

## ECTOPIC PREGNANCY

(A Review of 110 Cases)

by

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No other gynaecological lesion produces as variable and atypical a picture as ectopic pregnancy. Quite often delayed or mistaken diagnosis delays the logical surgical treatment and endangers the life of the patient. The object of this paper is to analyse various aspects of ectopic pregnancy as reviewed from clinical records.

### Incidence

The incidence of ectopic pregnancy has increased over last 20 years. The increase in the incidence is due to a number of factors: increased frequency of tubal infections, increase in number of operations done on the fallopian tube and better facilities for diagnosis and treatment.

One hundred and ten cases of ectopic pregnancy were admitted and treated at Zanana Hospital, Udaipur between 1970 to 1978. During this period there were 77,276 admissions to the hospital, eccyesis formed 0.14% of the admissions. During the same period 23,048 deliveries, 1703 M.T.Ps and 4560 abortions were conducted in the hospital giving the total of 29,311 pregnancies. Incidence of eccyesis in relation to intrauterine pregnancy was 1:266.

There is wide variation in the incidence

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of ectopic pregnancy reported by Western as well as Indian authors. This is so because the incidence varies from place to place, from hospital to hospital depending upon the area drained and also because the incidence is calculated in relation to such variables as total admissions, intrauterine pregnancies, abortions, deliveries, live births etc. Some of the incidences reported in Indian literature are: 1:300 full term deliveries by Upadhyay *et al* (1955), 1:333 full term deliveries by Mitha (1965), 1:89 viable deliveries and 1:14 abortions by Mokadam and Kalappa (1968), 1:72.4 deliveries by Wagh and Patel (1968), 1:370 viable confinements by Ghose and Ghosh (1968) and 1:250 deliveries by Das (1970). Incidences reported in Western literature are also equally variable; 1:26 full term deliveries by Becham *et al* (1956), Eastman in 1973 found it to be 1:100-150 infants delivered, 1:300-1000 deliveries after 28 weeks by Jeffcoate (1962), 1:300 pregnancies by Peel (1963), 1:70 pregnancies by Greenhill (1965-66), 1:64 live births by Bobrow and Bell (1962) and 1:28 by Douglas (1963) from Jamaica.

### Age Group

Eccyesis may occur at any time from menarche to menopause. In this study, the youngest patient was 17 years and oldest was 49 years old, 27.2% cases were in 10-20 year age group, 61.8% in 21-30 years, 9.0% in 31-40 and 1.8% in 41-

50 year age group. Average age was 26.5 years, which in most of the reported series varies from 25.5 to 28.2 years (Mitha, 1965). Though the commonest age group for eccyesis is the third decade, surprisingly high figure of 27.27% in the second decade in our series may be taken to reflect the still prevalent custom of early marriages and consequent early pregnancy.

#### Parity

In the present series review of previous reproductive performance was studied and it was found that 21 (19%) were primigravida, 34 (30.90%) were second 17 (15.45%) were third, 17 (15.45%) were fourth, 7 (6.36%) were sixth, 4 (6.36%) were seventh and 2 (1.8%) were eighth gravida. Highest number of patients were second gravida. History of no alive issue but pregnancy wastage was observed in 15 (13.6%) cases.

#### Infertility

Ectopic pregnancy follows a period of infertility in good number of cases. Primary sterility was present in 6 (5.4%) cases. Secondary sterility of 3 to 5 years duration was present in 22 (20%) cases, of 5 to 10 years in 7 (6.3%) and of more than 10 years in 11 (10%) cases. Longest period of childlessness of about 17 years, without the use of contraceptives, was present in a 47 year old woman in our series and this factor was largely responsible for delay in diagnosis in this case. Significant incidence of prolonged infertility and its causal relationship to ectopic pregnancy has been observed by several authors: Eastman (1956), Beacham *et al* (1956), Iffy (1961, 1963), Greenhill (1965), Ghose and Ghosh (1968), Patel and Sankari (1968) and Das (1970).

#### Previous and Intercurrent Conditions

History of treatment for sterility preceding ectopic gestation was present in 14 (12.7%) cases. In 2 cases ectopic pregnancy occurred with I.U.C.D. in place.

History of tuberculosis, either previously treated or diagnosed during the present pregnancy, was observed in 10 (0.09%) cases. In 1 case (0.9%) there was a big broad ligament fibroid associated with ectopic gestation which may have caused it. Abdominal operations on genital organs had been done in 8 (7.2%) of our cases, out of which 3 had tubectomy, 3 had previous Laparotomy for ectopic, 1 had unification operation for double uterus and 1 had previous caesarean section.

Diseases and operations involving the pelvic organs usually cause narrowing, kinking or partial blockage of fallopian tubes and this factor may be directly responsible for causation of eccyesis.

#### Clinical Features

No specific symptom or sign can be said to be pathognomonic of eccyesis, but combination of various findings may be highly suggestive.

The classical picture of amenorrhoea, acute pain in abdomen, vaginal bleeding with signs of internal haemorrhage was seen in only 21 (19.09%) cases, but 2 of the 3 cardinal symptoms were present in 67 (60.7%) cases. The clinical picture is dependent on several factors, the most important factor being the extent and time taken for disturbance to occur in ectopic gestation. More extensive and rapid is the disturbance, more clear is the clinical picture. Hence undisturbed ectopic gestation is likely to be missed in majority of cases as clinical features are vague. The incidence of various symptoms is shown in Table I.



TABLE I  
Symptoms

| Symptom                                  | No. of cases | Per cent |
|--|--------------|----------|
| Abdominal Pain                           |              |          |
| Acute                                    | 81           | 73.6     |
| Chronic                                  | 25           | 22.7     |
| Amenorrhoea                              | 80           | 72.7     |
| Vaginal bleeding                         | 72           | 65.4     |
| Fainting attacks                         | 28           | 25.4     |
| Shoulder pain                            | 4            | 3.6      |
| Dysuria                                  | 20           | 18.1     |
| Retention of urine                       | 3            | 2.7      |
| Fever                                    | 8            | 7.2      |
| Vomiting                                 | 21           | 19.0     |
| Rectal tenderness                        | 2            | 1.8      |
| Burning in lower abdomen and leucorrhoea | 1            | 0.9      |

Acute pain in lower abdomen was the most common presenting complaint and was present in 81 (73.63%) cases. The cause of the acute pain is sudden stretching and rupture of the tube or ovary. It was present in all the cases of tubal rupture in the present series. Chronic or dull pain appears to be due to slow distension and leakage from the fallopian tube as it was seen in the majority of the cases of tubal mole and tubal abortions with formation of pelvic haematocele. No history of pain in 4 cases (3.6%) appears to be due to undisturbed nature of the tubal pregnancy in 2 cases and pain must have been overlooked by the 2 patients because of individual differences in pain threshold. Shortest duration of pain was 4 hours and longest duration of chronic pain was 8 weeks.

Amenorrhoea was present in 80 (72.7%) cases. The incidence is comparable to incidence given by Peel (1963), Ghose and Ghosh (1968), Roy Chowdhary (1968), Mokadam and Kalappa (1968) and Eastman (1956).

Vaginal bleeding of variable pattern was present in 72 (65.4%) cases. According to Eastman (1956) and Peel

(1963) it was found in 75% cases. Our incidence is comparable with incidence of 63.4% cases of Webster *et al* (1965), 63.2% Wagh and Patel, and 69.8% cases of Makadam and Kalappa (1968). Amount of vaginal bleeding was scanty to moderate. Incidentally, in 1 case bleeding had started after I.U.C.D. insertion 2 months previously. History of passing some mass (? decidua cast) was present in 3 cases, 2 of whom had evacuation of doubtful incomplete abortion elsewhere, prior to admission.

Insignificant complaints like leucorrhoea and burning in abdomen with no history of amenorrhoea was present in 1 case who came for interval sterilisation and a tubal pregnancy in undisturbed state was accidentally discovered.

Various physical findings were as shown in Table II.

TABLE II  
Physical Findings

| Physical findings            | No. of cases | Per cent |
|------------------------------|--------------|----------|
| <i>General:</i>              |              |          |
| Clearcut picture of shock    | 16           | 14.5     |
| Generalised pallor           | 93           | 84.5     |
| Fast and low volume pulse    | 96           | 87.2     |
| Air hunger                   | 6            | 5.4      |
| <i>Local-Abdominal:</i>      |              |          |
| Tenderness in lower abdomen  | 98           | 89.0     |
| Abdominal mass               | 28           | 25.4     |
| Fullness in lower abdomen    | 30           | 27.2     |
| Abdominal distension         | 18           | 16.3     |
| Abdominal rigidity           | 6            | 5.4      |
| Distended bladder            | 3            | 2.7      |
| <i>Local-Vaginal:</i>        |              |          |
| Painful cervical movements   | 95           | 86.3     |
| Fullness in posterior fornix | 80           | 72.7     |
| Adnexal or cul-de-sac mass   | 60           | 54.5     |
| Enlarged uterus              | 58           | 52.7     |

On general examination, in the absence of shock, the most suggestive signs were pallor and fast and low volume pulse. On abdominal examination the most common sign was tenderness in lower abdomen. Painful cervical movements were present in 95 (86.3%) cases, this sign along with suggestive history and fullness of posterior fornix was most helpful in arriving at the correct diagnosis of eccyesis.

#### Diagnosis

In the present series the diagnosis was correct in 98 (89%) cases. Wrong diagnosis in 12 (11%) cases is as follows: Three cases had acute abdomen opened on surgical side. Two cases who had advanced abdominal pregnancy were diagnosed as intrauterine deaths. One case was diagnosed as having fibroid uterus undergoing infection and degeneration as she was above the age of 40 years. In one case M.T.P. had been done 5 days prior to admission and hence diagnosis of ectopic pregnancy was missed. One case had evacuation of incomplete abortion prior to admission and was diagnosed as shock due to incomplete abortion. Two cases were diagnosed as post-tubectomy pelvic inflammation and tubo-ovarian masses. Two cases were diagnosed as unresolved tubo-ovarian masses.

Diagnosis was based on symptomatology, clinical picture, blood picture, sudden change in general condition while under observation, examination under anaesthesia, colpocentesis and lastly laparotomy. Decidual reaction in endometrial curettage helped in diagnosis of 3 cases who were initially diagnosed as unresolved tubo-ovarian masses. Colpocentesis helped in diagnosis in 85 (77.2%) cases. In 2 cases it gave false negative results causing delay in diagnosis. Delay in diagnosis was the cause of death in 1 case.

Various types and sites of eccyesis as diagnosed and confirmed during laparotomy are shown in Table III. Surpri-

TABLE III  
Types and Sites of Eccyesis

|                                 | No. of cases | Per cent |
|---------------------------------|--------------|----------|
| <i>Sides:</i>                   |              |          |
| Right                           | 55           | 50.0     |
| Left                            | 37           | 33.6     |
| <i>Tubal:</i>                   |              |          |
| Tubal Rupture                   | 37           | 33.6     |
| Ampullary                       | 26           | 23.6     |
| Isthmic                         | 9            | 8.1      |
| Cornual                         | 3            | 2.7      |
| Interstitial                    | 1            | 0.9      |
| Tubal Abortion                  | 32           | 29.0     |
| Tubal Mole                      | 16           | 14.5     |
| Secondary Abdominal             | 7            | 6.3      |
| <i>Rudimentary or accessory</i> |              |          |
| horn                            | 4            | 3.6      |
| Undetermined                    | 5            | 4.5      |
| Secondary broad ligament        | 2            | 1.8      |
| Ovarian                         | 5            | 4.5      |
| Bilateral                       | 2            | 1.8      |

singly 1 case of tubal abortion showed vesicular mole.

#### Treatment

The treatment of eccyesis is always surgical, earlier it is carried out better it is. Various surgical procedures carried out are as shown in Table IV.

Surgical treatment should always be combined with replacement of blood loss by blood transfusion.

#### Mortality

There were 3 (2.7%) maternal deaths. Two patients died due to irreversible delayed shock and 1 died due to pulmonary embolism four hours after operation.

#### Comments

Ectopic pregnancy is the most common gynaecological Intraabdominal emer-



TABLE IV  
Surgical Procedures

|   | No. of cases |
|---|--------------|
| Total unilateral salpingectomy                                      | 12           |
| Total unilateral salpingo-oophorectomy                              | 75           |
| Excision of cornu with ipsilateral salpingo-oophorectomy            | 2            |
| Unilateral oophorectomy   | 3            |
| Excision of rudimentary horn with ipsilateral salpingo-oophorectomy | 3            |
| Hysterectomy with bilateral salpingo-oophorectomy                   | 3            |
| Removal of gestation sac and placenta                               | 11           |
| Additional procedure  |              |
| Tubectomy   | 26           |
| Appendicectomy  | 2            |
| Removal of contralateral diseased tube                              | 6            |

gency. The diagnosis is frequently delayed or occasionally mixed, chiefly because of paucity of pathognomonic signs and symptoms.

The much described diagnostic triad of symptoms was found in 19% cases, but at least 2 of these are present in 60% cases. The commonest and most dependable sign on vaginal examination was tender cervical movements.

Prompt examination under anaesthesia and culdocentesis on slightest suspicion is most helpful in coming to the diagnosis of ectopic pregnancy. Laparotomy is the only method of confirming the diagnosis (in the absence of facilities for laparoscopy and culdoscopy) and treatment.

Mortality rate in our series is no doubt high but the factors responsible are, (1) lack of proper medical facilities at the periphery, (2) poor socioeconomic and nutritional status, (3) inadequate transport and communication, and (4) diffi-

culty in procuring blood and sometimes even consent for operation.

#### Summary

One hundred and ten cases of ectopic pregnancy seen at Zanana Hospital, Udaipur between 1970 and 1978 have been reviewed. Incidence, age group distribution, clinical features and treatment of ectopic pregnancy have been reviewed and pertinent references have been listed.

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#### References

1. Beacham, W. D., Webster, H. D. and Beacham, B. W.: *Amer. J. Obstet. Gynaec.*, 72: 830, 1956.
2. Beacham, W. D., Hernquist, W. D., Beacham, B. W. and Webster, H. D.: *Amer. J. Obst. Gynec.*, 84: 1257, 1962.
3. Bobrow, M. L. and Bell, H. G.: *Obstet. Gynaec.*, 20: 500, 1962.
4. Das, R. K.: *J. Obstet. Gynaec. India*, 20: 208, 1970.
5. Douglas, C. P.: *Brit. Med. J.*, 2: 838, 1963.
6. Eastman, N. J.: *William's Obstetrics*, ed. 14th 1973, New York, Appleton-Century-Crofts Inc., p. 536.
7. Ghose, N. and Ghosh, M.: *J. Obstet. Gynaec. India*, 18: 375, 1968.
8. Greenhill, J. P.: *'Obstetrics'*, ed. 12th, 1960, Philadelphia, W. B. Saunders Co., p. 409-410.
9. Greenhill, J. P.: *Year Book of Obst. and Gynaec.*, 1965-66 series, Chicago, Year Book Publishers, p. 73.
10. Iffy, L.: *J. Obstet. Gynaec. Brit. Emp.* 70: 996, 1963.
11. Iffy, L.: *J. Obstet. Gynaec. Brit. Emp.* 69: 598, 1961.
12. Jeffcoate, T. N. A.: *Principles of Gynaecology*, ed. 2nd, 1962, London, Butterworths.

13. Kishore, N. and Gupta, P.: J. Obst. and Gynaec. India, 28: 404, 1968.
14. Mitha, S. H.: J. Obstet Gynaec. India. 15: 606, 1965.
15. Mokadam, N. and Kalappa, R.: J. Obstet Gnaec. India. 18: 353, 1968.
16. Patel, S. C. and Sankari, K.: J. Obstet. Gynaec. India. 28: 388, 1968.
17. Peel, J.: 'British Gynaecological Practice', Ed. Bourne, A., ed. 3rd, 1963, London, William Heinemann.
18. Roy Chowdhary, N. N.: J. Obstet. Gynaec. India. 18: 364, 1968.
19. Upadhyay, S. N., Bhattacharya, G. R. and Prakash, B.: J. Obstet. Gynaec. India. 6: 76, 1955.
20. Webster, H. D., Barclay, D. L. and Fischer, C. K.: Am. J. Obstet. Gynaec. 92: 23, 1965.
21. Wagh, K. V. and Patel, S.: J. Obstet. Gynaec. India. 18: 370, 1968.

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