ECTOPIC PREGNANCY

(A Study of 55 Cases)

By

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SUMMARY

Fifty five cases of ectopic pregnancy were studied in 3 years to evaluate the aetiological factors associated with this serious life-threatening problem. The rate of ectopic pregnancy was 1 in every 241 pregnancies with a gestation period of more than 28 weeks. Three-fourth of cases occurred in the 3rd decade of life, 80% had regular menses, 22% had a last abortion and 7% an earlier ectopic pregnancy. Forty per cent had infertility, more than 96% had abdominal pain, tenderness and vaginal tenderness on examination and 70% had tender cervical movements. Fifteen cases had abdominopelvic surgery, 5 cases used an IUD to postpone pregnancy, 5 cases had an MTP. Thirty seven cases had evidence of pelvic inflammation at laparotomy and transmigration of ovum was seen in 9% cases. Evidence of chronic salpingitis was seen in 62% of the specimens examined.

Introduction

During the last 25 years, a worldwide increase in incidence of ectopic pregnancy has been reported. The incidence of ectopic pregnancy in any population is determined by the number of fertile women exposed to pregnancy and the distribution of the various risk factors in the population. Recent advances in contraception, tubal surgery and in the treatment of infection all contribute to the increase in the incidence of ectopic pregnancy. Ectopic pregnancy is a dramatic gynaecological emergency with a mortality rate which is now the major cause of death in the first trimester of pregnancy. The rate due to other cause in the first trimester of pregnancy is sharply on the decline due to the advances in the clinical management of these causes of death.

An attempt is made to present the relationship between ectopic pregnancy and the different various risk factors present in our population.

Material and Methods

Fifty five cases of ectopic pregnancy who were operated upon at J.J. group of hospitals, Bombay during a period of 3 years were analysed. A detailed note was made of the past obstetric, menstrual and medical history. Stress was laid on the past contraceptive use, any pelvic

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pathology in the past or any surgery undergone by the patient. Ours is a general hospital which is attended mainly by the middle and lower sociol-economic class of women. Presenting symptoms, findings of the initial pelvic examination and during operation were noted in all cases. Colpopuncture and E.U.A. was done in 26 doubtful cases and diagnostic laparoscopy in 11 cases. Histopathological examination of the removed specimen could be done in only 26 cases to confirm the diagnosis and look for any associated evidence of inflammation of the tubes.

Results

The women were aged between 19-37 years with a mean age of 26.56 years and the maximum incidence was in the third decade of life (Table I). Of the 55 cases 81.8% had regular menstrual cycle, 16.4% had irregular cycles and only 1 case complained of lactation amenorrhoea of more than one year duration. Table II also shows that 12 cases had a last abortion—7 spontaneous and 5 induced abortion. Four cases had a repeat ectopic pregnancy in the opposite tube. Out of the 22 cases of infertility 59.1% complained of primary infertility of atleast 2 years duration. A history of abdomino-pelvic surgery was obtained in 15 cases (27.3%) 4 for ectopic pregnancy; 3 each for appendicitis, tuboplasty and sterilization and 2 for other reasons (Table III). Five cases had a last induced abortion and another 5 cases used an intrauterine device for contraception for varying durations. Two cases were operated upon for chronic pelvic inflammatory disease.

As seen in Table IV, 96.36% cases complained of pain in abdomen, 80% had vaginal bleeding of which 4 had passed a decidual cast and 63.64% had a delay in menstrual periods of 15 days or more. Syncope and nausea and/or vomitting

TABLE I
Analysis of Ectopic Pregnancy in Relation to Age of Patient

Age (Years)	Number	Per cent
<20	3	5.45
21-25	24	43.64
26-30	17	30.91
>31	11	20.00

TABLE II
Risk Factors in Relation to Ectopic Pregnancy

	Number	Per cent
A. *Menstrual History*		
Regular periods	45	81.82
Irregular periods	9	16.36
Amenorrhoea (more than 1 year)	1	1.82
B. *History of Last Abortion*	12	21.82
Spontaneous abortion	7	
Induced abortion	5	
C. *History of last ectopic Pregnancy*	4	7.27
D. *History of Sterility*	22	40.0
Primary	13	
Secondary	9	

TABLE III
Significant Past History Analysis

	Number	Per cent
A. Abdomino-pelvic Surgery	15	27.27
(1) Ectopic pregnancy	4	7.27
(2) Tuboplasty	3 (2)	
(3) Sterilization	3 (2)	
(4) Appendicectomy	3	
(5) Infertility surgery	1	
(6) Laparotomy for other reasons	1	
B. Last Induced abortion in 1st trimester	5	9.09
C. Past pelvic inflammation and operated	2	3.64
D. IUCD use (6 months-8 years)	5	9.09

TABLE IV
Analysis of Presenting Clinical Picture

	Number	Per cent
A. *Presenting Symptoms*		
(1) Abdominal pain	53	96.36
(2) Vaginal bleeding	44	80.00
(3) Amenorrhoea	35	63.64
(4) Nausea, Vomiting	22	40.00
(5) Syncope	22	40.00
(6) Fever	10	18.18
(7) Passed decidual cast	4	7.27
(8) Others	13	23.64
B. *Presenting Signs*		
(1) Abdominal tenderness	54	98.18
(2) Vaginal tenderness	52	94.55
(3) Mass in either fornix	47	85.45
(4) Tenderness on cervical movement	38	69.09
(5) Marked pallor	18	32.72
(6) Shock	8	14.55
(7) Mass in abdomen	6	10.90

were seen in 40% of cases each. Abdominal tenderness (the commonest sign on examination) was seen in 98.2% of cases, vaginal tenderness in 94.6% of cases, mass in either fornix on vaginal examination in 85.4% of cases and tender cervical movements in 69.1% of the cases. Marked pallor and shock were seen in 18 and 8 cases respectively.

At laparotomy (Table V) 96% of ectopic pregnancies were in the fallopian tube and a single case of secondary abdominal pregnancy and another of broad ligament pregnancy were seen. Fifty six per cent of ectopic pregnancies were seen on the right side and 71.7% were in the ampulla of the tube, 20.7% in the isthmus, 5.6% in the interestitial part of the tube and in a single case the pregnancy was in the fimbriae. Of the total 53 cases, 42 were ruptured ectopic pregnancies and of the 11 unruptured ectopic pregnancies 7

TABLE V
Significant Findings at Laparotomy

Findings	Number	Per cent
A. *Site of ectopic pregnancy*		
Tubal	53	96.36
Broad Ligament (R)	1	1.82
Secondary abdominal (R)	1	1.82
B. *Side of Ectopic Pregnancy*		
Right	31	56.36
Left	24	43.63
C. *Site of Tubal Pregnancy (53 cases)*		
Ampullary	38 (7)	71.70
Isthmic	11 (4)	20.75
Interititial	3	5.66
Fimbrial	1	1.88
D. *Type of Tubal Pregnancy (53 cases)*		
Ruptured	40	75.47
Tubal abortion	2	3.77
Intact tube	11	20.75
E. *Other Pelvic Pathology*		
Adhesions	22	40.00
To masses	7	12.73
Haematosalpinx	3	5.45
Endometrial cyst	2	3.64
Hydrosalpinx	3	5.45
Unilateral mullerian agenesis	1	1.82
Uterine perforation	1	1.82
Transmigration of Ovum	5	9.09

were in the ampullary region and 4 in the isthmus of the tube. One or the other evidence of pelvic inflammation was found in 37 cases. Pelvic adhesions and tuboovarian masses were seen in almost 80% of these cases. In 5 cases the corpus luteum was seen on the side opposite to the side of ectopic pregnancy (transmigration of the ovum).

Discussion

Ectopic pregnancy i.e. implantation of the fertilized ovum in sites other than the endometrium lining the uterine cavity is seen in an increasing number of women in the childbearing age group all over the world as reported by Beral (1975), Westrom (1981) and Rubin (1983). The three major contributing factors for ectopic pregnancy are factors retarding the passage of fertilized ovum, increasing the receptivity of the lining of the tube and factors intrinsic in the conceptus. Introduction of newer methods of contraception and liberal abortion laws increase the incidence of ectopic pregnancy. Westrom (1981) reports that in Sweden the rate of ectopic pregnancy had doubled itself over the last two decades. The incidence in our study was 1:241 pregnancies with a duration greater than 28 weeks and is in close agreement with two other studies of Weeks (1981) a nd Atputharajah (1982). Several authors (Beral, 1975; Westrom, 1981; Jabbar, 1980; Glebatis, 1983) have reported an increasing incidence with an increase in the maternal

age. In our study three fourths of the patients were in the third decade of their life similar to that reported by Westrom (1981).

No particular relationship was noted with the change in gravidity though one-fourth of the women were nulliparous similar to that reported by Bronson (1977). A high frequency of past abortion in women with an ectopic pregnancy have been reported. Many other authors relate this increase to the relative availability of various other methods of contraception to these at-risk women. In our study also 22% of women had a last abortion, and 4 women had a repeat ectopic pregnancy on the opposite side.

Both Beral (1975) and Brenner (1980) stress that a history of previous tubal surgery is an important cause of ectopic pregnancy. Of the 55 cases, 27% had a history of abdomino-pelvic surgery (Table III). Previous ectopic pregnancy occurred in 4 cases. Tuboplasty was done in 3 cases, 2 with previous sterilization operations done. There were 3 cases of past appendicectomy and all 3 had a right sided ectopic pregnancy. Two cases were operated upon for chronic pelvic infection and one each had undergone laparotomy for subacute intestinal obstruction and correction of retroversion of the uterus (Ventral suspension). There were 5 cases of voluntary termination of pregnancy. Only 5 cases had used an IUD. Glebatis (1983) argues whether the apparent increase in ectopic pregnancy in IUD users is real or functional as the extrauterine pregnancies are not prevented by it, unlike the intrauterine ones which are almost totally prevented.

The presenting symptoms and signs as seen from Table IV are in agreement with Brenner (1980). Out of 55 cases, 53 cases had pain in abdomen, 80% had vaginal bleeding and 64% complained of amenorrhoea of more than 15 days being overdue. Seven per cent of cases passed a decidual cast per vaginum. On examination abdominal tenderness, vaginal tenderness and a mass in either fornix were seen in 90% of the cases. Tenderness on cervical movements, an important diagnostic sign was elicited in 70% of the cases. The agglutination-inhibition slide pregnancy test was positive in 60% of the cases. Culdocentesis is a valuable diagnostic procedure and this is further confirmed as it was positive (producing non-clotting blood) in 25 out of 26 cases where it was done.

At laparotomy, the various hypothesis about the site and side of ectopic pregnancy and the frequency of different implantation sites in the fallopian tube are once again confirmed (Table V). Out of 53 tubal pregnancies, in 40 cases the tubes had ruptured, in 11 cases there was intact tube. Of the 11 cases, 70% were in the ampulla and 40% in the isthmic portions of the tube.

In 37 (67.3%) cases one or many evidence of pelvic inflammation were seen by the naked eye. Unfortunately only 26 of the tubal specimens could be subjected to histopathological examination and in 16 cases (62%) an evidence of chronic salpingitis was reported. Our percentages are higher than those of Hallatt (1976) and Bronson (1977) and can be explained by the higher incidence of tubal infection in the poorer socio-economic subjects forming our study group.

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