A REVIEW OF 95 CASES OF ECTOPIC PREGNANCIES

by

SHARMISHTHA C. PATEL,* M.D., D.R.C.O.G.

and

K. SANKARI,** M.D., F.R.C.O.G.

The subject of ectopic pregnancy is very fascinating as the clinical picture varies widely in different cases. The woman may present herself in a collapsed state with hardly palpable pulse or recordable blood pressure or she may come walking to a gynaecologist with a dull ache in the lower abdomen.

It has been noted by many workers that the incidence of ectopic pregnancy is on the increase. The reason attributed is the use of antibiotics in the treatment of inflammation which leaves partially blocked tubes (Krohn, 1952), particularly in tuberculous salpingitis (Halbrecht, 1957).

There were 95 cases of ectopic pregnancy treated at the Nanavati Hospital, Bombay, from January, 1955 to December, 1966. During this period there was a total of 12,010 deliveries and 1652 abortions, giving an incidence of 1 in 144 pregnancies. (Table 1).

TABLE I

No. of Deliveries	12,010
No. of Abortions	1,652
No. of Ectopics	95
Ratio of Ectopic to pregnancies ..	1 : 144

A review of literature shows that Greenhill estimates the incidence as 1:70 or 80 pregnancies in 1965 in America as compared with Schumann's estimate of 1:303 pregnancies in 1918. Eastman (1961), reports an increase from 1:118 in 1942 to 1:83 in 1959.

In this series ectopic gestation occurred between the ages of 18 and 43 years 68.4 per cent (65 cases) occurred between 25-30 years. Table II gives the parity incidence,

TABLE II

Obstetric Record	No. of cases	Percentage
Para 0	45	47.4
Para 1+2	31	32.8
Para 3+4	13	13.7
Para 5 and over ..	6	6.3
Patients with one or more previous abortions ..	14	14.7%
	No. of abortions 30.	
History of previous ectopic	7	7.4

47.4 per cent had the ectopic pregnancy occurring in the first gestation and 32.8 per cent were during the first and second pregnancies. Fourteen patients gave

*Asst. Hon. Gynaecologist.

**Hon. Gynaecologist.

Dept. of Gynec. & Obst., Nanavati Hospital, Bombay 56.

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a history of 30 abortions between them. These patients had either been sterile for a long time, or had a previous abortion. None of them had induced abortions which might have lead to subsequent inflammation of the tube resulting in ectopic pregnancy. In this series it was not possible to correlate the causation of ectopic due to genital infection. There were 2 unmarried mothers and in 2 patients the ectopic pregnancy occurred within 2-4 months of a delivery. Tubal spasm probably played a part in the causation of ectopic. Grant (1962) found that the ectopic rate was 12 times higher in women in whom a previous tubal insufflation had revealed tubal spasm.

Out of the 95 patients, 43 were sterile (45.3 per cent). Amongst these, 39 had primary sterility and the rest had secondary sterility. The incidence of ectopic pregnancies in infertility clinic patients is reported as 1.8 per cent or 6 times higher than the overall rate (Bender, 1956). Fifteen patients gave a history of dilatation and curettage and Rubins test done on them. Ventral-suspension was done on 3 patients and 2 cases had appendicectomy. Seven patients had a previous ectopic gestation. Grant (1962) has stressed the fact that the residual tube may be damaged during the first tubal pregnancy if the free and clotted blood in the peritoneal cavity is not mopped out carefully.

Clinical aspects of ectopic gestation

Manifestations of an unruptured tubal pregnancy are not characteristic. Almost all the symptoms and signs produced by tubal pregnancy are caused by ultimate rupture of the tubal wall or by tubal abortion, with resultant haemorrhage into the peritoneal cavity. Various signs and symptoms of ectopic gestation in the present series have been reviewed in Tables III and IV.

TABLE III

Symptoms

		No. of cases	per-centage
1	Abdominal pain ..	92	96.8
2.	Pain associated with vomiting ..	38	40
3.	Pain associated with fainting ..	35	36.8
4.	Vaginal bleeding ..	75	78.9
5.	Amenorrhoea ..	88	92.62
6.	Shoulder pain ..	15	15.8
7.	Bladder and rectal symptoms ..	19	20

TABLE IV

Diagnosis in Relation to Physical Findings.

1.	Shock	15	15.8%
2.	Abdominal mass ..	6	6.3%
3.	Abdominal tenderness	75	78.9%
4.	Rigidity and spasm	40	42.1%
5.	Tenderness on moving the cervix ..	68	71.5%
6.	Adnexal mass ..	65	68.4%
7.	Cul-de-sac mass ..	40	42.1%
8.	Enlarged uterus ..	25	26.3%

Physical Findings

Amenorrhoea followed by pain and then bleeding were the cardinal symptoms of ectopic gestation. Next came the anomalous uterine bleeding in about 78.9 per cent. There was a palpable mass in 68.4 per cent of cases. Other symptoms in order of frequency were vomiting in association with attacks of pain, fainting during attacks of pain, blad-

der and rectal symptoms and collapse. Shock occurred in only 15 cases. Shoulder pain was complained of in 15.8 per cent.

A rising pulse rate under observation helps to clinch the diagnosis. Sudden fall in haemoglobin percentage and red blood cell count without much change in the clinical picture proved to be of great value. Excruciating pain on moving the cervix is one of the most important diagnostic signs, even in the absence of a palpable adnexal mass.

Culdocentesis was done as a routine in all cases. In 84.2 per cent of cases, (80 patients), the puncture was positive and in 15.8 per cent, (15 cases), it was negative. In spite of negative punctures, exploration was carried out, since clinically it appeared to be ectopic pregnancy. Colpotomy and culdoscopy help to make a definite diagnosis.

On admission, routine blood counts and grouping were done. A correct diagnosis was made in 85 cases as shown in Table V.

TABLE V

Diagnosis

Correct pre-operative diagnosis	..	91
Wrong diagnosis ..	..	4
(a) appendicitis ..	2	
(b) Pelvic inflammation	2	
Mistaken diagnosis		
(a) Corpus luteum haematoma ..	3	5
(b) Twisted ovarian cyst ..	1	
(c) Haemorrhage from ruptured broad ligament vein	1	

Three cases of corpus luteum haematoma and 1 case of twisted ovarian cyst were mistaken for ectopic. An interesting case of heamoperitoneum due to a ruptured vein in the left broad ligament was also mistaken for an ectopic. All these cases gave a positive culdocentesis. Eastman states that the preoperative diagnosis of ruptured tubal pregnancy is shown at operation to be wrong in about 20 per cent of cases.

Of the 95 cases, 39 cases came as acute ectopics, but only 15 cases were in a state of severe shock. These cases were operated upon within 2 hours of adminission. The rest of the cases were operated after an observation of 12-48 hours.

Management

Urgent surgical treatment is required when the patient is admitted in a state of collapse. Blood transfusion is arranged for and started. The theatre in the meantime is prepared. The transfusion is continued during the operation and afterwards for as long as is necessary.

All the 15 acute cases were done under general anaesthesia. In acute cases, as far as the operation is concerned, haemostasis should be obtained with removal of minimum of tissue.

As a rule, therefore, only the affected tube is removed.

Observations at time of operation

At laparotomy, rupture of the tube was noted in 58 cases, tubal abortion in 25 cases and tubal mole in 12 cases. The left tube was affected in 52 cases and the right in 43. There were 2 cases of early secondary abdominal pregnancy.

Old adhesions, suggestive of chronic pelvic inflammation, were

present in 6 cases. The opposite tube required salpingostomy. Haematosalpinx of the opposite tube was present in 3 cases which was evacuated and left alone.

There was a prolonged interval between the occurrence of ectopic pregnancy and laparotomy in 4 cases. The organised clots, the walling off of the pelvic haematocele by intestinal adhesions and the complete disruption of the affected tube made it difficult to evaluate the exact pathology.

There were 2 cases of combined intra-uterine and tubal pregnancy. One case had a dilatation and curettage done for incomplete abortion. Two weeks following it she had an operation for tubal abortion. The second case was operated for ruptured ectopic and the intra-uterine pregnancy progressed well.

Reconstruction of a damaged tube and partial excision should be considered where the patient is young and sterile. Jeffcoate (1955) has suggested removal of tube and ovary of the same side to enhance the chances of future pregnancy. The success of conservative tubal surgery depends on complete haemostasis and asepsis. It should be done if the gravid tube is the only tube present. In this series, it was attempted in 2 cases but neither of them have conceived till now. The place of additional surgery like appendicectomy and removal of the opposite tube is a disputed point. We had to do appendicectomy in 7 cases, and in 2 cases the opposite infected tube was removed without any ill effects. But, the general condition of these patients was good. In the chronic cases, plication of the round ligament was done as a routine to prevent the uterus falling backwards. Forty-seven patients required blood transfusion.

Histopathological study

In 35 cases, the tube was perfectly normal except for the ectopic gestation. Hence they were not sent for pathological examination. Of the remaining 60 cases, 26 tubes showed evidence of inflammation, of which 2 had definite tuberculous infection. Two tubes showed endometriosis. In the remaining 32 cases, there was normal tubal structure with minimal inflammatory cell infiltration. Bone and Greene (1961), state that both acute reaction with swollen rugae, leucocytic infiltration in all layers and engorged blood vessels with leucocytes and desquamated epithelium in the lumen and subacute and chronic reaction with lymphocytic infiltration of all layers may be a response to ectopic nidation. Heera and Rosario (1967) reviewed 37 tubes histologically examined. There was evidence of inflammation in only 24.4 per cent. Eastman (1961) also concludes from a study of the literature that salpingitis is responsible for one quarter of the cases of ectopic and that an important factor in the causation of ectopic pregnancy was defective postembryonic development of the tubes.

We agree with Ashermann (1955) who believes that functional disturbances of the propelling mechanism of the tubes are to blame for ectopic pregnancy rather than the

pathological changes in the tubes themselves.

Mortality and Morbidity

There was not a single death in this series. Temperature was elevated from 99-100.5 F°. in most of the cases during the first two post-operative days. Two cases had paralytic ileus which responded to continuous gastric aspiration and intravenous fluids in 48 hours. There was no wound dehiscence but mild wound sepsis was present in 14 cases.

Follow-up: Unfortunately follow-up was not satisfactory. Two patients came with repeat ectopic. Fourteen cases had normal vaginal deliveries and 3 cases had 4 abortions. Four patients have not conceived again.

Conclusion and Summary

Ninety-five cases of ectopic pregnancy treated during a 12 year period (1955-1966) are reported. A total of 13,662 pregnancies were treated, giving an incidence of 1:144; 68.4 per cent occurred between the ages of 24-30 years. Forty-three women (45.2 per cent) were sterile. Fourteen patients (14.7 per cent) gave a history of 30 spontaneous abortions. Seven patients had a previous ectopic. Sixty tubes were subjected to histological study. The other 35 tubes appeared perfectly normal and hence were not sent.

Definite cause of ectopic could be ascertained only in 28 cases. Twenty-six tubes definitely showed histological evidence of infection, of which 2 were tuberculous. Two cases had endometriosis in the tube. All other tubes appeared normal.

We agree with Ashermann (1955) who believes that the autonomic dysfunction can cause either sterility or ectopic pregnancy and can explain the fact that infertility or ectopic pregnancy often occur in the same woman, either one coming first, or that tubal pregnancy often repeats itself in the same woman, even if the second tube was found intact during the first operation. If it is true that the incidence of ectopic gestation is increasing, one should not blame antibiotics alone but rather the emotional strain.

Early diagnosis can be made only when a high index of suspicion is coupled with a few early symptoms. To help make a definite diagnosis of ectopic pregnancy, three vaginal procedures, colpotomy, culdocentesis and culdoscopy, are available.

Operation should be carried out without delay. There were no deaths in this series. The most important measures which can be taken to achieve future fertility are early operation, removal of blood clot, conservation of the residual tube if it is the only one present and a patency test of the residual tube some weeks after the operation. A broad spectrum antibiotic should be given if the post-operative course is febrile.

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