

ECTOPIC PREGNANCY—AN 11 YEAR CLINICAL STUDY

By

MELWYN D'MELLO, H. T. MANORAMMA RAO, ASHA DEVI RAI AND PATRIC J. PINTO

SUMMARY

An 11 year clinical study was undertaken at Govt. Lady Goschen Hospital and Kasturba Medical College, Mangalore, during the years June 1976 to June 1987.

We had 121 patients with an ectopic pregnancy during this period, giving an incidence of 1:214.

In this article we have discussed the aetiological factors involved, as also the clinical features, diagnosis and management of these patients.

Introduction

The incidence of ectopic pregnancies is on the rise. This is on account of a number of factors, viz. increased use of intra-uterine devices, increased incidence of pelvic inflammatory disease, increased surgery on the tubes, and a recent contributory factor is *in-vitro* fertilisation and embryo transfer.

Since an ectopic pregnancy presents very often in an atypical fashion, diagnosis and treatment is often delayed. However, new and sophisticated diagnostic aids such as laparoscopy, β -HCG assay and ultrasound help in early diagnosis. It is thus possible to carry out planned early surgery and preserve the reproductive function, for, attainment of motherhood is the most cherished desire in every female. An ectopic pregnancy jeopardises this wish and may permanently impair her reproductive capacity.

From: Dept. of Obstetrics and Gynaecology, K.M.C. Mangalore.

Accepted for publications on 27-6-88.

Incidence

An 11 year clinical study was undertaken at Govt. Lady Goschen Hospital and Kasturba Medical College, Mangalore during the years June 1976 to June 1987.

Out of a total number of 25,924 deliveries during this 11 year period, there were 121 ectopic pregnancies, thus giving us an incidence of 1:214. Some other incidences reported in Indian literature are: 1:266—Pendse (1981), 1:219—Mitra *et al* (1980). Overall, the incidence in India is comparatively lower than that in the Western countries. Some series abroad have reported an incidence as high as 1:32—Gonsalez and Waxman (1981), and 1:45—Weinstein *et al* (1983), although a few series in India like Mokadam and Kalappa, 1968 (1:89) have also reported high incidences.

Age Group

An ectopic pregnancy can occur in any woman in the reproductive age group.

In our series, the youngest patient was 18 years old and the oldest was 42 years old. The maximum number of patients were in the age group 21-30 years (62% of cases).

Parity

Pendse (1981) reported that primigravidas made up 19% of patients. In our series, 18.2% were primigravidas with second gravidas forming the largest group (31.1% of patients).

Aetiological Factors in Ectopic Pregnancy Infertility

Primary infertility was seen in 9 patients (7.5%) and secondary infertility was seen in 36 patients (30%) with one patient having been infertile for 11 years. Mitra *et al* (1980) reported an incidence of 55.2% of infertile patients.

Intra Uterine Devices

The increased use of intra uterine devices as a method of contraception has resulted in the increased incidence of ectopic pregnancies, because the intra-uterine device's protection against intra-uterine pregnancy (99.5%) is far greater than that for tubal pregnancy (95%) and it offers no protection against ovarian pregnancy. Thus the ectopic pregnancy to intra-uterine pregnancy ratio increases by 3 to 7 fold and the occurrence of ovarian pregnancies has risen in comparison to both. In our series, 6.6% of patients gave a history of having used an intra-uterine device, with 2 patients having the device (Lippes loop) in situ at the time of occurrence of the ectopic pregnancy.

Previous Sterilisation

Tubectomy failure either due to improperly performed procedure or due to

recanalisation has resulted in an increased incidence of ectopic pregnancies. Pendse and Kanwarani reported in 1983, 5 cases following tubal ligation giving an incidence of 10.8%. We had no fewer than 14 patients (11.5%) who had undergone tubectomy earlier, one of them having the ectopic gestation 10 years after her sterilisation. With the present day emphasis being on this mode of permanent sterilisation, tubectomy failure is becoming an increasingly important aetiological factor, and the fact that the patient had undergone previous sterilisation may cause us to overlook the possibility of an ectopic pregnancy.

Previous Abortions

Abortions, either spontaneous or induced, can result in perisalpingitis and peritubal adhesions and can lead to an increased incidence of ectopic pregnancies. In our series, 20.6% had at least one spontaneous abortion and 6.6% had an induced abortion.

Pelvic Inflammatory Disease

This is considered to be one of the most important factors and is assuming a premier place as an aetiological factor especially in the West where its occurrence has been on the rise. The use of antibiotics has increased the pregnancy rate following treatment of pelvic inflammatory disease and hence has led to an increased number of pregnancies in the damaged tubes. Westrom (1975) has stated that patients treated for pelvic inflammatory disease had the risk of developing an ectopic pregnancy increased 7 to 10 fold. Five of our patients (4.1%) gave a definite history of having had pelvic inflammatory disease.

Repeat Ectopic Pregnancy

Jeffcoate has stated that women who became pregnant following an ectopic pregnancy had 40 times more risk of developing an ectopic pregnancy subsequently. We had 5 patients (4.1%) who had an ectopic pregnancy previously.

Clinical Features

The diagnosis of an ectopic pregnancy can be one of the most difficult to make because no specific sign or symptom can be considered to be pathognomonic. Although all the classical symptoms of amenorrhoea, acute abdominal pain and vaginal bleeding are seen only in a few patients, at least 2 of the 3 above symptoms are seen in almost all the cases. As listed in Table I, the commonest symptom were pain in abdomen (90%), amenorrhoea (67.8%) and vaginal bleeding (67%). The absence of amenorrhoea as seen in 32.2% of cases may cause a delay in the diagnosis. Pallor and tenderness per abdomen were the commonest signs. Painful cervical movements were seen in 57% of cases; although the incidence varies in different series. If present, it can aid in the diagnosis.

Diagnosis

Following a detailed history and clinical examination, 91 patients (75.2%)

were subjected to culdocentesis. Due to the lack of modern diagnostic methods like β -HCG assay and ultrasound we had to resort to culdocentesis, to aid in the diagnosis. Most series report a true positive result very similar to ours which was 82.4%. Culdocentesis was not done in 23 patients as the diagnosis was clinically obvious and in 7 patients laparoscopy was used for the diagnosis. The results of the procedure are tabulated in Table II.

TABLE II
Result of Culdocentesis

Result	No. of patients	Percentage
True Positive	75	82.4
False Positive	3	3.3
False Negative	13	14.3

Management

All the 121 patients with ectopic underwent laparotomy. In 114 of them (94.2%) the pregnancy was in the tube while the other 7 were either in the ovarian (3 cases), rudimentary horn (1 case) or secondary abdominal pregnancies (3 cases).

In 85 patients (70.2%) the tubal pregnancy had ruptured and in only 13 patients (10.7%) it was intact.

TABLE I
Signs and Symptoms

Symptoms	Percentage	Signs	Percentage
Pain in Abdomen	90.1	Pallor	73.5
Amenorrhoea	67.8	Shock	21.5
Vaginal bleeding	66.9	Fullness in abdomen	33.9
Syncope	36.4	Tenderness per abdomen	76.0
Vomiting	28.4	Fullness in fornix	45.5
Micturition sympt.	21.5	Pelvic Mass	53.7
Rectal Symptoms	6.6	Cervical excitation	57.0
Shoulder pain	4.1		

Tubal abortion had occurred in 23 patients (19%). There was an increased occurrence of tubal pregnancies on the right side (57.85%) as compared to that of the left (42.15%). The frequency of the occurrence at the various sites is listed in Table III.

TABLE III
Situation of the Ectopic Pregnancy

Site	No. of Patients	Percentage
TUBAL	114	94.2
Interstitial	7	5.8
Isthmial	21	17.4
Ampullary	75	62
Fimbrial	11	9.1
EXTRA TUBAL	7	5.8
Rudimentary horn	1	0.8
Ovarian	3	2.5
Secondary Abdominal	3	2.5

Treatment

Salpingectomy was the commonest operation performed on our patients and was done in 91% of them. The high incidence of ruptured tubes in our series necessitated this line of management. The ipsilateral ovary was also removed in 47 of these patients. Conservative surgery for the tube was done in 5 patients (3 underwent partial salpingectomy and in 2 patients a linear salpingostomy was done). Removal of the secondary abdominal pregnancy was done in the 3 patients who had it. Three patients required hysterectomy as they had ruptured interstitial pregnancies and were multigravidas with living children. In multiparas who did not desire further child bearing, sterilisation was performed.

Due to the non-availability of blood, autohaemotransfusion of blood collected from the peritoneal cavity was done in

6 patients. No untoward reaction was noted in any of them.

Mortality

Only one patient was lost in our series as she was admitted in a moribund condition, giving a mortality rate of 0.8%. A mortality rate varying from 1 to 3% is common for most series.

Conclusion

The diagnosis of ectopic pregnancy should be considered in all women in the reproductive age group presenting with abnormal uterine bleeding and/or pain in abdomen. In spite of the lack of modern diagnostic aids like β -HCG assay and ultrasound the dictum "Think Ectopic" has held us in good stead. Thus vigilance, prompt diagnosis and management can help save, for many a patient, not only her life but even her tube.

Acknowledgement

We wish to thank the Superintendent, Govt. Lady Goschen Hospital, Mangalore for his kind permission to use the Hospital records and clinical facilities for our study.

References

1. Gonzalez, F. A. and Waxman, M.: *Diagn. Gynec. Obstet.* 3: 101, 1981.
2. Jeffcoate Sir Norman: *Principles of Gynecology*, 4th Edition, 1975.
3. Mitra, S., Sikdar, K. and Mandal, G. S.: *J. Obstet. Gynec. India.* 30: 24, 1980.
4. Mokadam, N. and Kalappa, R.: *J. Obstet. Gynec. India.* 18: 353, 1968.
5. Pendse, V.: *J. Obstet. Gynec. India.* 31: 100, 1981.
6. Pendse, V. and Kanwarani, K.: *J. Obstet. Gynec. India.* 33: 122, 1983.
7. Weinstein, L., Merri, B., Morris, D., Datters, D., Donald Christian: *Obstet. Gynec.* 61: 698, 1983.
8. Westrom, L.: *Amer. J. Obstet. Gynec.* 121: 707, 1975.