Study of Ectopic Pregnancy at Guru Gobind Singh Hospital, Jamnagar Region

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Abstracts: Background: Ectopic pregnancy is assuming greater importance because of its increasing incidence and its impact on woman's fertility. Method: We have conducted study of 50 cases of ectopic pregnancy during year January 2001 to December 2002 in Guru Gobind Singh Hospital, Jamnagar City. Result: In our study we have found that incidence of ectopic pregnancy is 1:211. Ectopic pregnancy is more common in younger age group patient and patients with 2 or more parity in our study. Previous pelvic surgery, previous abortion, pelvic inflammatory diseases and IUCD are most common risk factors for ectopic pregnancy. Presenting complains of patients on admission are abdominal pain, amenorrhoea and bleeding per vagina which were present in 96% , 88% , 50% cases respectively in our study. Common signs for diagnosis of ectopic pregnancy are abdominal tenderness, bleeding per vagina and tenderness on cervical movement in our study. The most common clinical type of ectopic pregnancy is acute variety which is 70% in our study. Commonest site for ectopic pregnancy is fallopian tube which is found in 90% of cases and ampullary region is the most common portion of tube involved which is found in 75.6% cases in our study. Common mode of termination of Ectopic pregnancy is tubal rupture which is present in 48% cases in our study. Conclusion: Although ectopic pregnancy will never be completely prevented, but incidence can be reduced and much of the morbidity and mortalities can be minimised by prevention and efficacious diagnostic and interventional strategies aimed primarily at those women who are at high risk for the condition and taking precaution that woman who likely to become high risk are handled in such a way that the number of these high risk women are reduced. [Parmar D et al NJIRM 2012; 3(5): 43-47]

Key words: Ectopic pregnancy, Fallopian tube, Bleeding, Pain.

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Introduction: Ectopic pregnancy is assuming greater importance because of its increasing incidence and its impact on woman's fertility[1, 2, 3]. Ectopic pregnancy remains the leading cause of maternal deaths in early pregnancy[4]. With respect to the management of ectopic pregnancy, there have been tremendous technical advances. The early diagnosis and treatment of this condition over the past two decades has allowed a definitive medical management of unruptured ectopic pregnancies even before there were clinical symptoms in these high risk women[5, 6].

Detection of ectopic pregnancy in early gestation has been achieved mainly due to enhanced diagnostic capability. Despite all these notable successes in diagnostics and detection techniques, ectopic pregnancy remains a source of serious maternal morbidity and mortality worldwide, especially in countries with poor prenatal care.

Material and Method: A prospective study of two years was carried out to make a detailed analysis of 50 cases of ectopic pregnancy admitted in the hospital (Guru Gobind Singh Hospital, Jamnagar) during January 2001 to December 2002, after obtaining ethical committee clearance from the hospital authorities.

In all cases thorough clinical examination and necessary investigations were done to establish proper diagnosis and immediate surgical treatment was carried out. They were analyzed for incidence, presentation on admission, history, investigation including pregnancy test, culdocentesis, trans-vaginal ultrasound and laproscopy were carried out. These cases were treated and follow up for one month was carried out post operatively. Long term follow up was not carried out so that outcome of future pregnancy or any complication is not known.

Methods of Collection of the Data: All the women with ectopic pregnancies (who were diagnosed after a clinical examination and investigations) were included in the study.

Inclusion Criteria: The women who were diagnosed as ectopic pregnancy cases, who were in the reproductive age group of 15-44 years.
Exclusion Criteria: No exclusion criteria.

Observation and Discussion: The results and other clinical aspects of ectopic pregnancy are compared with other studies. Our study shows that between Jan 01- Dec 01 the incidence of ectopic pregnancy was 1: 166, while it was 1:256 during Jan 02 – Dec 02. The highest incidence was recorded by Raksha Arora[7] 1:160 deliveries. This is because the incidence varies from place to place even in the same country. In India, the rate of Ectopic pregnancy is rising. The reasons for that are increased use of IUCD, abortion, infection, STDs, and newer artificial reproductive techniques. Our incidence is similar to those studies conducted by Gordon King[8] and Melwyn D. Mello[9]

Age: In our study 38 patients (76%) are of below 30 years age group which is considered a normal reproductive period in Indian setup. While 12 patients (24%) are above 30 years age group. The age incidence is compared with other studies. It is observed from that highest incidence is below 30 years of age, may be due to maximum number of conception occurring during that period i.e. child bearing period. Kamala Rani Khera[10] and Ravi Prabha Kulshreshtha[11] have also reported highest incidence of 80% and 80.8% respectively below 30 years of age. The incidence in present study also similar to their study and that is 76%.

Parity: The incidence of Ectopic pregnancy according to parity was 18% in nulliparous, 36% in primi and 46% in multiparous women. The highest incidence is seen in the women of 2 or more than 2 parity, which is due to highest rate of conception and post abortal and post puerperal infection. Our incidence is almost similar to the study conducted by Ravi Prabha Kulshrestha[11].

AETIOLOGICAL FACTORS: The following table shows various percentages of aetiological factors (Risk factors) for ectopic pregnancy.

Table 1: Etiological Factors for Ectopic Pregnancy

Risk factor	No. of cases	Percentage
Abortion	10	20%
Infertility -Primary - 01 -Secondary- 04	05	10%
MTP	03	06%
PID	07	14%
Tuberculosis	01	02%
Previous ectopic pregnancy	02	04%
Previous LSCS	07	14%
Previous pelvic surgery	12	24%
IUCD	09	18%

The above table shows that abortion, IUCD and previous pelvic surgery and PID are major causes of ectopic pregnancy. Post abortal and Post MTP infection might be the causes. Pelvic inflammatory disease is the leading causative factor for ectopic pregnancy and in our present study it is seen in 14% of cases which is nearly equal to U Gupta[12] and Kamal Buckshee[13]. IUCD is also the main factor for the ectopic pregnancy because the recent widespread use of the Intra uterine device as a means of temporary birth control has a remarkable influence on the occurrence of extra uterine pregnancy. Our study is nearly similar to the study of U. Gupta[12] and Kamal Buckshee[13]. The history of previous abortion has rate of 20% in our study which is quite similar to study of U. Gupta[12].Post abortal infection may the causative factor for ectopic pregnancy. MTP, tuberculosis, infertility and previous ectopic pregnancy are other risk factors for occurrence of ectopic pregnancy.

Table 2: Presenting Symptoms on Admission

Symptoms	No. of cases	Percentage
Abdominal pain	48	96%
Amenorrhoea	44	88%
Bleeding P/ V	25	50%
Nausea and Vomiting	28	56%
Fainting attack	09	18%
Giddiness	13	26%

The abdominal pain may be acute excruciating type, chronic dull aching intermittent type, or acute on chronic variety. Thus pain is the most characteristic symptom which depends upon the type of ectopic pregnancy, duration, amount of bleeding and individual pain threshold. In present study abdominal pain was found in 96% cases which are similar to Kamala Rani Khera[10] and U. Gupta[12]. In our study Amenorrhoea was present in 88% cases which are almost similar to Nazima Saloda[14], and U. Gupta[12] .The amenorrhoea is also the main symptom for Ectopic Pregnancy. In our study bleeding P/V was present in 50% of cases which is similar to Nazima Saloda[14]. Bleeding per vaginum may be continuous or intermittent. This is due to separation of the uterine decidua resulting from hormonal withdrawal due to death of the embryo, very rarely there may be passage of blood from the tube. Bleeding is usually small in amount and dark brown in colour and very rarely profuse. In the present study nausea and vomiting was present in 56% cases, this is due to peritoneal irritation by blood. Syncope is due to reflex vasomotor disturbances resulting from hypovolaemia and peritoneal irritation by blood. In present study it was seen in 18% cases. Our study is nearly similar to study of U. Gupta[12] and Nazima Saloda[14].

Table 3: Clinical Signs

Signs	No. of cases	Percentage
Shock	08	16%
P/A		
Abdominal tenderness	28	56%
Abdominal distension	03	06%
P/S		
Bleeding per vagina	19	38%
P/V		
Tender Cx movement	28	56%
Uterus size		
Normal	21	42%
Bulky	13	26%
Not made out	12	24%
6-8 weeks size	04	08%
Fornix palpable mass	13	26%
Tenderness in fornix	41	82%
Fullness in fornix	15	30%

From the present study it is seen that abdominal tenderness, tenderness on cervical movement, tenderness in fornix and bleeding per vagina were important clinical features. In the present study, 8 cases were admitted with signs of shock. Abdominal tenderness is the commonest sign which is present in 56% cases in our study which is nearly similar to study of U. Gupta[12] .Abdominal tenderness occurs due to peritoneal irritation by blood. Abdominal distension is present in 6% of cases in our study which was due to collection of blood in the peritoneal cavity. Bleeding P/V is present in 38% cases in present study; this usually starts after the death of embryo due to hormonal withdrawal. Tenderness on Cervical movement was present in 56% cases in present study which was nearly similar to study of U. Gupta[12]. Tenderness in fornix is present in 82% cases in present study which was nearly similar to the study of Nirmala Mokadam[15]. Fullness of fornix which was present in 30% of cases in our study was due to collection of blood in P.O.D or general peritoneal cavity. Shock was present in 16% of cases was due to sudden blood loss. Size of uterus was normal in 42% cases, bulky in 26% cases, difficulty to elicit (not made out) in 24% cases, and 6-8 weeks size uterus in 8% cases. In acute cases the size of uterus was difficult to elicit due to severe tenderness. Our study is nearly similar to study of U. Gupta[12].

In present study 70% cases were acute and 30 % of cases were presented with chronic variety. In past studies chronic variety was very common, while in our study the most common clinical type of ectopic pregnancy is acute variety. This difference is due to availability of newer and early diagnostic tools like Trans abdominal and transvaginal sonography, laparoscopy & urine pregnancy test, so that we can diagnose ectopic pregnancy in early stage.

Table 4: Gestational age according to weeks

No. of weeks	No. of cases	Percentage
< 8 weeks	25	50%
8-12 weeks	17	34%
>12 weeks	02	04%
No amenorrhoea	06	12%

From the above table it is seen that most of the ectopic pregnancies were terminated during less than 8 weeks of gestation. The commonest gestational age at the time of diagnosis of ectopic pregnancy is less than 8 weeks. This is due to tubal rupture between 6 to 10 weeks in ampullary implantation and before 6 weeks in case of isthmic implantation.

Table 5: Site of Ectopic Pregnancy

Sr. No.	Site	No. of cases	Percentage
1	**Tubal**	**45**	**90%**
	-Ampullary	34	75.6%
	-Interstitial	1	2.2%
	-Isthmic	8	17.8%
	-Fimbrial	2	4.4%
2	**Uterine**	**2**	**4%**
	-Cornual	2	100%
	-Cervical	-	-
	-Angular	-	-
3	**Abdominal**	-	-
4	**Ovarian**	-	-
5	**Accessory horn**	**03**	**06%**

In present study the commonest site of implantation of ectopic pregnancy is fallopian tube. In our study it is present in 90% cases which are nearly similar to the other studies. It is seen that the commonest part of fallopian tube involved in the implantation of the ectopic pregnancy is the Ampullary region. The second most common part is isthmic region. In our study ectopic pregnancy in ampullary region was present in 75.6% which is similar to the study of Kamala Rani Khera[10].

Table 6: Mode of Termination

Site	No. of cases	Percentage
Tubal abortion	08	16%
Tubal rupture	24	48%
Unruptured tubal pregnancy	11	22%
Tubal mole	02	04%
Cornual rupture	02	04%
Accessory horn rupture	02	04%
Accessory horn unruptured	01	02%

The usual mode of termination of tubal ectopic pregnancy is ruptured due to lack of tubal accommodation for growing foetus. In our study 24 numbers of cases (48%) are ruptured tubal pregnancy, while 11 numbers of cases (22%) are unruptured tubal pregnancy. Tubal abortion present in 16% in our study.

In present study out of 50 cases USG was performed in 21 cases. Findings suggestive of ectopic pregnancy were no evidence of intrauterine gestational sac in 100 % cases, free fluid in pouch of Douglas in 57.1 % cases, Adnexal mass in 76.1 cases and uterine enlargement in 23.8% cases.

Salpingectomy is the treatment in most of cases. The surgical management of ectopic pregnancy depends upon age, parity, desire of further child, site of ectopic pregnancy, clinical variety of ectopic pregnancy etc. Salpingostomy has very limited value in the surgical management of ectopic pregnancy because it may lead to recurrence of ectopic pregnancy. Jaffcoate has explained that after salpingo oophorectomy chances of recurrent ectopic pregnancy was reduced by abolishing the transmigration of fertilised ovum.

Conclusion: The incidence of ectopic pregnancy is on rise, thereby causing serious concern over maternal mortality. Sexually transmitted diseases, post abortal infection and post puerperal infection are important risk factors. More young women are subjected to various methods of fertility control like oral contraceptive pills, intra uterine contraceptive device and tubal surgeries to limit their families. Modern drugs for induction of ovulation and tubal reconstructive procedures and women conceive after long period of infertility have increased risk of ectopic pregnancy. Incidence of ectopic pregnancy has become increase, in spite of sophisticated diagnostic aids like ultrasound which can detect very early ectopic pregnancy. Although ectopic pregnancy will never be completely prevented, but incidence can be reduced and much of the morbidity and mortalities can be minimised by prevention and efficacious diagnostic and interventional strategies aimed

primarily at those women who are at high risk for the condition and taking precaution that woman who likely to become high risk are handled in such a way that the number of these high risk women are reduced.

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