



A STUDY OF RISK FACTORS AND TREATMENT MODALITIES OF ECTOPIC PREGNANCY AT TERTIARY CARE TEACHING HOSPITAL

Obstetrics & Gynaecology

Dr Shraddha Paliwal

MBBS MS DNB, SR MYH & MGM college, Indore.

Dr Prof Sumitra Yadav*

MBBS MS DNB MNMS, MGM medical college & MYH group of hospitals, Indore.
*Corresponding Author

Dr Sapna Chaurasia

MBBS DGO MS, Assistant professor, MGM medical college Indore.

ABSTRACT

Introduction: In the past two decades globally, the incidence of ectopic pregnancy has been increasing exponentially. One of the major triggering factors being the introduction of medical assisted reproductive techniques. The present study emphasis more on clinical presentations, risk factors, associated maternal morbidity and mortality with respect to ectopic pregnancy.

Methodology: Patients diagnosed with ectopic pregnancy in reproductive age group (15-44 years) after clinical examination and investigations during one year period were included in the study. It was a prospective study using contingency table analysis and Chi-square test.

Results: A total of 52 patients were diagnosed and treated as ectopic pregnancy during the study period. Risk factors were found in 45 patients, of which most common were white discharge per vagina (WDPV) in 20 and tubectomy in 10 patients. Infertility was seen in 5 and no risk factors in 7 patients. Of the 52 patients, 47 underwent surgery as primary modality of treatment and 5 patients underwent medical management.

Conclusion: As the incidence of ectopic pregnancy has been on the rise, screening of high risk cases, early diagnosis and early intervention are required to enhance maternal survival and conservation of reproductive capacity.

KEYWORDS

Ectopic, High risk, WDPV

INTRODUCTION :-

Ectopic pregnancy is a life threatening emergency commonly being managed by primary care physicians where diagnosis is often being missed at the first contact. Any women in reproductive age group with lower abdominal pain and vaginal bleeding often raises the suspicion of ectopic pregnancy but Sometimes women may present with nonspecific symptoms unaware of ongoing pregnancy can also present with hemodynamic shock. Since the maternal mortality is associated with higher number of risk factors and also with high risk pregnancies, ectopic pregnancy being one of them, this study becomes very useful to compile all the risk factors associated with ectopic pregnancy. For the practice of primary care physician patients with early pregnancy with risk factors should be referred to tertiary care centre to rule out ectopic pregnancy.[1] It has always challenged ingenuity of the Obstetrician and Gynecologist by its bizarre clinical picture. (2)

An accurate history and physical examination and its correlation to the modern diagnostic technology are important in the diagnosis of ectopic pregnancy. To diagnose ectopic pregnancy, one has to be "ectopic minded". Despite a rising incidence, the related morbidity and mortality is declining in the developed countries due to well organized health - care delivery system, due to early recognition and treatment of ectopic pregnancies. The ectopic pregnancy mortality ratio declined by 56.6% from 1.15 to 0.50 deaths per 100,000 live births between 1980-1984 and 2003-2007 and is estimated to further decrease.[3] The most frequent causes of death for women with ectopic pregnancy are hemorrhage, infection, and anesthetic complications.[4] According to Mayo clinic 2020 guidelines suggested that some things which makes more likely to have an ectopic pregnancy which are: Previous ectopic pregnancy, Inflammation or infection, Fertility treatments (IVF), Tubal surgery, choice of birth control (IUD) and smoking.[5] The present study was done to understand the clinical presentation, risk factors, associated maternal morbidity and mortality and various treatment modalities.

MATERIAL AND METHOD

A cross sectional study was conducted at MGM Medical college and MYH group of hospitals for a period of one year from September 2019 to September 2020. All patients who were diagnosed as ectopic pregnancy in the reproductive age group of 15-44 years were included with written informed consent. They were evaluated by complete history, clinical examination and relevant investigations and managed according to the condition of patient either medical, surgical or both. Patients in shock were treated and then taken for surgery. Blood

transfusion was given preoperative, intra-operative or postoperative as per the requirement of individual cases.

Management plan was decided based on the individual case. Medical management was done for patients who fulfilled criteria for medical management and were treated with methotrexate (single/multidose regimen). Some, based on their general condition were posted for surgical management, either laparotomy or laparoscopic procedure. The site of ectopic gestation, status of the fallopian tube, contralateral tube, ovaries and uterus were noted. Depending on the condition of the tube, a decision for removal of the tube i.e., unilateral Salpingectomy/salpingostomy/salpingotomy was made. Salpingectomy was combined with contralateral tubectomy in patients who did not wish to conceive. In cases with obvious pathological findings on the opposite side, the diseased adnexa were removed. Specimen was sent for histopathology for confirmation. Prophylactic antibiotics were given to all patients at the time of induction of anesthesia. Patients were observed in the postoperative period for the development of fever, abdominal pain, and distension of the abdomen and wound sepsis. Blood transfusion given if required. Patients were discharged with an advice to come for follow up after 2 weeks.

RESULTS:-

in the present study, 52 cases of ectopic pregnancy were observed and treated. The maternal age ranged from 19 to 36 years. The maximum number of ectopic gestation in the present series occurred between the age group 26 to 30 years (42.3%).

Table:1 Distribution Of Case According To Age

Age (in a years)	Number	Percentage
Less than 20	02	03%
20-25	15	28.8%
26-30	22	42.3%
More than 30	13	25%
Total	52	100%

The distribution of cases in relation to parity, maximum number of cases were nulliparous, 35 patients (67.3%).

Table:2 Distribution Of Case According To Parity

Parity	Number	Percentage
Primi	35	67.3%
Multipara	17	32.6%
Total	52	100%

Among the risk factors, white discharge per vagina was found to be most common (38.4%), followed by tubectomy (19.2%).

Table 3: Distribution Of Cases According To Risk Factors

Risk factors	Number	Percentage
White discharge	20	38.4%
Tubectomy	10	19.2%
Infertility	04	7%
Previous ectopic pregnancy	01	1.9%
IUCD	04	7%
Dilation and curettage	02	3.8%
Tuberculosis	04	7%
Idiopathic	07	13.4%
Total	52	100%

The triad of symptoms i.e., amenorrhea, pain abdomen and per vaginal bleeding was seen in 40% of patients. Amenorrhea followed by pain abdomen was the most common symptoms. Other symptoms like nausea, vomiting and syncopal attacks were observed in 17 out of 52 patients i.e., 32.6%.

Table :4 Distribution Of Cases According To Mode Of Presentation

Presentation	Number	Percentage
Ammnorhea	43	82.6%
Pain in abdomen	37	71.1%
Bledding	30	52.6%
Others	17	32.6%

Among 52 cases, ectopic pregnancy more commonly found on right side & the most common site was ampullary region offallopian tube, followed by fimbrial and isthmal region and leastcommon was ovary.e one case(1.9%)[Table 5].

Table :5 Distribution Of Cases According To Site Of Ectopic Pregnancy On Laparotomy/Laproscopy

Site of ectopic pregnancy	Number	Percentage
Ampullary	31	59.6%
Isthmal	06	11.5%
Cervical	00	00%
Ovary	01	1.9%
Fimbrial	07	13.4%
Cornual	02	3.8%
Ampullary +isthmal	05	9.6%
Total	52	100%

Surgery was the primary modality of treatment in 90.3% of patientsand secondary modality had medical management in 9.7% of cases(5 cases).Most of the cases had open unilateral salpingectomy(32.6%), and 9.6% ofpatients had bilateral salpingectomy and 28.8% of the patientsunderwent tubal ligation on contralateral side [Table 6].

Table :6 Distribution Of Cases According To Surgical Procedure

surgical procedure	Number	Percentage
Unilateral salpingectomy (open)	17	32.6%
Bilateral salpingectomy	05	9.6%
Unilateral salpingoohorectomy(open)	01	1.9%
Unilateral salpingectomy with contralateral tubal ligation	15	28.8%
Open salpingectomy	01	1.9%
Laprosopic unilateral salpingectomy	06	11.5%
Laprosopic bilateral salpingectomy	02	3.8%
Total	47	90.3%

DISCUSSION:-

In the present study 42.3% of patients are in age group of 26-35 years. In a study conducted by Panchal et al. 71.66% patients were in age group of 21-30 years of age, this may be because this is the period of maximum fertility and use of contraception is infrequent and occasional among these women.[7] Poonam et al. showed peak incidence in 26-30 years.[8] Biologic explanations for such variation in ectopic pregnancy incidence rates are anatomic and functional age-related changes of the fallopian tubes and also repeated pelvic inflammatory disease that may induce tubal damages and predispose women to ectopic pregnancy.[9]

In the present study, maximum cases occurred between parity 0 and 2, maximum patients were nulliparous (67.3%). In Panchal et al. study

80% of patients were of more than two parity.[6] In study of Rashmi A. Gaddagi&Chandrashekhar et al., 27% were nulliparous, 10.8% were primiparous and the rest (62.2%) were multiparous.[10]

In the present study, 13.4% of the patients had no risk factors, and the most common risk factor was history WDPV which was seen in 38.4% of patients. According to studies by Savitha Devi, Rose et al. and RashmiAGaddagi&Chandrashekhar, the incidence of PID as a risk factor is 25%, 34.4% and 8.1% respectively.[10-12] PID following gonococcal, chlamydial and other bacterial infection causes a 3.3-6fold increased risk of ectopic pregnancy.[13] Chlamydia trachomatis infection causes trachoma, an ocular infection that leads to blindness, and sexually transmitted diseases which includes pelvic inflammatory disease, chronic pelvic pain, ectopic pregnancy and epididymitis.[14] According to Shah JP et al. ectopic pregnancy was more after postpartum tubal ligation because edematous congested friable tube increases the chance of incomplete occlusion of tubal lumen.[15] All these studies show that genital infections i.e., PID, particularly following chlamydial infections and recent change in sex life can cause pelvic inflammation and tubal damage in younger age groups causing more incidence of ectopic pregnancy in young, nulliparous or low parity woman. In the present study, history of infertility was seen in 4 patients, contributing 7% of risk factors. The study conducted by Panchal et al. (2011), infertility was seen in 7 patients contributing to 11.66% of risk factors.[5] According to Rashmi A Gaddagi& Chadrashekhar, Savitha Devi and Rose et al., a positive history of infertility was present in 16.21%, 48.07% and 15.1% patient's respectively.

Although tubal pregnancy has been recognized for three and half centuries, the problem of accurate and early diagnosis has not been solved. The symptoms and signs of ectopic pregnancy often range from indefinite to bizarre clinical picture. In the present study classical triad of symptoms was seen in 40%of patients. Amenorrhea (82.69%) was the most common complaint followed by pain abdomen (71.1%). Bleeding per vagina was seen in 52.6% of patients. Other symptoms like nausea, vomiting, syncopal attacks were observed in 32.6% of patients.

CONCLUSION-

In institutional settings, ectopic pregnancy accounted for 1% of total deliveries. More than half of all women with ectopic pregnancies presented with acute abdomen and required emergency laparotomy/ laparoscopy. All the cases were diagnosed with a high index of clinical suspicion and the USG findings added to the diagnosis. It is therefore important that all the clinicians should be sensitive to the fact that in the reproductive age group, any women presenting with pain in the lower abdomen, diagnosis of ectopic pregnancy should be entertained irrespective of the presence or absence of amenorrhea, whether or not she has undergone sterilization. Though the recent trend in the management of ectopic pregnancy is the use of a conservative surgical or medical line of management, radical surgery or salpingectomy was the treatment modality which was used in the present study. This was mainly because majority (80%) of the cases was referred or they came late to the hospital after the ectopic pregnancy had ruptured. Importance of TVS for unruptured ectopic pregnancy at early stage, further complications can be avoided. Due to advanceddiagnostic techniques, conservative treatment is also possible and with recent surgical technique, the morbidity and mortality has drastically reduced. Because the vast majority of women with ectopic pregnancy are now hemodynamically stable, medical managementwith MTX has become a first-line therapy. As ectopic pregnancy are directlyrelated to pelvic infections, especially sexually associated ones,prevention should be the watchword.It is important to know when the patient should be referred totertiary care centre.

REFERENCES

- Nitesh M, Radheshyam B, Savitri S. Study of ectopic pregnancy in a tertiary care centre. Int J Reprod Contracept Obstet Gynecol 2020;9:212-5.
- Hoover KW, Tao G, Kent CK. Trends in the diagnosis and treatment of ectopic pregnancy in the United States. ObstetGynecol 2010;115:495-502.
- Creanga A, Carrie K, Bish CL, Zane S, Berg CJ, Callaghan WM. Trends in ectopic pregnancy mortality in the United States: 1980-2007. ObstetGynecol 2011;117:837-43.
- Dorfman SF. Ectopic pregnancy mortality, United States, 1979 to 1980: Clinical aspects. ObstetGynecol 1983;62:334-8.
- Ectopic Pregnancy, 2020. Mayo Clinic | diagnosis and management. [online]. Available from: <https://www.mayoclinic.org/diseases-conditions/ectopic-pregnancy/diagnosis-treatment/drc-20372093>. [Last accessed on 2020 Sep 22].
- Sivalingam VN, Duncan WC, Kirk E, Shephard LA, Horne AW.Diagnosis and management of ectopic pregnancy. J FamPlannReprod Health Care 2011;37:231-40.
- Divyesh P, Gunvant V, Kunal S. Study of management in patient with ectopic pregnancy. Natl J Integr Res Med 2011;2:91-4.

8. Poonam, Uprety D, Banerjee B. Ectopic pregnancy-two years review from BPKIHS, Nepal. Kathmandu Uni Med J 2005;3:365-9.
9. Soper DE. Pelvic inflammatory disease. *ObstetGynecol* 2010;116:419-28.
10. Rashmi A Gaddagi RA, Chandrashekhar AP. A clinical study of ectopic pregnancy. *J ClinDiagn Res* 2012;6:867-9.
11. Yelamanchi SD. Laparoscopic treatment of ectopic pregnancy. *J ObstGyn India* 2000;50:69-74.
12. Jophy R, Thomas A, Mhaskar A. Ectopic pregnancy- 5 years experience. *J ObstGyn India* 2002;52:55-8.
13. Brunham RC, Binns B, McDowell J, Paraskevas M. Chlamydia trachomatis infection in women with ectopic pregnancy. *ObstetGynecol* 1986;67:722-6.
14. Schachter J. Chlamydial infections. *West J Med* 1990;153:523-34.
15. Shah JP, Parulekar SV, Hinduja IN. Ectopic pregnancy after tubal sterilization. *J Postgrad Med* 1991;37:17-20.