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Ectopic Pregnancy – A retrospective study showing rising trend with early diagnosis and timely management at a tertiary care centre in Rajasthan

[1]Dr. Reshma Khan, Resident Doctor, Department of Obstetrics and Gynaecology Mahatma Gandhi Medical College & Hospital, Jaipur

[2]Dr. Ranjana Atal, Associate Professor, Department of Obstetrics and Gynaecology MGMC, Jaipur

[3]Dr. Jaya Choudhary, Professor and Unit Head, Department of Obstetrics and Gynaecology, MGMC, Jaipur

[4]Dr. Nyaz Mohammad Khan, Senior Resident Doctor, Department of Physiology, Govt Medical College, Alwar

Corresponding Author: Dr. Ranjana Atal, Associate Professor, Department of Obstetrics and Gynaecology MGMC, Jaipur

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Abstract

Background: Ectopic pregnancy is one in which the fertilized ovum becomes implanted at site other than normal uterine cavity. Ectopic pregnancy is one of the chief causes of bleeding in first trimester. Ectopic is the first thing to be ruled out when a pregnancy is suspected. The present study briefly summaries the risk factors associated, demography, presentation, outcome & future consequences in a patient with ectopic pregnancy.

Method: The sample for the retrospective study was derived from database from January 2023 to December 2023. to see the rising trend of ectopic. Data were collected from OPD registers, case records, IPD files and discharges. Various parameters like age, parity, risk factors, clinical presentation, pre-operative findings and post operative outcome were observed.

Keywords: Ectopic, Abdominal, Bleeding

Introduction

Ectopic pregnancy means embryo implantation outside the uterine cavity It is one of the chief causes of bleeding during first trimester Incidence varies worldwide between 0.25 % to 2 % (1) It still accounts for 3.5 to 7 % of maternal deaths in India (2). The most common risk factor is presence of PID & history of abortions. Spectrum of ectopic pregnancy presents from asymptomatic to ruptured pregnancy presenting as shock. Delay in diagnosis may result in increased morbidity & even mortality. However early diagnosis can prevent morbidity and can be managed

conservatively and medically (3,4) The present study represents the data gathered over a period of 1 year at our tertiary care centre. Inspite of good diagnostic methods available most woman present late as majority of them are asymptomatic and present lately when they have ruptured ectopic or heavy bleeding per vagina with abdominal tenderness.

Material & Methods

This is a retrospective study derived from database at obstetrics & gynaecology department of Mahatma Gandhi medical college which is a tertiary care centre from January 2023 to December 2023. Data were collected in a preconceived format. The case sheets of patients with ectopic pregnancy were traced through labour ward registers & operation theatre register. Possibility of ectopic was suspected on clinical symptoms which were amenorrhoea, pain abdomen, or bleeding per vagina. Positive signs were presence of adnexal mass, gestational sac with or without cardiac activity in adnexa, free fluid in pelvic cavity, empty intrauterine cavity, pseudo gestational sac etc. Following parameters were taken – age, parity, risk factors, clinical presentation, pre-operative findings, and outcome in terms of morbidity (like ICU stay, blood transfusion, surgery etc) and mortality were assessed.

Aims & Objectives

1. To know the incidence of maximum occurrence in which age group.

2. To study the various associated factors like age, parity, risk factors associated with ectopic pregnancy.

3. To know the outcome of ectopic pregnancy.

4. To study how the outcome depends on time of presentation at hospital.

5. to determine how early intervention and treatment could save patients life and reduce the comorbidities associated with the presenting illness.

• Key words – ectopic pregnancy, fallopian tube, PID, USG, Risk factors.

Table 1: Distribution According To Clinical Symptoms

Clinical Presentation	Number	Percentage
Pain Abdomen	62	79.48%
Amenorrhoea	52	66.66%
Bleeding Per Vaginum	39	50%
Adenexal Mass	22	28.20%
Shock	04	5.12%
Cervical Motion Tenderness	26	33.33%
Classic Triad	41	52.56%

- Classical picture of ectopic (TRIAD SYMPTOMS- Amenorrhoea, pain, bleeding per vagina).
- Mostly 40% patients presented with this classical triad of symptoms.
- Cervical motion tenderness (clinical examination) was present in 33 % of patients with ectopic pregnancy.
- Amenorrhoea present in almost 67 % patients, which was almost always presented with pain or bleeding p/v.
- Shock was present in only 4 % of the patients less occurrence nowadays due to early diagnosis with modern investigations and rising trend of awareness and education.

Table 2: Mean Age of Presentation of Ectopic

Age	Number	Percentage
<20 Years	08	10.25%
20-25 Years	36	46.15%
26-30 Years	24	30.76%
31-35 Years	08	10.25%
>35 Years	02	2.56%

- The mean age of presentation in our study was 20-30 years as this is the most fertile period and mostly eligible couples lie in this age group.
- The incidence was almost very less after 35 years of age because most of fertile couples complete their family till 35 years of age and there are very little chances of ectopic pregnancy after this particular age group.
- There are also little chances of ectopic pregnancy before 20 years of age due to rising education for females and late marriages (mostly after 25 years) because mostly girls try to complete their education before getting married and pregnant.

Table 3: Associated Risk Factors

Risk Factor	Number	Percentage
PID	21	26.92%
IUCD	02	2.56%
Previous Ectopic	08	10.25%
LSCS	12	15.38%
Abortion	14	17.94%
MTP Pill Intake	10	12.82%
Prior Tubal Surgery	11	14.10%

Now coming to the risk factors for ectopic pregnancy

The most attributable risk factor in our study was pelvic inflammatory disease (PID) – 30 % because it is common in young fertile sexually active females due to ascending tract infections and latesequelae may result in kinking of tubes, adhesions, blockage and ectopic chances.

So there is a good enough need to teach our community regarding sexual health so as to improve the outcomes and avoidance of infections of genital tract and system.

Next important risk factor in our study was abortion followed by prior tubal surgery and prior lower segment caesarean section – almost contributing to a whole total of 15% of risk factors.

Previous ectopic pregnancy is also an important risk factor for ectopic (10%) because next pregnancy also finds better nidation at the site of previous ectopic location.

Table 4: Morbidity Following Ectopic Pregnancy

ICU Admission	06	7.69%
Surgery	52	66.66%
Bowel Injury	02	2.56%
Need Of Transfusion	14	17.94%
Mortality	OO	00%

Sequelae of ectopic pregnancy are-

- Patients in whom conservative management had failed or those who had ruptured ectopic pregnancy needed immediate laparotomy for management and further management – 66 % patients needed surgery for ectopic management.
- 14 % patients needed blood transfusion because of excessive bleeding (those with ruptured ectopic) who cannot be managed conservatively.
- There was zero mortality as all cases were managed well and better availability of diagnostic tools and operative intervention as and when needed, availability of transfusions and ICU availability.

Table 5: Distribution According To Pre –Op Findings

Condition of tube	Number	Percentage
Ruptured	26	33.33%
Un-ruptured	39	50%
Chronic ectopic	13	16.66%

- In our study TRIAGE of patients was done on following parameters:
- Vitals of patients, pain, bleeding, based on USG findings.

- Patients were primarily divided into following groups.

1-Ruptured2- unruptured 3-chronic

Generally ruptured ectopic needed immediate management rather than unruptured followed by chronic.

Patient with ruptured ectopic needs immediate intervention, stabilized and investigated and operated on time to prevent shock and blood loss.

Table 6: Distribution of cases according to site of ectopic pregnancy

Site of Ecropic	Number	Percentage
Ampulla	15	19.23%
Ishthmus	13	16.66%
Fimbrial	08	10.25%
Cornual	06	07.69%
Ovarian	01	01.28%
Tubal Abortion	02	02.56%
Abdominal	00	00%
Site Cannot Be Located	00	00%

Most common site of ectopic pregnancy was fallopian tube, followed by cornual pregnancy (8%).

Fallopian tubes are long and tortuous providing favourable site for implantation of a fertilized ovum.

Most common site of ectopic pregnancy was- ampulla of fallopian tube as it is the widest portion of a fallopian tube (19%), followed by isthmus and fimbria part.

Ovarian pregnancy (1%), abdominal and site not located are rare.

Result

Out of 8790 total ANC who visited Mahatma Gandhi Medical College & Hospital during a period of one year from January 2023 to December 2023 , ectopic pregnancies ruled out by various modality like clinical examination & thereafter verified by Ultrasonography (TVS SOS),total 78 ectopic pregnancies were noted (0.88% of total registered pregnancies) , out of which ,nearly 52 ectopic pregnancies (66.66 %) needed surgical management and 26 ectopic pregnancies (33.33 %)were managed conservatively on methotrexate & resolved thereafter.

13 ectopic pregnancies were chronic ectopic and had gradual disintegration of tubal wall with slow/repeated episodes of hemorrhage leading to formation of pelvic mass.

Younger age group is more common because they are more active sexually and more predisposed to STI, PID and their sequelae.

Ectopic pregnancy isgenerally diagnosed earlier due to their associated symptoms like bleeding and pain.

Approximately 2% patients using intrauterine IUCD as a method of contraception, IUCD do not allow intrauterine pregnancy hence increase the chances of ectopic so the patient has more chances of ectopic with IUCD in situ.

Pain abdomen is the most common presentation followed by amenorrhoea and bleeding p/v.

Majority of the cases present late in ruptured state and are managed surgically – laparotomy (mostly open laparotomy).

Discussion

Ectopic pregnancy is a life-threatening condition and acute emergency in obstetrics leading to morbidity and mortality if left undiagnosed or illtreated. All first trimester pregnancies presenting early with bleeding p/v should be suspected as ectopic until and unless proven otherwise. Globally its incidence has been rising over past decades, complicating 0.25 to 2% of all pregnancies worldwide (1). It accounts for 3- 7.1% of maternal mortality in India. (2)

In the present study the age group of 25to 30 years are more prone for chances of ectopic pregnancies due to

following factors like- they are sexually more active, more chances of PID (3,4) and most Indian woman enter their reproductive period or get sexually active at this particular age group in India and their reproductive child period too during this particular period itself.

Cervical motion tenderness noted in 33 % cases as comparable to Gaddagi and Chandrashekhar (56%). (5)

Medical line of management was given in 26 cases out of 78 which is more as compared to study by Khan et al (6). Probably because the patients presented at early gestation.

Most of the patients has ampullary ectopic pregnancy as comparable to study by Pisarska et al (7).

No mortality was recorded as comparable to study by Shetty & Shetty (8) &Udigwe et al (9).

The success rate of surgical treatment was 100% , as comparable with other studies (10).

A significant number of pregnant women who do not desire pregnancy and self-medicated themselves with, MTP pill intake under the influence of thinking that they will undergo safe abortion and the impression that this was a normal intrauterine pregnancy complicate themselves under the false impression that they are undergoing a normal abortion process. This may lead to fatal consequences in case of ruptured ectopic and may threaten the life of the woman. So, all woman before taking MTP kit should be advised proper counselling and make sure that the pregnancy is an intrauterine one, may be with the help of an ultrasound before undergoing an abortion or medicating a MTP pill. Our study shows 11.11% with prior history of MTP pill use and presenting as ectopic after bleeding and history of prior abortion approx. 37% which is comparable to study by Singh et al (11,12)

Singh et al have reported prior tubal surgery as a common risk factor (40%) as comparable to our study in which 26.66 % chances of prior tubal surgeries like tubal surgery or tuboplasty. So, patient should be counselled and educated about its failure and likelihood of ectopic in future (13).

Mostly ectopic pregnancies are diagnosed at an earlier period of gestation like 6 to 8 weeks (khaleeque et al)(15) presenting mostly as the classic triad with symptoms of bleeding per vaginum, abdominal pain and amenorhoea.

Amenorhoea was present in 90 % of cases included in our study, while in study of Jophy et al (78.9%) (16) cases presented with amenorrhoea.

A detailed history about is needed to understand the underlying etiology of ectopic pregnancy. In our study history of previous abortion has a significant role due to damage to tubes and thus focusses on the need of safe and legal abortion and termination of pregnancies. Similar observation was made by Majhi et al and Muffi et al (21.05%) (17,18).

Conclusion

Most common attributing factor were previous ectopic, prior tubal surgery, PID and abortions. Comprehensive and thorough clinical examination with ultra sound examination was thought to be the diagnostic modality of choice with maximum best outcome of treatment in a case presenting at the earliest of gestation. Early and timely management can help in preserving fertility and to prevent hazards to life. Patients, who were hemodynamically stable, had a gestational sac size.

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