

Clinical Presentation and Management of Ectopic Pregnancy in Tribal Population in South Rajasthan and Co-Relation with High Prevalence of Sexually Transmitted Diseases

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Abstract

ECTOPIC PREGNANCY " A GREAT DECEIVER " may present with varied symptoms and signs []. BETA HCG and ULTRASONOGRAPHY has revolutionized the diagnosis of ectopic pregnancy and this has drastically reduced maternal morbidity and mortality[2]. Still in rural, unaware, malnourished and severely anemic population it poses diagnostic and management dilemma. This is retrospective study, carried out at PIMS (Pacific Institute of Medical Sciences Umarda, Udaipur, Rajasthan) in 2014 and 2015. Total 32 cases were analyzed. 26(81.25%) had pelvic infection either acute or chronic including sexually transmitted diseases and post abortal and previous tubercular infections. All patients had pain in the abdomen, 28(87.50%) had history of amenorrhea and 26(81.25%) had uterine bleeding. USG in 28(87%) was suggestive of fluid/clots in peritoneum or tubo-ovarian Mass. However Urine Pregnancy Test/Beta HCG were positive in 25(78.13%). Salpingectomy was the most common surgery done in 31(98.67 %). There was no negative laparotomy in this study. There was no maternal mortality in this series. Prevention of sexually transmitted diseases, pelvic infection, early diagnosis and prompt treatment helps in reducing mortality and morbidity.

Keywords: Ectopic Pregnancy; Sexually Transmitted Diseases In Ectopic Preg Ruptured Ectopic Prgnancy; Haemoperitoneum;

Conservative Surgery For Tubal Pregnancy; Salpingostomy; Salpingectomy; Salpingo-Ophorectomy.

Introduction

Incidence of ectopic pregnancy is 0.5 - 1.00% and is responsible for 6-10% of all maternal deaths in India [3]. Signs and symptoms classically include amenorrhea, abdominal pain and vaginal bleeding. 90% of women however have these symptoms. The pain may be described as sharp, dull, or cramp. Pain may also spread to the shoulder if bleeding into the abdomen has occurred. Severe bleeding may result in a tachycardia, extreme pallor and low blood pressure or shock [4]. Risk factors for ectopic pregnancy include: pelvic inflammatory disease, chronic and acute often due to chlamydia infection, gonorrhoea, syphilis or tuberculosis, tobacco smoking, and the use of assisted reproductive technology. Those who have previously had an ectopic pregnancy are at much higher risk of having another one. Most ectopic pregnancies (90%) occur in the fallopian tube which are known as tubal pregnancies [5]. Implantation can also occur on the cervix, ovaries, or within the abdomen. detection of ectopic pregnancy is typically by blood tests for human chorionic gonadotropin (BETA HCG) and ultrasound /TRANSVAGINAL SONOGRAPHY. This may require testing on more than one occasion. Ultrasound works best when performed from within the vagina. Differential diagnosis include miscarriage, ovarian torsion, and acute appendicitis [6]. Prevention is by decreasing risk factors such as infections through screening and treatment. The use of the medication methotrexate works as well as surgery in some cases. Specifically it works well when the beta-HCG is low and the size of the ectopic is small. Surgery is still typically

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recommended if the tube has ruptured, there is a fetal heartbeat, or the person's vital signs are unstable. The surgery may be laparoscopic or through a larger incision, known as a laparotomy. Outcomes are generally good with treatment [7]. Incidence of ectopic pregnancy is quite high in Tribal population. Ladies are little less or uneducated with early marriage and repeated childbirths and very high incidence of pelvic inflammatory disease and local customs allow promiscuity and tobacco chewing and smoking. Studies show that safe sex works. When barrier contraceptive use goes up, both STDs and ectopic pregnancy rates go down. Using a condom and limiting your sexual partners is a good way to reduce your chances of experiencing an ectopic pregnancy [8].

Material and Methods

This has been a retrospective study at PIMS (Pacific Institute of Medical Sciences) Umarda, Jaipur. Period of study has been from 2014 to 2015 (two years) all

those patients on whom laparotomy was performed suspecting ectopic pregnancy were included. Detailed history examination findings and investigations were scrutinized. Investigations included complete blood count HB, TLC, DLC, BT, CT, PT, INR, HIV, HBSAG, VDRL, TREPONEMA TEST, VAGINAL SWAB, BLOOD GROUPING, BLOOD SUGAR, URINE PREGNANCY TEST, BETA HCG, ULTRASONOGRAPHY, TRANS ABDOMINAL AND TRANS VAGINAL. Suspected patients were taken up for laparotomy and all patients underwent salpingectomy as the definitive treatment. Patients made uneventful recovery and there was no mortality. Thirty-two patients with provisional diagnosis of ectopic pregnancy were studied. Physical examination, urine pregnancy test, trans-abdominal scan using 5 MHz transducer or trans-vaginal ultrasonography of 7 MHz was done. The diagnosis of ectopic pregnancy was confirmed by direct observation by laparotomy or laparoscopy (which was taken as gold standard). Prevalence of Sexually transmitted disease in relation to incidence of ectopic pregnancy was studied.

Observations

Table 1: Age distribution for ectopic pregnancy

Serial no	Age in years	Number of patients	Percentage
1	Less than 20	2	6.25
2	20-25	3	9.37
3	26-30	22	68.75
4	31-35	5	15.63
5	36-40	0	0
Total		32	100

Result- maximum number of patients 22(68.75 %) belonged to age group of 26-30 years.

Table 2: Parity of patients affected by ectopic pregnancy

Serial number	Parity	Number of patients	Percentage
1	Nulli para	0	0
2	Para one	4	12.50
3	Para two	18	56.25
4	Para three	3	9.37
5	Para four	6	18.75
6	Para five	1	3.13
Total		32	100

Result- Maximum number of patients were para two 18(56.75 %).

Table 3: Risk factors in ectopic pregnancy

Serial number	Risk factors	Number of patients	Percentage
1	Pelvic infection	26	81.25
2	Previous ectopic	2	6.25
3	Asst repro tech	1	3.13
4	Copper t	0	0
5	Tobacco use	15	46.87

Result- Most 26(81.25%) had pelvic infection either acute or chronic including post aortal and previous tubercular. Interestingly 15(46.87%) were using tobacco for chewing and BIDI smoking.

Table 4: Sexually transmitted diseases and pelvic inflammatory disease

S. No	Positive Tests	Number	Percentage
1	Hiv	1	3.13
2	Hbsag	2	6.25
3	Vdrl	2	6.25

4	Vaginal Swab	2	6.25
5	History Suggestive Of	4	9.38

Total 11(34.38%) had chronic PID and sexually transmitted disease

Table 5: Clinical presentation

Serial number	Symptoms and signs	Number of patients	Percentage
1	Amenorrhea	28	87.50
2	Uterine bleeding	26	81.25
4	Pain abdomen	32	100.00
5	Syncopal attack	8	25.00
6	Pallor, HB < 8 gm%	12	37.50
7	Shock, BP < 90 mmofHG	5	15.62
8	UPT, BETA HCG positive	25	78.13
9	USG POSITIVE	28	87.50

Result – All patients had pain in the abdomen, 28(87.50 %) had history of amenorrhoea and 26(81.25%) had uterine bleeding. However upt/bhcg were positive in 25(78.13%)

Table 6: Site of ectopic pregnancy

Serial number	Site of ectopic	Number of patients	Percentage
1	Ampullary	27	84.37
2	Interstitial	2	6.25
3	Cornual	2	6.25
4	Cervical	1	3.13
5	Ovarian	0	0
6	Abdominal	0	0

Result- 31(96.87%) were tubal pregnancies, and all were ruptured ectopics



Fig. 1:



Fig. 4:



Fig. 2:



Fig. 5:

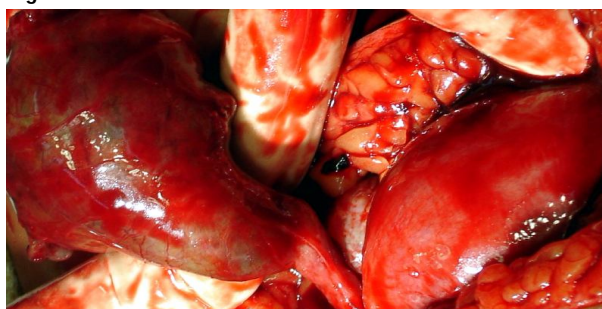


Fig. 3:

Results

Total 32 cases were analyzed. Maximum number of patients 22(68.75 %) belonged to age group of 26-30, years, 5(15.63%) were 31 – 35 years, 3(9, 37%) were 20-25 years of age and 2 (6.25%) were less than

20 years of age Maximum number of patients were para two 18(56.75%), para four were 6(18.75%) para one were 4(12.50%), para three were 3 (9.37%) and 1 patient was para five. Most 26(81.25%) had pelvic infection either acute or chronic including post abortal and previous tubercular. 11(34.38%) had history suggestive of chronic pelvic inflammation and sexually transmitted disease 2(6.25%) positive vaginal swab for gonococci. 1(3.13%) was HIV positive 2(6.25%) were HBSAG positive and 2(6.25%) were VDRL positive. 2(6.25%) had history of previous ectopic. 1(3.13%) was undergoing assisted reproduction technique treatment. Interestingly 15(46.87%) were using tobacco for chewing and bidi smoking. All patients had pain in the abdomen, 28 (87.50%) had history of amenorrhoea and 26(81.25%) had uterine bleeding. 8(25%) had history of syncopal attacks 12 (37.50%) were extremely pale and 5(15.62%) were in shock before being taken up for laparotomy. ULTRA SONOGRAPHY in 28(87%) was suggestive of fluid/ clots in peritoneum or tubo ovarian mass. However URINE PREGNANCY TEST/BETA HCG were positive in 25(78.13%). 31(96.87%) were tubal pregnancies, and all were ruptured ectopic either acute or chronic with haemo-peritoneum and required salpingectomy. 1(3.13%) was cervical ectopic pregnancy in para five which got complicated with uncontrollable haemorrhage and required emergency obstetric total hysterectomy. The study showed ectopic pregnancy was most common in gravida 2 and in age group 26–30 years with most of them having married life <10 years. One or more risk factors were found in 66% of cases. 54% of cases presented with acute symptoms, 14% of cases in shock. All patients had pain in the abdomen, 28(87.50%) had history of amenorrhoea and 26(81.25%) had uterine bleeding, abdominal tenderness, and tender cervical movements. However urine pregnancy test/BETA HCG were positive in 25(78.13%). Inv revealed high incidence of sexually transmitted diseases in the tribal population of south rajasthan. ultrasonography, complex mass in adnexa was present in 60% of cases and haemo-peritoneum in 50%. 96% of cases were tubal pregnancy with most of them tubal rupture. In 98% of cases, radical surgery was done. Salpingectomy was the most common surgery done (90%). There was no negative laparotomy in this study. There was no maternal mortality in this series.

Discussion

There are multiple factors that increase a women's likelihood of having an ectopic pregnancy.

One of the risk factor is a prior history of an ectopic pregnancy. Any disruption of the normal architecture of the Fallopian tubes can be a risk factor for a tubal pregnancy. Previous surgery on the Fallopian tubes such as tubal sterilization or reconstructive, procedures can lead to scarring and disruption of the normal anatomy of the tubes and increases the risk of an ectopic pregnancy. Likewise, infection, congenital abnormalities, or tumors of the Fallopian tubes can increase a woman's risk of having an ectopic pregnancy. Pelvic infections are usually caused by sexually-transmitted organisms, such as chlamydia or *N. gonorrhoeae*, having multiple sexual partners increases a woman's risk of pelvic infections, multiple sexual partners also are associated with an increased risk of ectopic pregnancy.

Like pelvic infections, conditions such as endometriosis, fibroid tumors, or pelvic scar tissue (pelvic adhesions), can narrow the Fallopian tubes and disrupt egg transportation, thereby increasing the chances of an ectopic pregnancy. Approximately half of pregnancies in women using intrauterine devices (IUDs) will be located outside of the uterus. Cigarette smoking around the time of conception has also been associated with an increased risk of ectopic pregnancy [8]. Clinical presentation of ectopic pregnancy occurs at a mean of 7.2 weeks after the last normal menstrual period, with a range of 4 to 8 weeks. Later presentations are more common in communities deprived of modern diagnostic ability. In the present study average detection was at 8-10 weeks. Differential diagnosis include acute appendicitis, salpingitis, rupture of a corpus luteum cyst, miscarriage, ovarian torsion or urinary tract infection. Signs and symptoms of ectopic pregnancy include vaginal bleeding (in varying amounts), abdominal pain, pelvic pain, a tender cervix, an adnexal mass, or adnexal tenderness. In the present study all patients had pain in the abdomen, 28(87.50%) had history of amenorrhoea and 26(81.25%) had uterine bleeding. Rupture of an ectopic pregnancy can lead to symptoms such as abdominal distension, tenderness, peritonism and hypovolemic shock. Risk factors include: pelvic inflammatory disease, infertility, use of an intrauterine device (IUD), previous exposure to DES, tubal surgery, intrauterine surgery (e.g. D&C), smoking, previous ectopic pregnancy, and tubal ligation. Although older texts suggest an association between endometriosis and ectopic pregnancy this is not evidence based and current research suggests no such association [9]. In the present study- most 26(81.25%) had pelvic infection. Of these 2(6.25%) had history of previous ectopic. 1(3.13%) was undergoing assisted

reproduction technique treatment. Interestingly 15(46.87%) were using tobacco for chewing and bidi smoking. Hair-like cilia located on the internal surface of the Fallopian tubes carry the fertilized egg to the uterus. Women who smoke have a higher chance of an ectopic pregnancy in the fallopian tubes. Smoking leads to risk factors of damaging and or killing cilia. Women with pelvic inflammatory disease (PID) have a high occurrence of ectopic pregnancy. This results from the build-up of scar tissue in the Fallopian tubes, causing damage to cilia. Intrauterine adhesions (IUA) present in Asherman's syndrome can cause ectopic cervical pregnancy or, if adhesions partially block access to the tubes via the ostia, ectopic tubal pregnancy [10]. Asherman's syndrome usually occurs from intrauterine surgery, most commonly after D&C. Endometrial/pelvic/genital tuberculosis, another cause of Asherman's syndrome, can also lead to ectopic pregnancy as infection may lead to tubal adhesions in addition to intrauterine adhesions [11]. Although some investigations have shown that patients may be at higher risk for ectopic pregnancy with advancing age, it is believed that age is a variable which could act as a surrogate for other risk factors. An ectopic pregnancy should be considered as the cause of abdominal pain or vaginal bleeding in every woman who has a positive pregnancy test. An ultrasound showing a gestational sac with fetal heart in the fallopian tube has a very high specificity of ectopic pregnancy. Transvaginal ultrasonography has a sensitivity of at least 90% for ectopic pregnancy. An ultrasound showing a gestational sac with fetal heart in the fallopian tube has a very high specificity of ectopic pregnancy. Transvaginal ultrasonography has a sensitivity of at least 90% for ectopic pregnancy. Where no intrauterine pregnancy is seen on ultrasound, measuring β -human chorionic gonadotropin (β -hCG) levels may aid in the diagnosis. A laparoscopy or laparotomy can also be performed to visually confirm an ectopic pregnancy. This is generally reserved for women presenting with signs of an acute abdomen and/or shock. Often if a tubal abortion or tubal rupture has occurred, it is difficult to find the pregnancy tissue. A laparoscopy in very early ectopic pregnancy rarely shows a normal looking fallopian tube. The vast majority of ectopic pregnancies implant in the Fallopian tube. Pregnancies can grow in the fimbrial end (5% of all ectopic pregnancies), the ampullary section (80%), the isthmus (12%), and the cornual and interstitial part of the tube (2%) [12]. Mortality of a tubal pregnancy at the isthmus or within the uterus (interstitial pregnancy) is higher as there is increased vascularity that may result more likely in sudden major internal bleeding. Two percent of ectopic pregnancies occur in the ovary, cervix, or are intraabdominal. Transvaginal ultrasound examination is usually able to detect a cervical

pregnancy. An ovarian pregnancy is differentiated from a tubal pregnancy by the Spielberg criteria [13]. In the present study 31 (96.87%) were tubal pregnancies, and all were ruptured ectopic either acute or chronic with haemoperitoneum and required salpingectomy. Early treatment of an ectopic pregnancy with methotrexate is a viable alternative to surgical treatment [14]. Which was developed in the 1980s. If administered early in the pregnancy, methotrexate terminates the growth of the developing embryo; this may cause an abortion, or the developing embryo may then be either resorbed by the woman's body or pass with a menstrual period. Contraindications include liver, kidney, or blood disease, as well as an ectopic embryonic mass > 3.5 cm [15]. Surgeons use laparoscopy or laparotomy to gain access to the pelvis and can either incise the affected Fallopian and remove only the pregnancy (salpingectomy) or remove the affected tube with the pregnancy (salpingectomy) [16]. In the present study all but one case were treated by salpingectomy and one required obstetric hysterectomy because of cervical ectopic pregnancy leading to uncontrolled hemorrhage.

Conclusion

Present study clearly shows importance of acute and chronic pelvic inflammatory disease in causing tubal damage which in turn is responsible for tubal ectopic pregnancy. High incidence of sexually transmitted diseases was contributory to high incidence of ectopic pregnancy. Preventive measures should be directed towards awareness, early diagnosis and prompt treatment. Any lady in reproductive age group should be considered as potential candidate for ectopic pregnancy unless proved otherwise. Beta HCG, ultrasonography and immediate laparotomy and management of ectopic pregnancy are key factors in reducing maternal mortality and morbidity.

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