A STUDY OF 158 CASES OF ECTOPIC PREGNANCY

by

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An ectopic pregnancy is a matter of great concern that a woman might have to face any time during child-bearing period. Tubal pregnancy is one of the commonest surgical emer-agencies among women. It not only threatens the life of a woman if not treated timely and effectively but also tells upon her fertility unavoidably by causing mutilation of an essential organ of reproduction, namely fallopian tube with or without the ovary and sometimes even the uterus. When this ectopic gestation occurs in the expected sites as in the ampulla and the isthmus of the tube, there is not much difficulty in diagnosis and management. But, when it occurs in an unusual site, it not only creates difficulty in diagnosis but also carries great risk of maternal death due to haemorrhage.

This is a review of 158 cases of ectopic pregnancies admitted in the Eden Hospital, Medical College Calcutta, during the period January 1964 to December 1965. This study is mainly restricted to tubal pregnancy —that being the commonest variety of ectopic gestation.

During the period of survey, the incidence of ectopic pregnancy increased from 1 in 207 i.e., 0.48 per cent in 1964 (82 cases of ectopic pregnancy out of 17,006 total obstetric admissions, including abortions) to 1 in 191.6 i.e., 0.52 per cent in 1965 (76 cases of ectopic pregnancy out of 14,567 obstetric admissions, including abortions).

The range in age of women in this study was 15 to 40 years—the highest incidence being in the age group between 26 to 30 years (32.70 per cent). Only 24 cases (15.20 per cent) occurred in primigravidae—the maximum incidence being in the parous group—between para 2 to para 4 (118 cases i.e., 74.68 per cent).

TABLE I

Relation between Infertility and ectopic pregnancy

(a) Interval between marriage and ectopic pregnancy (Nulliparous women—24 cases)

	No. of cases	Per cent
Less than 2 years ..	5	3.26
2-4 years	14	8.86
5-8 years	3	1.9
More than 8 years ..	2	1.26

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(b) Interval between last pregnancy and ectopic pregnancy (Parous women—134 cases)

	No. of cases	Per cent
Less than 2 years ..	35	22.29
2-4 years	84	53.50
5-8 years	11	6.20
More than 8 years ..	4	2.53

Table 1 shows the time interval between (a) marriage and ectopic pregnancy in nulliparous women (24 cases) and (b) last pregnancy and ectopic pregnancy in parous women (134 cases). In both the groups 2 to 4 years' interval was commonest—14 cases in the former and 84 cases in the latter groups of cases.

The commonest variety of ectopic pregnancy in this study was subacute type (95 cases or 60.10 per cent); next to that was acute type, (34 cases or 21.5 per cent) and rest were chronic or old types (29 cases or 12.39 per cent).

The vast majority were tubal pregnancies (152 cases or 96.20 per cent); there were 2 cases of primary ovarian pregnancies (1.27 per cent), 2 cases of secondary abdominal pregnancies (1.27 per cent), 1 case each of angular pregnancy and intraligamentary pregnancy (0.36 per cent).

The distribution by site of implantation is of interest because the proportion of isthmic pregnancies (16.45 per cent) is unexpectedly high, although the highest incidence of tubal pregnancy was in the ampullary part (78.50 per cent). Infundibular pregnancy was found in 5.05 per cent of cases. Abortion was the commonest type of disturbance in the tubal pregnancy (39.50 per cent) next to which was tubal rupture (22.40 per cent). Pathological types of tubal pregnancies are given in Table 2.

TABLE II

Pathological types of tubal pregnancy

	No. of cases	Percent
Tubal rupture	34	22.40
Tubal abortion ..	60	39.50
Tubal mole	12	7.90
Tubal erosion	10	6.58
Not mentioned	36	23.62

Previous pelvic inflammation was of aetiological significance in 106 cases (67.13 per cent) of which 18 cases (11.40 per cent) had postabortal sepsis and 15 cases (9.49 per cent) had puerperal sepsis. Forty-five cases (28.5 per ecnt) gave history of infertility (primary or secondary of more than 3 years duration) and 22 cases had hydrosalpinx of the opposite tube. Six cases (3.80 per cent) showed definite evidence of genital tuberculosis. Two patients developed tubal pregnancy following insertion of I.U.C.D. There was history of appendicitis in 8 cases and in 2 cases appendicectomy was performed prior to tubal pregnancy. Tuboplasty in 4 cases was complicated by tubal pregnancy later on. There were 3 cases of recurrent ectopic pregnancy (1.90 per cent). Tubal pregnancy developed in a case of sterilization done 16 years back by tubal ligation.

The most frequent symptom in this series was pain in the abdomen. Pain was dull and diffuse in character—in 95 cases (60.10 per cent), acute colicky in nature in 34 cases (21.54 per cent) and mild, mostly localised to lower abdomen, in 20 cases (12.66

per cent). The next most commonly recorded symptom was abnormal vaginal bleeding varying from slight spotting in 85 patients (53.86 per cent) to profuse bleeding in 8 cases (5.06 per cent). In 48 cases (30.40 per cent) there was no abnormal vaginal bleeding.

TABLE III

Amenorrhoea

	No. of cases		Per cent
Below 8 weeks	76		48.10
More than 8 weeks	40	(including lactational amenorrhoea) (Intraligamentary — 20 weeks amenorrhoea. Secondary abdominal pregnancy — 42 weeks amenorrhoea)	
No amenorrhoea	42		26.60

Table III shows that amenorrhoea of varying duration was present in 116 cases (73.40 per cent) and was absent in 42 cases (26.60 per cent). One patient in four gave a menstrual history which was so vague and uncertain as to be valueless.

Although according to the majority of authors syncope is invariably present in disturbed tubal pregnancy it was found in only 54 cases (34.2 per cent) in the present series.

About one patient in five had bladder or bowel symptoms of which bladder symptoms were more common (28 cases or 17.33 per cent).

Twenty-eight (17.73 per cent) passed decidual cast between 6th to 8th day after the operation. Moderate to severe degree of shock was present in 60 cases (38 per cent) and haemoglobin level was below 7 gms. per cent in 51.97 per cent cases, (Table IV). The

TABLE IV

Haemoglobin Level

	No. of cases	Per cent
Less than 4 gm% ..	19	6.33
4-6 gm%	72	45.54
7-10 gm%	42	26.60
Above 10 gm% ..	34	21.53

degree of shock was not necessarily always related to the amount of intraperitoneal bleeding. Some patients with apparently little bleeding were severely shocked and some even with massive intraperitoneal bleeding were in good general condition.

The commonest physical sign was abdominal tenderness, next to adnexal tenderness. Tenderness was present in this series in 89 cases (56.21 per cent) of which 34 cases (21.41 per cent) had acute tenderness and 55 cases (34.80 per cent) had diffuse and vague tenderness. The most consistently helpful finding on abdominal palpation was rebound tenderness which might be generalised or localised in the lower abdomen.

On vaginal examination—uterus was found to be slightly enlarged in 96 cases (60.77 per cent) and was normal sized in 52 cases (32.90 per cent). Cervix was soft in only 32 cases (20.20 per cent) and not softened in 105 cases (66.50 per cent). Commonest finding on vaginal examination was palpation of a tender,

cystic mass through one lateral fornix and extending to pouch of Douglas (92 cases or 58.20 per cent). Diagnostic puncture of pouch of Douglas for evidence of free blood was of immense value. Ectopic pregnancy was correctly diagnosed in 122 cases (69.80 per cent). The highest source of error was in pelvic inflammation confirmed after laparotomy. This study consists of 175 culdocentesis done for diagnostic purpose on patients admitted with pelvic pain and irregular vaginal bleeding where the diagnosis was not obvious.

The line of treatment adopted in these 158 cases of ectopic pregnancy was as follows. Laparotomy was advocated as soon as the diagnosis of ectopic pregnancy was confirmed. In 104 cases (65.80 per cent) unilateral salpingo-oophorectomy was performed; in 36 cases (22.80 per cent), salpingectomy could be done. Associated operations were advocated only in subacute or chronic type of cases. These consisted of ventrisuspension of uterus or plication of round ligaments in 26 cases, removal of tubo-ovarian mass on the opposite side in 18 cases, tuboplasty on the other side in 7 cases and tubal ligation on the opposite side in 12 cases.

Table V shows the result of treatment in this series of 158 cases of ectopic pregnancy. There was no mortality in this series and morbidity of different types went up to 28.50 per cent.

TABLE V

Result

	No. of cases	Per cent
Mortality	Nil	
Morbidity	45	28.50
Temperature	12	
B. Coli cystitis ..	10	
Distension	8	
Peritonitis	7	
Paralytic ileus ..	4	
Burst abdomen ..	2	
Incisional hernia ..	2	

Discussion

Although incidence of pelvic inflammation is going down, the incidence of ectopic pregnancy is gradually going up (Poddar, 1958). Injudicious administration of antibiotics in pelvic infections is possibly responsible for this increase in the number of tubal pregnancies (Krohn *et al,* 1952), the former producing a greater legacy of tubes which become patent but distorted or narrowed, making them more suitable for tubal pregnancy.

Transperitoneal migration of ovum from the ovary of original to the contralateral tube has been found to be an important cause of tubal pregnancy. It is always worthwhile to search for the corpus luteum in the contralateral ovary. During laparotomy in cases of ectopic pregnancy, Berlind (1960) found [illegible] aetiological factor operating in 50 per cent cases of tubal pregnancy.

In diagnosis of ectopic pregnancy abdominal pain and tenderness are two almost constant features particularly becoming pronounced by the slightest movement of the cervix. This may be due to peritoneal irritation by the blood coming into the peritoneal cavity after the tubal pregnancy comes to grief (McDaugull,

1958; Mellish and Wolman, 1958). On the contrary these two features may be present even when there is not enough haemorrhage in the peritoneal cavity (Irwin, 1960).

The degree of shock does not bear constant relationship with the amount of intraperitoneal haemorrhage. Sometimes it is out of proportion to the amount of haemorrhage (Moir, 1960). This may be explained by the damage and tearing of tissues of the tube and mesosalpinx.

Culdocentesis is of immense value in the diagnosis of disturbed ectopic pregnancy. Sometimes cases of pelvic pain with irregular vaginal bleeding may pose a serious diagnostic problem when simple clinical history and physical examination may not be enough. Sometimes the latter may suggest exploratory laparotomy which may be justified by the operative findings. At other times it is found that conservative therapy would have been more appropriate. At still others, the delay in operation may be dangerous for the patient. In such cases we have found diagnostic puncture of pouch of Douglas extremely useful in providing an acurate, safe and quick method of diagnosis. Our experience with conservative surgery on the fallopian tube in ectopic pregnancy is small but it is firmly believed that there is little place for any thing less than complete removal of the affected tube which becomes the seat of ectopic pregnancy mostly due to some inflammatory reaction. Ploman and Wicksell (1960) reported series of subsequent repeat ectopic pregnancies in such cases where conservative surgery was undertaken on previous occasions.

Summary

1. An analysis of 158 cases of ectopic pregnancy occurring in the Eden Hospital, Medical College, Calcutta, during the period January 1964 to December 1965 is given.

2. Various aetio-pathological factors have been discussed together with important diagnostic criteria.

3. An emphasis has been laid on the routine use of culdocentesis in doubtful cases of ectopic pregnancy. The former can save many patients suffering from pelvic inflammation from unnecessary laparotomy.

4. In treatment, a policy of immediate operation, supplemented by adequate blood transfusion is justified by the absence of mortality and minimum morbidity in this series.

5. Conservative surgery on the affected tube has not been much favoured in the present study.

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