International Journal of Reproduction, Contraception, Obstetrics and Gynecology
Wakode SR et al. Int J Reprod Contracept Obstet Gynecol. 2024 May;13(5):1245-1249
www.ijrcog.org
pISSN 2320-1770 | eISSN 2320-1789

DOI: https://dx.doi.org/10.18203/2320-1770.ijrcog20241074

Original Research Article

Ectopic pregnancies at a tertiary care centre: a five-year retrospective study

Shamrao Ramji Wakode, Sakshi Pramod Sharma*

Department of Obstetrics and Gynecology, Dr. Shankarrao Chavan Govt. Medical College and Hospital, Nanded, Maharashtra, India

Received: 19 March 2024
Accepted: 08 April 2024

***Correspondence:**
Dr. Sakshi Pramod Sharma,
E-mail: sharmasakshi979900@gmail.com

ABSTRACT

Background: Ectopic Pregnancy results in significant morbidity. Our aim during present study was to understand age wise, parity wise distribution of cases, risk factors, clinical presentation and management of ectopic pregnancy which may be useful in lowering morbidity and mortality.
Methods: A five-year retrospective study was done from 2019 to 2023; comprising detailed medical records of detected cases of ectopic pregnancies admitted to the tertiary care centre.
Results: Incidence of ectopic pregnancy during present study was 0.40%. 65.48% of ectopic pregnancy cases recorded in the age group of 21-30 years. Majority of parity wise cases were multipara (63.95%). There were no risk factors noted in 34.01% cases. Majority of the cases (65.95%) had one or the other distinguishable risk factor. 21.68% cases had history of Tubectomy, while 19.38% ectopic gestation had history of abortion. Most of the patients presented with clinical presentation of amenorrhoea 59.89%. 55.83% cases had bleeding per vaginum, while 47.71% had pain in abdomen. Most common ectopic pregnancy site was ampulla, with 63.95% cases. Ultrasonic findings showed ruptured ectopic pregnancy in 59.39% cases and unruptured in 30.45%. Regarding mode of management in the cases, surgical management with unilateral total salpingectomy (56.79%) was most commonly performed, followed by salpingoopherectomy (14.81%).
Conclusions: Ectopic pregnancy is a common obstetric emergency leading to first trimester morbidity and mortality. Diagnosis of these cases requires a high index of clinical suspicion and early intervention often is lifesaving. Hence, knowledge of the disease related trends and timely management is the key for successful outcomes in such cases.

Keywords: Ectopic pregnancy, Salpingoophorectomy, Tertiary care centre, Total salpingectomy

INTRODUCTION

Ectopic pregnancy occurs when the fertilised ovum implants and develops at any position other than usual uterine cavity.[1,2] Most common site of ectopic pregnancies is in the fallopian tube. Tubal ectopic pregnancies constitute more than 95% of overall ectopic pregnancies and the rest 5% occur in the ovaries, cervix, peritoneal cavities and previous caesarean section scar.[3] It is a life-threatening state and one of the commonest emergencies in routine obstetrics practice; affecting approximately 2% of overall pregnancies and 3.5 to 7.1% of maternal deaths in India.[4-6] Ectopic pregnancies carries a high rate of morbidity and mortality when not diagnosed at early stages and treated without delay, thus a high index of suspicion for an ectopic in the pregnant women is required as they may present with pain, vaginal bleeding or more vague symptoms.[7-9] Delay in diagnosis and treatment adversely affects the reproductive potential of a woman by resulting in damage of one or more of the essential organs of reproduction, namely fallopian tubes, ovaries or even the uterus.[10,11]

During last few decades it is observed that, overall incidences of ectopic pregnancy are increasing, but the case fatality rate has come down due to early diagnosis and its proper management.[3,13] However, ruptured ectopic pregnancy continues to be a significant cause of maternal death during the first trimester of pregnancy.[13] These incidences of ectopic pregnancy are due to various risk factors, such as, pelvic inflammatory disease, infertility, intrauterine contraceptive device, tubal surgeries and assisted reproductive technology, etc.[14] Present retrospective study was done to determine the frequency of its occurrence, clinical features, risk factors, mortality and morbidity associated with ectopic pregnancy in a Tertiary Care Centre.

METHODS

This retrospective databased study was conducted in the department of Obstetrics and Gynaecology of a Tertiary care centre over a period of five years (January 2019 to December 2023). All detected cases of ectopic pregnancies admitted to the tertiary care centre were considered for the study. Detailed information/data of the patients with ectopic pregnancy was gathered from case sheets of patients, labour room and operation theatre registers. Data were obtained regarding the total number of antenatal admissions, the number of ectopic pregnancies, their demographic characteristics, clinical signs and symptoms, risk factors, treatment given and associated morbidity.

Inclusion criteria

All women with ectopic pregnancies were included in this study.

Exclusion criteria

All intrauterine pregnancies were excluded.

RESULTS

Present retrospective study was conducted for the duration of five years i.e. from January 2019 to December 2023. (Figure 1).

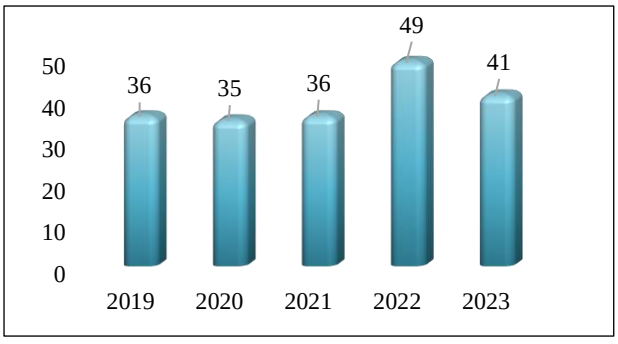

Figure 1: Year wise no of ectopic pregnancy cases.

Age distribution

As far as age group of tubal pregnancies concerned, majority of cases of ectopic pregnancies were occurred in the age group of 21-30 years (65.48%) which is followed by 23.35% in the age group 31 to 40 years (Table 1).

Table 1: Age wise distribution.

Age	No. of cases	Percentage
<20	17	8.6
21-30	129	65.48
31-40	46	23.35
41-50	05	2.53

Parity

Majority of parity wise cases were Multipara 63.95%; whereas Primipara were 30.90% (Table 2).

Table 2: Parity wise distribution.

Parity	No. of cases	Percentage
Nullipara	10	5.07
Primipara	61	30.90
Multipara	126	63.95

Risk factors

Majority of the cases (65.95%) had one or the other distinguishable risk factor. About 21.68% had history of tubectomy; 19.38% of abortion and remaining had other risk factors (Table 3). There were no risk factors noted in 34.01% of the cases.

Table 3: Risk factors.

Risk factors	No. of cases	Percentage
No risk factor	67	34.01
Previous ectopic pregnancy	07	3.55
IUCD use	15	7.61
Infertility treatment	10	5.07
H/O tubectomy	43	21.82
D&C	16	8.12
Abortions	38	19.28
Previous tubal surgeries	01	0.50

Clinical presentation

Majority of patients presented with clinical presentation of amenorrhoea 59.89%; 55.83% cases had bleeding per vaginum, while 47.71% had pain in abdomen. 35.02% presented with nausea and vomiting and 13.70% cases were asymptomatic (Table 4).

Table 4: Clinical presentations.

Symptoms	No. of cases	Percentage
Asymptomatic	27	13.70
Pain abdomen	94	47.71
Bleeding pervaginum	110	55.83
Amenorrhoea	118	59.89
Nausea and vomiting	69	35.02

Site of ectopic pregnancy

Most common ectopic pregnancy site was ampulla with 63.95% cases recorded. Whereas 14.72% were of isthmus, 8.12% of fimbria and 5.07% of cornu. Ovary, caesarean scar, rudimentary horn was below 5% (Table 5, Figure 2).

Table 5: Ectopic pregnancy site.

Pregnancy site	No. of cases	Percentage
Ampulla	126	63.95
Cornu	10	5.07
Isthmus	29	14.72
Fimbria	16	8.12
Rudimentary horn	02	1.01
Caesarean scar	06	3.04
Ovary	08	4.06

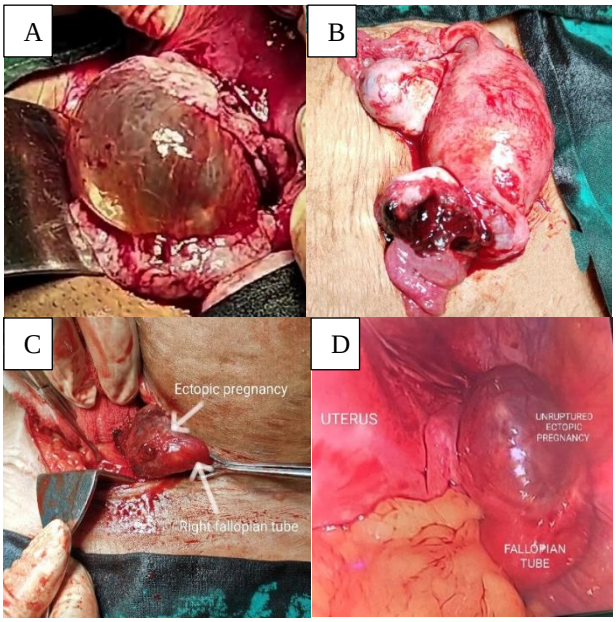

Figure 2: Some photographs of ectopic pregnancy sites. A) Scar ectopic pregnancy; B) Right ovarian ectopic pregnancy; C) Ectopic pregnancy in right fallopian tube; D) Laparoscopic view of unruptured fallopian tube pregnancy.

Type of ectopic pregnancy

Ultrasonic findings showed ruptured ectopic pregnancy in 59.39% cases, while 30.45% had unruptured ectopic. While heterogenous mass with minimal free fluid in POD and cornual ectopic cases were 4.06% each; 2.03% cases were scar ectopic (Table 6).

Table 6: Ultrasound findings.

Ultrasound findings	No. of cases	Percentage
Heterogenous mass with minimal free fluid in POD	08	4.06
Unruptured ectopic	60	30.45
Ruptured ectopic	117	59.39
Cornual ectopic	08	4.06
Scar ectopic	04	2.03

Medical management

After assessing the patient individually, the mode of management was decided. 82% cases were treated surgically and 18% cases with medical method of treatment. Regarding mode of management in the cases (total 162) treated with surgical methods 56.79% were salpingectomy, 14.81 with salpingo oophorectomy and remaining other with partial salpingectomy, fimbrial expression, fimbriectomy, scar ectopic excision, cornual stump excision and salpingostomy (Table 7).

Table 7: Mode of management (out of 162).

Mode of management	No. of cases	Percentage
Partial salpingectomy	03	1.85
Total salpingectomy	92	56.79
Fimbrial expression	13	8.02
Fimbriectomy	13	8.02
Scar ectopic excision	04	2.46
Cornual stump excision	11	6.79
Salpingo oophorectomy	24	14.81
Salpingostomy	02	1.23

DISCUSSION

The management of ectopic pregnancy has changed over the past few decades due to several imperative developments in healthcare sector. Detection of high-risk pregnant women and cautious monitoring has also contributed in better outcomes.[15] But still, ectopic pregnancy remains as an important cause of maternal morbidity, and is one of the common reasons of 1st trimester deaths.[16]

Various studies done in India have found a incidence of ectopic pregnancies ranging from 1-2%.[17] However, in present study total 48906 Pregnant ladies were admitted to tertiary care center among these 197 of ectopic pregnancies were diagnosed giving an incidence of 0.40%. In our study majority of women (65.48%) were in the age group of 21-30 yrs. This correlates with the studies done by Kaur et al (62.16%); Tahmina et al (54.1%), Godria et al (62.10), Nath et al (57.71%).[4,7,18]

Majority of cases with ectopic pregnancy were multipara (63.95%), followed by primipara (30.90%) and nullipara (5.07%). This higher incidence of ectopic pregnancy in multipara's correlated with the studies done by Kumari et al i.e. (94.1%), and Khandkar et al, 76%.[12,20] The data indicates that the incidence of ectopic pregnancy is high in multigravida patients due to risk factors like previous abortions and infections which causes tubal damage.

Total 65.95% cases had one or the other distinguishable risk factor. About (21.68%) were treated with H/O Tubectomy. 19.38% ectopic gestation treated by abortion and remaining with other risk factors. This data correlates with Murugesan et al, tubectomy (28.76%) and previous abortion (19.17%).[21] Amongst the clinical presentations abdominal pain, amenorrhaea and vaginal bleeding was noted in most of the cases. Similar findings noted by Kaur et al, Das et al, Banu et al, Barik et al, Patel and Chouhan.[3,7,22,23,24]

The fallopian tube persisted the commonest site of ectopic pregnancy in present study, the ampulla being commonly affected. Of these in turn 63.95% are located in the ampulla, 14.72% in the isthmus and 8.12% in the fimbria. This is similar to the findings of a study by Promise et al, Wakankar and Kedar, Kharat et al, Sujata et al.[10,25,26,27] Ultrasound revealed a ruptured ectopic pregnancy in 86.29% of the cases; an unruptured pregnancy in 30.45% of the cases and a heterogenous mass and cornual ectopic in 4.06% each of the cases. Similar observations are noted by Gaddagi and Chandrashekhar, Sindhura et al.[28,9]

About 82% cases treated surgically, in which the common procedures done were unilateral total salpingectomy (56.79%), salpingo oopherectomy (14.81%), fimbrectomy and fimbrial expression (8.02% each), cornual stump excision (6.79%), scar ectopic excision (2.46%) Partial salpingectomy (1.85%), and salpingectomy (1.23%). No maternal mortality was recorded among 197 cases. The results were more or less close to study by Sindhura et al.[9]

CONCLUSION

Ectopic pregnancy is a common obstetric emergency leading to first trimester morbidity and mortality. Diagnosis of these cases requires a high index of clinical suspicion and early intervention is often lifesaving. Hence, knowledge of the disease related trends and timely management is the key for successful outcomes in such cases.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

REFERENCES

1. Sudha VS, Delphine RT. A retrospective study on ectopic pregnancy: a two-year study. Int J Reprod Contracept Obstet Gynecol. 2016;5(12):4365-8.
2. Buhur A, Unal O. Management of ectopic pregnancy in a tertiary hospital: a retrospective cohort study. Euro Rev Medi Pharmaco Sci. 2023;27(8):3500-7.
3. Banu AS, Indu NR, Rohini E, Hiremath PB, Hiremath R. A retrospective study of ectopic pregnancy. Int J Reprod Contracept Obstet Gynecol. 2022;11:144-7.
4. Tahmina S, Daniel M, Preethy S. Clinical analysis of ectopic pregnancies in a tertiary care centre in southern india: a six-year retrospective study. J Clin Diag Res. 2016;10(10):QC13-6.
5. Mehta A, Jamal S, Goel N, Ahuja M. A retrospective study of Ectopic pregnancy at a tertiary care centre. Int J Reprod Contracept Obstet Gynecol. 2017;6(12):5241-6.
6. Yan-Yan F, Yi-Nan L, Xin-Tong M, Yan Fu. The prevalence of ectopic gestation: a five-year study of 1273 cases. Int J Gen Med. 2021;14:9657-61.
7. Kaur A, Anu G, Jyotsna S. A retrospective clinicopathological study of tubal ectopic gestation and its associated risk factors in a tertiary care hospital. JK Sci: J Med Educat Res. 2023;25(3):168-71.
8. Aaliya T, Babar RZ, Virta C. A retrospective study to evaluate ectopic pregnancy in atertiary care center. Int J Surg Med. 2022;8(6):13-7.
9. Sindhura M, Sailatha R, Famida AM, Vijayalakshmi K, Sathiya S, Renuka S. Trends in Ectopic pregnancy: a retrospective clinical study of 79 cases. Int J Reprod Contracept Obstet Gynecol. 2017;6(7):3009-13.
10. Kharat D, Giri PG, Fonseca M. A study of epidemiology of ectopic pregnancies in a tertiary care hospital of Mumbai, India. Int J Reprod Contracept Obstet Gynecol. 2017;6(9):3942-6.
11. Verma ML, Singh U, Solanki V, Sachan R, Sankhwar PL. Spectrum of ectopic pregnancies at a tertiary care center of northern india: a retrospective cross-sectional study. Gynecol Minim Invasive Ther 2022;11(1):36-40.
12. Smita K, Dipali P, Archana S, Sadia P. Retrospective study of ectopic pregnancy in tertiary care centre. IAIM. 2018;5(1):95-9.
13. Wang X, Huang L, Yu Y, Xu S, Lai Y, Zeng W. Risk factors and clinical characteristics of recurrent ectopic pregnancy: a case-control study. J Obstet Gynaecol Res. 2020;46(7):1098-103.
14. Emmanuel OE, Ngozichukwu CE, Edmund OE, Chisom JO, Kalu OE. Ectopic pregnancy: a 10 -year review of cases in a tertiary Health Institution in Umuahia, South East, Nigeria. Europ J Medi Heal Sci. 2022;4(4):54059.
15. Ozge KK, Seyhun S. Retrospective evaluation of patients treated for ectopic pregnancy: experience of a tertiary center. Rev Bras Ginecol Obstet. 2020;42(12):800-4.
16. Shetty S, Shetty A. A clinical study of ectopic pregnancies in a tertiary care hospital of Mangalore, India. Innov J Med Health Sci. 2014;4(1);305-9.
17. Gandhi A. FOGSI GCPR on Ectopic Pregnancy Version 1, 2020. Available at: https://www.fogsi.org/wp-

content/uploads/gcpr/Ectopic-Pregnancy.pdf. Accessed on 12th March 2024.
18. Godria PP, Darda MG, Modi DA, Rami BD. A retrospective study on ectopic pregnancy: incidence, clinical presentation, risk factors, treatment and morbidity and mortality associated with ectopic pregnancy-one year study. Int J Reprod Contracept Obstet Gynecol. 2023;12(4):1023-7.
19. Nath J, Akshara M, Vaishali V, Somya G. A 5-year Study on Ectopic Pregnancy in North India. Sch Int J Obstet Gynec. 2021;4(3):49-54.
20. Khandkar SA, Modi R, Jain M.A clinical study on ectopic pregnancy in a tertiary care hospital over one year. Int J Reprod Contracept Obstet Gynecol. 2024;13:386-90.
21. Murugesan A, Prabhu K, Muthulakshmi M. A retrospective study of ectopic pregnancies in a tertiary care hospital. Int J Reprod Contracept Obstet Gynecol. 2016;5(8):2537-40.
22. Das A, Chhetry M, Shrestha R, Rajbhandari S, Sitaula S, Hada A, Shrestha P. Clinical profile of ectopic pregnancy at a tertiary care centre in eastern nepal- a retrospective study. IRJMS. 2020;1(4):13-21.
23. Barik S, Abhishek M, Somnath L. Trends in ectopic pregnancy: a retrospective observational study from a Tertiary Care Center in Eastern India. J South Asi Federat Obstet Gynaecol. 2020;12(3).
24. Patel TL, Chouhan G. Clinical study on ectopic pregnancy. Int J Reprod Contracept Obstet Gynecol. 2023;12:382-6.
25. Sefogah PE, Oduro NE, Swarray-Deen A, Nuamah HG, Takyi RB, Nuamah MA, et al. Factors associated with ruptured ectopic pregnancy: a 10-year review at a district hospital in Ghana. Obstet Gynecol Int. 2022;2022.
26. Wakankar R, Kedar K. Ectopic pregnancy-a rising trend. Int J Sci Stud. 2015;3(5):18-22.
27. Sujata P, Janmejaya S, Jagadish H, Gangadhar S. A Retrospective Study on Risk Factors and Clinical Presentation of Ectopic Pregnancy. Infertility. 2017;5(1):15983-88.
28. Gaddagi RA, Chandrasekar AP. A clinical study on ectopic pregnancy. J Clinic Diag Res. 2012;6(5):867-9.

Cite this article as: Wakode SR, Sharma SP. Ectopic pregnancies at a tertiary care centre: a five-year retrospective study. Int J Reprod Contracept Obstet Gynecol 2024;13:1245-9.