Gynaecology, Government Medical College Patiala. All women who presented to our hospital from 1st July 2016 to 30th June 2017 and diagnosed with ectopic pregnancy, were analysed from the available hospital records. A detailed analysis of age, parity, period of amenorrhea, presenting complaints, high risk factors, mode of management and any blood transfusions required, was carried out.*
Results: *Majority of the patients (45.3%) belonged to the age group of 25-30 years in our study.54.8% were multiparas.84.4% had amenorrhea less than 7weeks at the time of admission*
The commonest presenting complaints were abdominal pain, amenorrhea and abnormal vaginal bleeding
The common risk factors were tubectomy, H/O abortion, previous ectopic pregnancies and previous LSCS.
79.68% (51/64) had laparotomy. Out of 51 patients, 44 had tubal rupture 3 had chronic ectopic and 4 had unruptured ectopic >4cm.20.31% (13/64) of cases were successfully managed medically with methotrexate therapy. 31(48.43%) patients required blood transfusion.
Conclusions: *Surgical treatment was done more often because of patients reporting late to the hospital. Screening of high risk cases, early diagnosis and early intervention reduces the morbidity and mortality in ectopic pregnancies.*
Keywords: *Ectopic Pregnancy, transvaginal USG, methotrexate therapy.*

Introduction

An ectopic pregnancy occurs when a fertilized ovum implants outside the normal uterine cavity[1]. It is the most important cause of maternal mortality and morbidity in the first trimester[2].

In developing countries, a majority of hospital-based studies have reported ectopic pregnancy case-fatality rates of around 1%–3%, 10 times higher than those reported in developed countries[3].

The overall incidence of ectopic pregnancy is increasing in the past three decades but due to early diagnosis and management, the case fatality rate has come down. In spite of good diagnostic methods available most women present late as majority of the cases are asymptomatic till they rupture. Ectopic pregnancy commonly occurs in the fallopian tube (95%)[4]. Most likely cause of ectopic pregnancy is the delay in the passage of the fertilized ovum from the fallopian tube to the uterine cavity[4]. The associated risk factors are sexually transmitted diseases, pelvic inflammatory disease, and history of previous ectopic, tubal sterilization, intra uterine device usage and age >35 yrs [5,6,7]. The importance of ectopic pregnancy is peculiar in our country because rather than join the global trend of early diagnosis and conservative approach in management, we are challenged by late presentation and rupture in most cases. Diagnosis can be made by USG, serum hCG, although the 'gold standard' is laparoscopy[8]. The management of ectopic pregnancy has been revolutionized over the past few decades. This has resulted in emergence of several non-surgical options to what had once thought to be a solely surgically treatable condition. An earlier diagnosis can be made with transvaginal ultrasound and quantitative serum β hCG. This increases the chances of success of medical treatment and minimizes its morbidity, mortality and financial burden[9,10].

Material and Method

This is a prospective observational study conducted in the department of Obstetrics and Gynaecology Government Medical College Patiala. The birth register was used to determine the total number of deliveries during this period. All women who presented to our hospital from 1st July 2016 to 30th June 2017 with ectopic pregnancy were analysed in respect to the following

- Age
- Parity
- Chief complaints
- Period of amenorrhea
- Any risk factors for ectopic pregnancy
- Evidence of hypovolemia
- HCG in urine/serum
- Mode of treatment
- Operative findings
- Outcome of patient

The inclusion criteria for medical management of ectopic pregnancy was haemodynamic stability, gestational sac size less than 4 cm by transvaginal ultrasound, serum beta hCG level less than 10,000 mIU/ml, absence of free fluid in the pelvic cavity and the desire of the patient for future fertility.

Results

Over the 1 year study period, there were 4153 total deliveries, with 64 cases of ectopic pregnancies making the incidence of ectopic pregnancy 1.56%

Table 1: Distribution according to Age

Age group in years	No. of patients	Percentage
<20 years	01	1.56%
20-<25years	11	17.18%
25-<30years	29	45.31%
>30years	23	35.9%
Total	64	100

The majority of women 29(45.31%) were within the age group 25–29years and 23(35.9%) out of 64 were of more than 30 years of age

Table 2: Distribution according to Parity

Parity	No. of women	Percentage
0	15	23.43%
1	14	21.8%
2	24	37.5%
3	09	14.06%
>3	02	3.125%
Total	64	100

A significant proportion 35(54.8%) of these were multiparous, while only 15(23.43%) were nuliparous and 14(21.8%) primiparas.

Table 3: Distribution according to duration of amenorrhea

Duration(weeks)	No. of patients	Percentage
Upto 7wks	54	84.37%
7-11 wks	10	15.62%
>11wks	00	00
Total		100

Majority of the women 54(84.37%) had amenorrhea of ≤7 weeks at the time of presentation and 10(15.62%) had 7 to 11 wks.

Table 4: Distribution according to site of ectopic pregnancy

Site	No. of patients	Percentage
Ampulla	36	56.25%
Isthmus	24	37.5%
Fimbria	02	3.12%
Interstitial/Cornual	01	1.56%
Ovarian	01	1.56%
Total	64	

The commonest site of ectopic gestation was fallopian tubes in 63(98.44%) and the ampullary region was most common site in 36 (56.25%) while the ovarian pregnancy was present in 1(1.56%) woman only.

Table 5: Distribution according to clinical presentation

Clinical presentation	No. of women	Percentage
Pain abdomen	59	92.18%
Amenorrhoea	58	90.62%
Vaginal bleeding	43	67.18%
Fainting attack	04	6.25%
Shock	00	00

The commonest presentation was abdominal pain in 59 women (92.18%) followed by amenorrhea in 58(90.62%), vaginal bleeding in 43(67.18%). 4 patients (6.25%) presented with dizziness/fainting attack.

Table 6: Hemoglobin level on admission

Hemoglobin level	Number of cases	Percentage
4-7 gm/dl	2	3.12%
7-10 gm/dl	28	43.75%
>10 gm/dl	34	53.12%

34 (53.12%) women had hemoglobin more than 10gm/dl, 28(43.75%) had 7-10 gm% and in remaining 2(3.12%) it was 4-7gm%.

Table 7: Distribution According to Mode of Treatment

Mode of treatment	No. of cases	Percentage
Laparotomy	51	79.68%
Medical management	13	20.31%

51 women (79.68%) had Laparotomy.

However,13 (20.31%) of cases were successfully managed medically with methotrexate therapy following early diagnosis with transvaginal ultrasound showing mass less than 4cm and Serum beta human chorionic gonadotrophin (hCG) less than 4000 mIU/ ml

Table8: Distribution According to Operative Finding

Operative findings	No of cases	Percentage
Tubal rupture	44	68.75%
Unruptured	04	6.25%
Chronic ectopic	03	4.7%

Out of 51women who had laparotomy, 44(68.75%) had tubal rupture 3 had chronic ectopic and 4 had unruptured ectopic >4cm

Table 9: The risk factors associated with ectopic pregnancy

Risk factors	No. of cases	Percentage(%)
Previous abortion	13	20.3%
Previous cesarean section	18	28.12%
Age>35years	09	14.06%
Previous ectopic pregnancy	05	7.8%
Previous tubal ligation	05	7.8%
Previous appendicectomy	01	1.56%
H/O infertility	05	7.8%

History of Previous ceasarean section was present in 18women(28.12%).13(20.35%) women had history of abortion.9(14.06%) women were having age more than 35 yrs, Five(7.8%) women had previous ectopic pregnancy hence the recurrence rate was 7.8%,Five women(7.8%) had history of tubal ligation, One had H/O appendicectomy, 5(7.8%) women had H/o infertility.

Table 10: Blood transfusion required

No. of blood tranfusions	No. of cases	Percentage
No transfusion given	35	54.8%
One transfusion	14	21.8%
Two or more tranfusion	15	23.4%

14(21.8%) women required one prbc transfusion and 15(23.4%) were given 2 or more prbc.

Discussion

In the present study, incidence of ectopic pregnancy was 1.56/100 deliveries. In a study

conducted by Rashmi Gaddagi and AP Chandrashekhar, the incidence was 1: 399 pregnancies[11]. In Porwal Sanjay et al study, the incidence was 2.46 per thousand of deliveries[12].

The maximum no. of women (45.3%) belonged to the age group of 25-30 years in our study. Similar results were found in Khaleeque et al study[13]. Hoover KW and colleagues reported that the ectopic pregnancy rate increases with age; it was 0.3% among girls and women aged 15-19 years and 1.0% among women aged 35-44 years[14].

In our study 54.8% were multiparas and 16.1% were primiparas. Multiparous women were found to be more prone to have ectopic pregnancy (61%) in LaxmiKarki et al study[9].

In this study the commonest presenting complaints were abdominal pain(92.18%), amenorrhea (90.62%) and abnormal vaginal bleeding (67.18%). Amenorrhea was upto 11weeks. In Porwal Sanjay et al study, 87.5% reported with pain abdomen, bleeding per vagina encountered in 67.5% and 90% of cases had history of amenorrhea ranging from 6 weeks to 4months[12].

The commonest site of location of the ectopic pregnancy was in the ampulla of the fallopian tube in 36 women (56.25%)in our study. Ampullary part of the tube was commonly involved in most of the ectopic pregnancies in other studies[16].

In this study, ruptured ectopic pregnancy was present in 68.7% cases, 26.5% had unruptured ectopic more than 4cm and tubal abortion in 3.9% cases In Latchaw G et al study, tubal rupture was present in 59% cases and 41% had unruptured ectopic pregnancies[17]. They concluded that the patients with a history of previous ectopic pregnancy are significantly more likely to experience a tubal rupture[17]. History of Previous ceasarean section was present in 18women (28.12%). 13(20.35%) women had history of abortion.9(14.06%) women were having age more than 35 yrs, Five(7.8%) women had previous ectopic pregnancy hence the recurrence rate was 7.8%, Five women(7.8%) had history of tubal ligation, One had H/O appendicectomy,5(7.8%) women had H/o infertility. Similar risk factors were reported in a study by shah and Khan[19.]

In our study, 79.68% (51/64) had laparotomy, 20.31% (13/64) of cases were successfully managed medically with one dose of methotrexate. In a study by Majhi and Karmakar only 1.75% women could be managed medically[20]. Murray etal observed the success of medical management more if initial level less than 2000 IU/L.[15,18]

14(21.8%) patients required one prbc transfusion, 15(23.4%) were given 2 or more prbc.

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[20].

Conclusion

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

Bibliography

1. Walker JJ. Ectopic pregnancy. ClinObstet Gynecol. 2007; 50: 89–99.
2. Mahboob U, Mazhar SB. Management of ectopic pregnancy: a two-year study. J Ayub Med Coll Abbottabad.2006 Oct-Dec; 18(4):34-7
3. Goyaux N, Leke R, Keita N, Thonneau P. Ectopic pregnancy in African developing countries. Acta Obstet Gynecol Scand 2003; 82:305-12.
4. Vasquez G, Winston RML & Brosens IA. Tubal mucosa and ectopic pregnancy. BJOG 1983; 90: 468.
5. Westrom L, Bengtsson LPH, Mardh P-A. Incidence, trends, and risks of ectopic pregnancy in a population of women. BMJ1981; 282:15– 18.

6. Ankum WM, Mol BWJ, Van der Veen F& Bossuyt PMM. Risk-factors for ectopic pregnancy – a meta-analysis. FertilS teril1996; 65: 1093–9.
7. Mol BW, Ankum WM, Bossuyt PM &Vand Derveen F. Contraception and the risk of ectopic pregnancy: a meta-analysis.Contraception1995; 52: 337–41.
8. Berek & Novak's Text book of Gynecology 13th Edition; chapter 17.
9. R. C (Karki) L, Pradhan B, Duwa S. Annual Analysis of Ectopic Pregnancy in Tertiary Care Hospital. PMJN 2011;11 :5-8
10. Roussos D, Panidis D, Matalliotakis I, Mavromatidis G, Neonaki M, Mamopoulos M, Koumantakis E. Factors that may predispose to rupture of tubal ectopic pregnancy. Eur J Obstet Gynecol Reprod Biol. 2000 Mar;89(1):15-7
11. Rashmi AGaddagi, AP Chandrashekhar. A Clinical Study of Ectopic Pregnancy. JCDR 2012;6:867-869
12. 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.
13. Khaleeque F, Siddiqui RI, Jafarey SN. Ectopic pregnancies: A Three year study. J Pak Med Assoc 2001; 51:240–243.
14. Hoover KW, Tao G, Kent CK. Trends in the diagnosis and treatment of ectopic pregnancy in the United States. Obstet Gynecol. 2010 Mar;115(3):495-502
15. Murray H, Baakdah H, Bardell T, Tulandi T. Diagnosis and treatment of ectopic pregnancy. CMAJ. 2005 Oct 11;173(8):905-12
16. Swende TZ. Jogo AA. Ruptured tubal pregnancy in Makurdi, North Central Nigeria. Niger J Med 2008; 17(1): 75-7
17. Latchaw G, Takacs P, Gaitan L, Geren S, Burzawa J. Risk factors associated with the rupture of tubal ectopic pregnancy. GynecolObstet Invest. 2005; 60 (3):177-80
18. Jurkovie D. Ectopic pregnancy. In: Edmonds DK, editor. Dew Hurst's textbook of Obstetrics & Gynecology. 7 ed. USA:; Blackwell Publishers;2007
19. Shah N, Khan NH. Ectopic pregnancy: Presentation and risk factors. J Coll Physicians Surg Pak. 2005;15:535–8.
20. Majhi AK, Roy N, Karmakar KS, Banerjee PK. Ectopic pregnancy--an analysis of 180 cases.J Indian Med Assoc. 2007 Jun;105(6):308,310,312.