

DOI: <https://dx.doi.org/10.18203/2320-1770.ijrcog20223124>

Original Research Article

Prospective study to evaluate management of ectopic pregnancy in a tertiary care centre

Bhavna^{1*}, Kushla Pathania², Kumud Bala Gupta³, Sushruti Kaushal¹

¹Department of Obstetrics and Gynecology, AIIMS, Bilaspur, Himachal Pradesh, India

²Department of Obstetrics and Gynecology, IGMC, Shimla, Himachal Pradesh, India

³Tenzin Hospital, Shimla, Himachal Pradesh, India

Received: 27 September 2022

Accepted: 29 October 2022

*Correspondence:

Dr. Bhavna,

E-mail: bharti.bhavna1988q@gmail.com

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ABSTRACT

Background: To study the pattern of management of ectopic pregnancy in a referral Centre in North India.

Methods: This prospective study was conducted over a period of one year in the department of obstetrics and gynecology, in a tertiary care Centre in North India. Total number of cases who reported to hospital with ectopic pregnancy during the study period were 110. All the cases were analyzed and managed either with conservative, medical or surgical treatment depending on the condition of cases at the time of presentation to the hospital. Frequencies of different variables were compared by chi square test using Graphpad Prism 9, p value less than 0.05 was considered statistically significant.

Results: The incidence of ectopic pregnancies reported in present study was 18.62 per 1,000 deliveries. Total of 110 cases with ectopic pregnancy reported to hospital during the study period. Mean age of the cases was 28.72 years. Out of 110 cases, laparotomy was performed in 100 cases and medical management in 10 cases. Medical management failed in one case and necessitated surgery in that case. There was no maternal mortality during the study period.

Conclusion: Most of the cases presented late to the hospital due to lack of awareness, topographically tough terrain in Himachal with limited transport facilities which delayed management of ectopic pregnancy and precludes conservative management either in the form of medical management or conservative surgery. Screening of high-risk cases, early diagnosis, early referral and early intervention reduces the maternal mortality and morbidity. So awareness at the primary health care level is the necessity of the hour.

Keywords: Ectopic pregnancy, Management, Laparotomy, Medical management

INTRODUCTION

Ectopic pregnancy is one of the clinical conditions which has always challenged the clinical acumen of obstetricians and gynecologists for its bizarre clinical presentation.¹ Fallopian tube is the most common site for ectopic pregnancy. Almost 95% of ectopic pregnancies occur in fallopian tube and out of which 70% occur in tubal ampulla.² Ancient treatments were designed to kill the ectopic conceptus and included starvation, purging, bleeding and even treatment with strychnine.² The

management of ectopic pregnancy has travelled a long way starting from radical surgery for control of life-threatening hemorrhage to conservative surgery and medical management aimed at preserving reproductive anatomy and fertility.² Over the subsequent years the outcome of ectopic pregnancy has dramatically improved due to timely diagnosis by modern imaging techniques, better transport facilities, antibiotics, anesthesia and blood transfusion facilities. Adequate and proper surgery has significantly reduced maternal morbidity and mortality from ectopic pregnancy.³ Diagnosed cases of

ectopic pregnancy can be managed either medically or surgically. Both methods are effective and choice depends on the clinical manifestations, site of ectopic pregnancy and available resources.⁴ This prospective study was conducted in Tertiary care Centre as it was the largest referral Centre in North India. Ectopic pregnancy can be managed with conservative measures if diagnosed before rupture. Conservative techniques have been available for long and early diagnosis can be done with timely ultrasonography. In present study, we wanted to see what is the utilization of these resources available and limitations.

Aim and objectives

Aim and objectives of current study were to estimate the incidence of ectopic pregnancy reporting to hospital during study period and to evaluate the management of ectopic pregnancy and to see the pattern of management.

METHODS

Present study was conducted over a period of one year in the department of obstetrics and gynecology, in a tertiary care centre in North India. Total number of cases who reported to hospital with diagnosed ectopic pregnancy during the study period were 110. All patients were admitted and consent was taken. Cases were treated according to the presentation. Some cases did not give consent for medical management. Medically managed cases were given either one or two doses of methotrexate and were monitored by beta hCG levels. Second dose of methotrexate was required in two cases. Cases with failed medical management were also posted for laparotomy. Laparotomy was performed in 101 cases and the operative findings were noted according to preset performa. Frequencies of different variables were compared by Chi square test using Graphpad Prism 9, p value less than 0.05 was considered statistically significant.

RESULTS

During the study period, a total number of 110 cases with ectopic pregnancy reported to the hospital thus making an incidence of 18.62 per 1,000 deliveries. Mean age of cases with ectopic pregnancy was 28.72 years. Cases were managed according to the clinical presentation and surgery was the mainstay of treatment in the present study. Surgical management was carried out in 100 (90.90%) cases and medical management in 10 (9.09%) cases. Out of 10 (9.09%) cases managed by medical method, 1 (0.90%) case had failed medical management and required surgical intervention later on. Second dose of methotrexate was required in 2 cases. The medical management was successful in 90% cases (Table 1). Hemoperitoneum was present in 93 (92.07%) cases, 66 (65.34%) cases had ruptured ectopic pregnancy, 48 (47.52%) cases had mass in adnexa, 18 (17.82%) cases with tubal abortion, 16 (15.84%) cases with unruptured

ectopic pregnancy and 1 (0.99%) case with baby in the abdominal cavity and placenta was taking blood supply from the omentum (Table 2).

Table 1: Management of Ectopic Pregnancy.

Management	N	%
Surgical	100	90.90
Medical	10	9.09
Successful	09	8.18
Failed	01	0.90
Total	110	100.00

Table 2: Operative findings.

OT findings	N	%
Hemoperitoneum	93	92.07
Ruptured EP	66	65.34
Tubal abortion	18	17.82
Unruptured	16	15.84
Fetus in abdomen	01	0.99

It was observed that fallopian tube was involved in 97 (96.03%) cases. In the fallopian tube, the commonest site was the ampullary region. Seventy (75.24%) cases had pregnancy in ampullary region, 12 (11.88%) cases in isthmic region, 5 (4.95%) cases in fimbrial region, 4 (3.96%) cases in infundibular part of tube, 2 (1.98%) cases in cornual region, 1 (0.99%) case was in rudimentary horn of uterus and 1 (0.99%) case had abdominal pregnancy. The difference in ampullary versus non-ampullary part of the fallopian tube as a site for ectopic pregnancy is statistically significant ($p < 0.001$) (Table 3).

Table 3: Site of ectopic pregnancy.

Site of EP	N	%	P value
Ampullary	76	75.24	<0.001
Isthmic	12	11.88	
Fimbrial	05	4.95	
Infundibular	04	3.96	
Cornual	02	1.98	
Rudimentary horn	01	0.99	-
Secondary abdominal pregnancy	01	0.99	-

Table 4: Condition of other tube.

Other tube	N	%
Normal	63	62.37
Peri adnexal adhesions	21	20.79
Hydrosalpinx	14	13.86
Tubal ligation	11	10.00
Tube absent	07	6.93

It was observed that out of 110 cases in the study group 101 underwent laparotomy. It was further observed that contralateral fallopian tube was normal in 63 (62.37%)

cases, 21 (20.79%) cases had peri adnexal adhesions, 14 (13.86%) cases had hydrosalpinx, 11 (10%) cases had evidence of tubal ligation and in 7 (6.93%) cases opposite tube was absent (Table 4). It was observed that 101 cases underwent some kind of surgical procedure. It was further observed that 85 (84.15%) cases had salpingectomy, 8 (7.92%) cases had salpingo-oophorectomy, 2 (1.98%) cases had excision of cornua with salpingectomy, 1 (0.99%) case had excision of rudimentary horn with salpingectomy, 1 (0.99%) case had exploratory laparotomy proceed extraction of the fetus and 4 (3.96%) cases had conservative surgery in the form of salpingostomy (Table 5). It was observed that the total number of cases with ectopic pregnancy were 110. Out of this, surgery was primarily done in 100 cases and one case added because of failed medical management. So surgical management was done in 101 (91.81%) cases and medical management was successful in 9 (8.18%) cases. Success of the medical method was 90%. There was no mortality during the study period (Table 6).

Table 5: Type of surgery.

Surgery	N	%
Salpingectomy	85	84.15
Salpingo-oophorectomy	08	7.92
Excision of cornua and salpingectomy	02	1.98
Excision of rudimentary horn with salpingectomy	01	0.99
Exploratory laparotomy proceeds extraction of fetus	01	0.99
Salpingostomy	04	3.96

Table 6: Final outcome.

Parameters	Outcome	%
Total number of cases	110	100.00
Medical management	10	09.09
Successful medical	09	90.00
Failed medical	01	10.00
Total surgeries	101	91.81
Mortality	00	00

DISCUSSION

Incidence of ectopic pregnancy is increasing day by day due to early diagnosis but the mortality and morbidity has decreased drastically with newer management techniques. The present study was conducted on 110 cases who reported to hospital with ectopic pregnancy over one year. Incidence of ectopic pregnancy in the present study was 18.62 per 1,000 deliveries which was similar to results shown by Khaleeque et al and Anorlu et al.^{5,6} The studies conducted by Khaleeque et al, Majhi et al, Kopani et al and Panchal et al showed that surgical management was done in maximum number of cases i.e., 92.2%, 96.5%, 72.36% and 96.66% cases respectively which was comparable to present study.^{3,5,7,8} The present study showed that ampullary region was the commonest site for

ectopic pregnancy in 75.24% of the cases which was also seen in studies conducted by Khaleeque et al, Bouyer et al and Panchal et al.^{3,5,9} Salpingectomy was the main surgery performed in 84.15% cases in the present study which was similar to the study conducted by Majhi et al.⁷ Conservative surgery in the form of salpingostomy was performed in 3.63% cases, which was seen in a study conducted by Majhi et al.⁷ Conservative surgery was performed in 23.33% cases by Panchal et al which was not in concurrence with the present study because in Himachal Pradesh, cases usually come from topographically tough terrain and far-flung areas and mostly they report late in the acute state where ectopic pregnancy has already ruptured and conservative management is not possible.³ There was no mortality observed in the present study which is in concurrence with the studies conducted by Khaleeque et al, Majhi et al, Kopani et al, Abbas et al and Panchal et al.^{3,5,7,9,10} It is clearly noticed that there is significant increase in incidence of ectopic pregnancy however mortality associated with this dreadful condition has significantly reduced due to improved diagnostic and treatment modalities.

CONCLUSION

Most of the cases presented late to the hospital due to lack of awareness and limited transport facilities which precludes conservative management either in the form of medical management or conservative surgery. The most important aspect of its management is awareness at the level of primary health care personnel, early diagnosis, availability of health facilities and early referral to the tertiary care hospital so that more conservative management could be done. Still more studies are required to compare different modalities of treatment of ectopic pregnancy in the present scenario.

Funding: No funding sources

Conflict of interest: None declared

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

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Cite this article as: Bhavna, Pathania K, Gupta KB, Kaushal S. Prospective study to evaluate management of ectopic pregnancy in a tertiary care centre. *Int J Reprod Contracept Obstet Gynecol* 2022;11:3324-7.