

# CLINICAL EVALUATION AND MANAGEMENT OF ECTOPIC PREGNANCY

by

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and

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The clinical entity 'Ectopic pregnancy' has always been baffling to the gynaecologists and surgeons alike. This condition, if not thought of, might endanger life. The atypical features of ectopic pregnancy must be very clearly understood and it is always better to rule out this condition in all acute abdomens in females. This study is an attempt to describe the various clinical features and difficulties of diagnosis.

## Material and Method

This study is based on the analysis of 40 consecutive cases of ectopic gestation admitted at the K.E.M. Hospital, Bombay 12, from January 1967 to December 1968. During the same period there were 10,512 full term deliveries giving the incidence

of ectopic as 1:263 viable deliveries (Table I).

The majority of the cases 31, belonged to the age group between 21-30 years. There were 7 cases between 31-40 years of age and only 2 cases below 20 years of age. There was not a single case above the age of 40 years (Table II).

There were 10 cases who had never become pregnant. Eleven women had conceived once prior to the present ectopic pregnancy. There were 19 cases who had two or more deliveries previously. Two women gave a history of secondary sterility of more than 8 years (Graph I).

## Symptoms

The presenting symptoms are shown in Table II. The most im-

TABLE I  
Analysis

1. Beacham et al (1956)	1 : 129	Total pregnancies
2. Mitha (1965)	1 : 333	Pregnancies
3. Upadhyaya et al, (1955)	1 : 293	Full term pregnancies
4. Patel et al (1968)	1 : 950	Viable pregnancies
5. Present series	1 : 263	Viable pregnancies

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portant and constant symptom was pain in the lower abdomen (in 34 cases). Amenorrhoea as a definite symptom was present in 24 cases, out of which 19 cases had amenorrhoea of less than 3 months and 5

TABLE II  
Symptoms

Symptoms	No. of cases	Per cent
1 Pain in the lower abdomen	34	85.0
2 Amenorrhoea—		
Less than 3 months	19	47.5
More than 3 months	5	17.5
3 Irregular vaginal bleeding	24	60.0
4 Vomiting	13	32.5
5 Fainting attacks	23	57.5
6 Bladder symptoms	9	22.5
7 Rectal symptoms	4	10.0
8 Lump in abdomen	1	2.5
9 Fever	4	10.0
10 Distension of abdomen	1	2.5
11 Passage of cast	1	2.5
12 Backache	1	2.5
13 Breathlessness	2	5.0
14 Shoulder pain	2	5.0

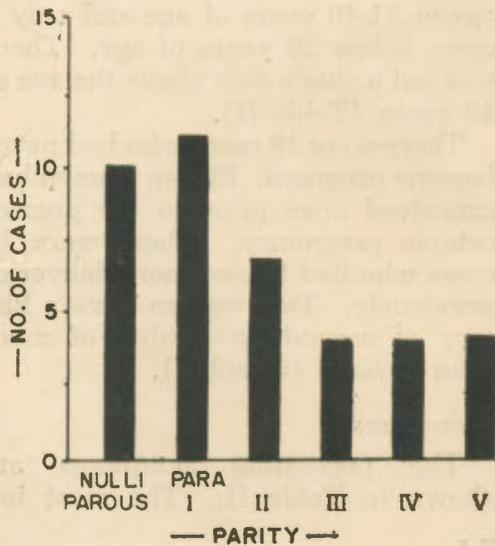


Fig. 1

cases had amenorrhoea of more than 3 months' duration. Irregular vaginal bleeding was present in 24 cases. History of fainting attacks was given by 23 cases.

#### Physical Findings

The physical findings are given in Table III. Lower abdominal tenderness was present in 24 cases and 7

patients were in shock. Mass in the hypogastrium was palpable in 6 patients. There were 11 cases who had free fluid in the abdomen and only 13 cases had muscle guarding.

Seventeen cases had tenderness on movement of the cervix and 26 cases had tenderness in the fornices. Bogginess in the fornices was present in 6 cases. Mass in the fornix was palpable in 24 cases. The uterus was enlarged in 15 cases. Bleeding per vaginam was present in 24 cases and 1 patient had bluish discoloration of the cervix.

The seven cases who had come in shock were almost pulseless, and the systolic blood pressure was 60 mm. Hg. or less. There were 9 cases who had haemoglobin levels of less than 6 gms% and 26 cases had haemoglobin levels between 6-10 gms% and only 5 cases had a haemoglobin of more than 10 gms%.

Colpopuncture was done in 25 cases and it was positive in 24 cases, and only in one case, though it was negative, exploration was undertaken on clinical grounds. In 15 cases colpopuncture was not done because

TABLE III  
Physical findings

Signs on general examination and on abdominal examination		No. of cases	Per cent
1	Pallor	31	77.5
2	Shock	7	17.5
3	Fever	4	10.0
4	Abdominal tenderness	24	60.0
5	Mass in the abdomen	6	15.0
6	Muscle guarding	13	32.5
7	Free fluid	11	27.5

Signs on vaginal examination		No. of cases	Per cent
1	Tenderness of cervix	17	42.5
2	Enlargement of uterus	15	37.6
3	Tenderness in fornices	25	65.0
4	Bogginess in fornices	6	15.0
5	Mass in the fornices	24	60.0
6	Bleeding per vaginam	24	60.0
7	Bluish discolouration of cervix	1	2.5
8	Pulsations	1	2.5

clinically ectopic pregnancy was evident, either the patient was severely pale or a mass felt in the abdomen or fornices.

Blood transfusion was given to all patients except 3, in whom there was not much blood in the peritoneal cavity and the general condition was good. Most of them required 350-700 ml. of blood. Only in one patient 2100 ml. blood was given.

#### Operative Procedures

The various operative procedures adopted are listed in Table IV.

The commonest procedure adopted was total salpingectomy on the affected side in 24 cases, salpingo-oophorectomy was done in 6 cases where it was very difficult to separate the adhesions, and if undertaken might have worsened the condition. The associated operative procedures are also listed in the table.

Location of ectopic pregnancy was definitely possible in the majority of the cases (Table V). Only in one case it had formed an infected tubo-

TABLE IV  
Operative procedures

Type of the operation	No. of cases
9 Salpingectomy—unilateral	24
2 Salpingectomy—bilateral	2
3 Unilateral salpingo-oophorectomy	6
4 Hysterectomy with bilateral salpingo-oophorectomy	1
5 Salpingectomy on one side with salpingo-oophorectomy of the other side	1
6 Ligation of blood vessels of infundibulo-pelvic ligaments	1
7 Partial salpingectomy with cuff salpingostomy	1
8 Salpingo-oophorectomy with excision of the sac (secondary abdominal pregnancy)	1
9 Excision of cornu of uterus with repair	2

ovarian mass and even on the other side there were adhesions. In 3 cases the fallopian tube was congested and inflamed and free blood was found in the peritoneal cavity. The diagnosis made was tubal abortion in all these cases. There were 2 cases of cornual ruptured pregnancy. There was one case of secondary abdominal pregnancy.

TABLE V  
Site of ectopic pregnancy

Ampulla and infundibulum	28
Isthmic	6
Cornual	2
Abdominal	1
Tubal abortion	3

Conservative surgery was carried out in a case where it was possible to do a partial salpingectomy with cuff salpingostomy. In a case of tubal abortion no operative procedure was carried out except appendicectomy, as it was inflamed and there was no obvious bleeding from the tube. In another case of tubal abortion only ligation of vessels in the infundibulopelvic ligament was carried out.

In one case of ruptured tubal pregnancy with formation of masses on both sides, hysterectomy with bilateral salpingo-oophorectomy was carried out as the patient had sufficient number of children and the ovaries on both sides had formed masses. Dissection might have prolonged the operation thus adding to the morbidity.

In cases of ruptured cornual pregnancy, excision of the cornu of the uterus with repair was carried out. Tubal ligation was carried out in 2 cases as these women had sufficient number of children.

There was no mortality in our series.

#### Discussion

It is very true that ectopic pregnancy commonly occurs during the very fertile period in a woman's life. Majority of ectopic pregnancies, i.e. 31 (77.5%), occurred during 21-30 years of age in this series. Ectopic pregnancy occurs rarely after the age

of 40 years. This is also reported by Mitha (1965).

The parity graph shows that most of them had one or more conceptions before this catastrophe. Only 10 women were nulliparous. It is said that ectopic pregnancy occurs in patients with a previous history of puerperal or pelvic infection, though this history could not be obtained in many cases. But the findings of adhesions at laparotomy prove that there must have been pelvic infection.

In the diagnosis of ectopic pregnancy abdominal pain and tenderness of lower abdomen are almost constant features and are more pronounced particularly by the slightest movement of cervix.

In a patient with severe shock and signs of free fluid, almost invariably the diagnosis is ectopic gestation. Fainting attacks, though not conclusive but a valuable symptom, was present in 23 cases (57.5%) of our series. Nine cases (22.5%) came to us with retention of urine and difficulty in passing urine, and after catheterizing either a mass was felt in the posterior fornix or one of the lateral fornices. Other clinical features led us to think in terms of ectopic pregnancy. Four cases (10%) came with history of passing loose motions with mucus and after taking a detailed history, were correctly diagnosed as cases of ectopic pregnancy. There was one patient who gave a history of passing some black particles with altered blood (decidual cast) and other features suggested that this might be a case of ectopic pregnancy and colpo-puncture confirmed it.

In our series, two patients came

with a history of breathlessness and they were extremely pale. After adequate transfusion and exploration (salpingectomy), they were better. There were other features like distension of abdomen and backache. Two cases gave a history of shoulder pain probably because of free blood irritating the diaphragm. This may be an important symptom to guide one in the diagnosis of this condition.

At laparotomy removal of the affected tube is the essential part of surgery and adequate transfusion helps in reducing the morbidity and mortality. It was observed that ectopic pregnancy was present on the left side in 19 cases (47.5%), i.e. almost half the cases. Thoyer *et al* report similar figures.

Whenever it was difficult to conserve the ovary on the affected side, salpingo-oophorectomy was carried out (in seven cases). No ovary was removed with the object of preventing recurrence of ectopic as a result of external migration, as suggested by Jeffcoate.

Two patients desired sterilization which did not add to the time consumed to any considerable extent. In one patient of tubal abortion, ligation of the infundibulopelvic vessels was carried out with the object of preventing haemorrhage and this patient did very well post-operatively. In one patient no operative procedure was undertaken as there was no fresh bleeding taking place. In one case after milking the tube there was slight oozing and salpingectomy was carried out.

In the present series there was no mortality. Prompt diagnosis, adequate blood transfusion and prompt

operative treatment will reduce the mortality to a minimum. Eastman and Hellman (1966) state that there was only one death in 826 ectopic pregnancies.

If the surgeon is confident, a vaginal approach through the posterior fornix might be tried in patients where the general condition of the patient is good, and if required an exploratory laparotomy can be carried out. This will reduce the morbidity considerably.

#### Conclusions

A study of 40 cases of ectopic pregnancies during January 1967 to December 1968 is presented.

Clinical features, investigations and operative treatment are discussed.

Importance of colpopuncture is stressed. There was no mortality in the series which could be attributed to prompt diagnosis, treatment and availability of blood transfusion.

It is important that one should be ectopic minded and the condition must be excluded in all the cases of acute abdomen in females.

#### Acknowledgement

We are extremely grateful to Dr. B. N. Purandare, M.D., F.R.C.S.E., F.C.P.S., F.I.C.S., F.R.C.O.G., F.A.M.S., Director and Honorary Gynaecologist & Obstetrician, K. E. M. Hospital, and Dr. V. N. Purandare, M.D., F.R.C.S.E., Honorary Gynaecologist and Obstetrician, K. E. M. Hospital, for allowing us to study their cases.

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Fig. 1  
Chorionitis and deciduitis. Infiltration of the decidua by polymorphonuclear leucocytes, some of which have invaded the trophoblastic layer of the chorion.

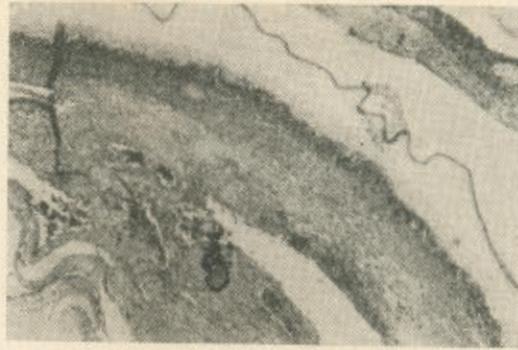


Fig. 2  
Chorionitis.



Fig. 3  
Chorio-amnionitis.



Fig. 4  
Inflammatory cells are lining the roof of the intervillous space. Leucocytes have invaded the chorion from the intervillous space. Few cells have penetrated the amnion also.

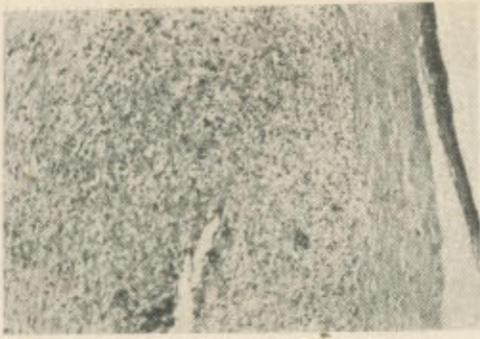


Fig. 5

Inflammation of a foetal vessel on the placental surface, stage IV inflammation. The polymorphonuclear leucocytes have invaded, from below upwards, the intervillous space, chorion, foetal vessel and amnion.

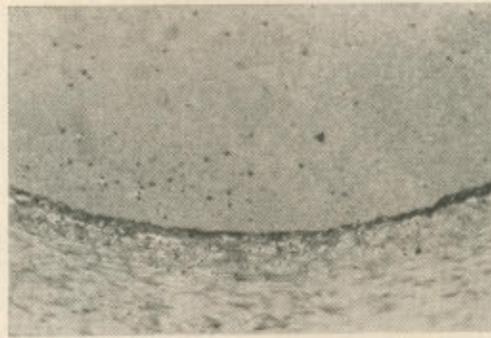


Fig. 6

Vasculitis of the umbilical cord. Stage I. Margination of leucocytes along the intima of the vessel wall.

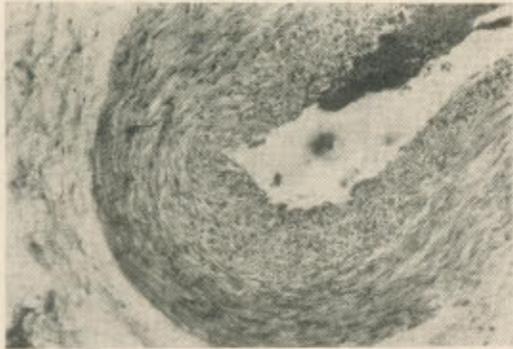


Fig. 7a

Vasculitis of the umbilical cord. Stage II. Full thickness of the vessel wall is involved.



Fig. 7b

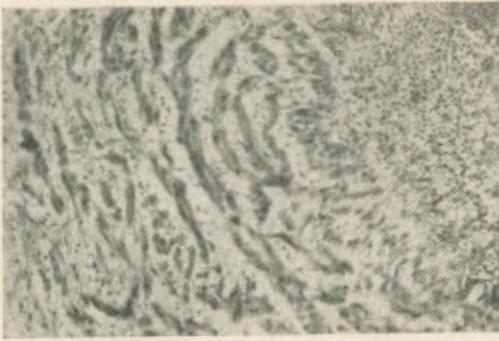


Fig. 8  
Vasculitis of the umbilical cord. Stage III. The polymorphonuclear leucocytes have infiltrated the vessel wall and Wharton's jelly.



Fig. 9  
Vasculitis of the umbilical cord. Stage IV. Vessel wall, Wharton's jelly and amnion are infiltrated with the polymorphonuclear leucocytes.

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*Clinical Significance of Placenta Extrachorialis—Malkani and Bhasin pp. 346-348*

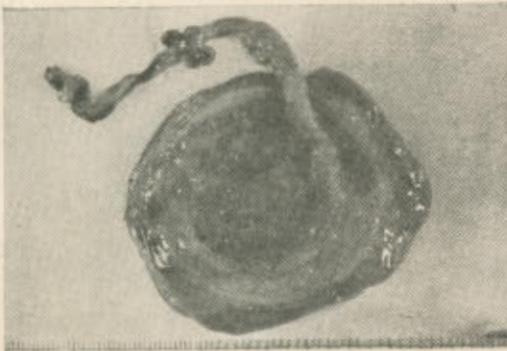


Fig. 1  
Placenta extrachorialis—foetal surface. Thick, round, white opaque complete ring, 0.5 mm to 35 mm from the periphery of the placenta.



Fig. 2  
Haemorrhage in the placenta extrachorialis. The membranes could be stripped only upto the fibrinous ring. Any further attempt at stripping resulted in tearing of the vessels. Patient had antepartum haemorrhage.

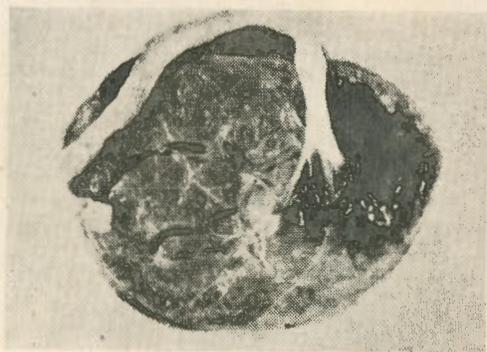


Fig. 1

Haematoma on the foetal surface of the placenta due to involvement of the placental vessel.

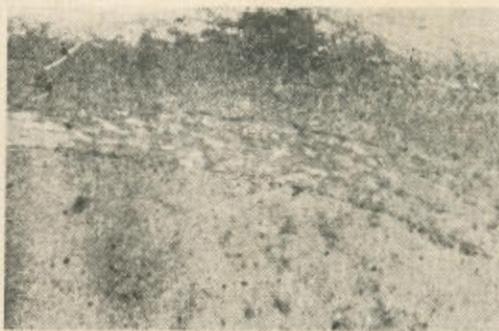


Fig. 2a

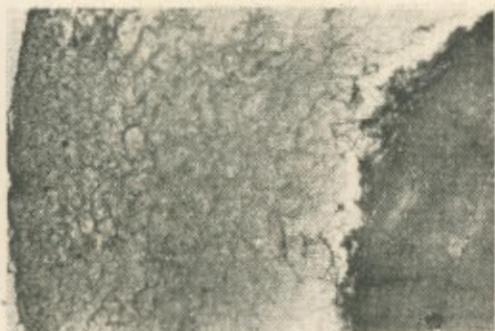


Fig. 2b

Haematoma of the umbilical cord. The blood has infiltrated in between the muscular layer of the vein and Wharton's jelly.

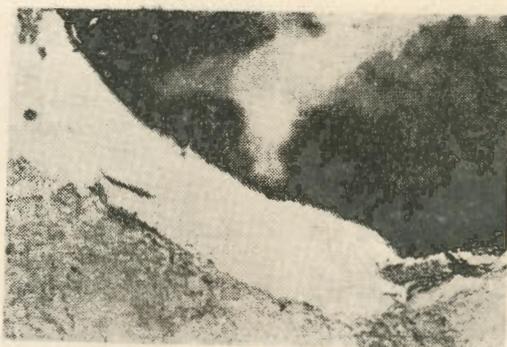


Fig. 3

Haematoma of the umbilical cord. Site of rupture of the vein is seen.

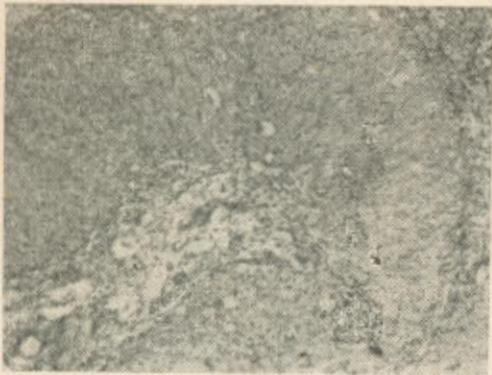


Fig. 1  
Showing normal corpus luteum on the 21st day  
of menstrual cycle.



Fig. 2  
Showing corpus luteum on the 22nd day of  
menstruation or 25th day after injection of  
SH-393.

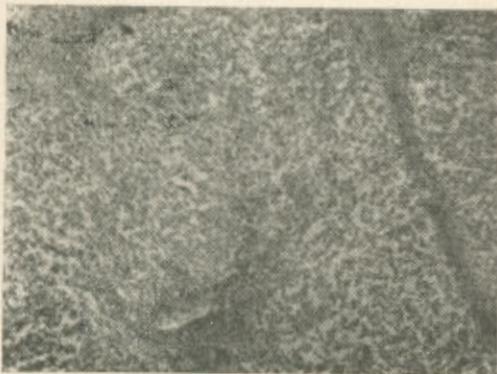


Fig. 3  
Showing normal corpus luteum on the 15th day  
of menstruation.



Fig. 4  
Showing corpus luteum on 16th day of menstrual  
cycle or 9th day after injection.

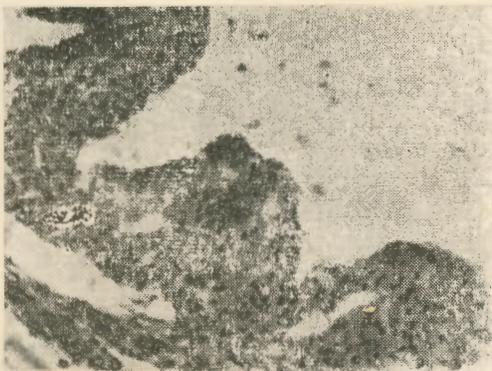


Fig. 5  
Showing normal corpus luteum probably of  
24 hours.

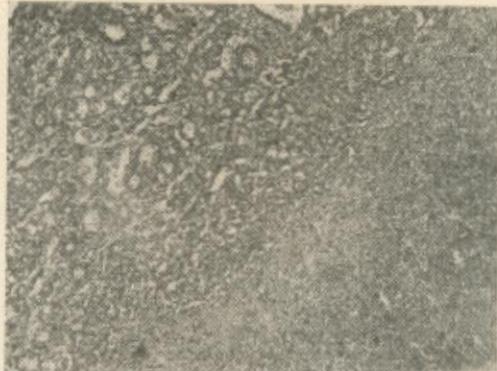


Fig. 6  
Showing corpus luteum 37 days after injection  
or on 44th day of menstrual cycle.

v

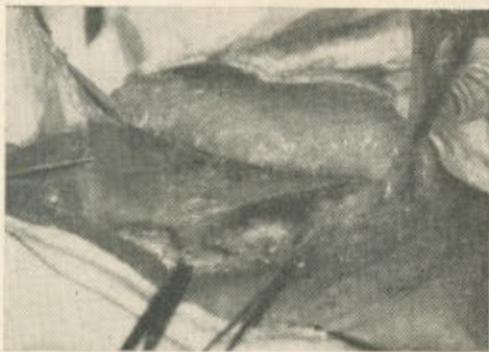


Fig. 1

- (a) Transverse semilunar suprapubic incision.
- (b) Skin and subcutaneous tissues reflected.
- (c) Half inch breadth strips of external oblique fascia with muscle dissected.

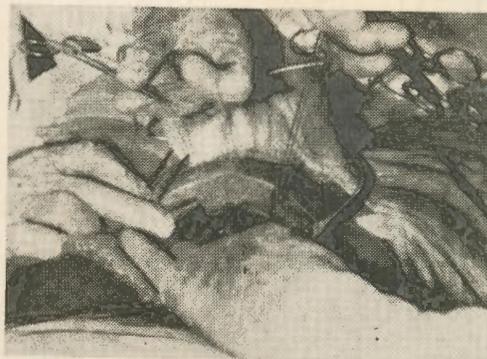


Fig. 2

Anchoring of anterior vaginal wall to the reflected part of inguinal ligament through the space of Retzius.



Fig. 3

Posterior peritoneal fold at the level of internal os opened.



Fig. 4

External oblique fascia is caught with the round ligament forceps passed extraperitoneally through the folds of broad ligament via the opening made at the level of the internal os posteriorly.



Fig. 5  
Closure of pouch of Douglas and shortening of utero-sacral ligaments.



Fig. 6  
Prolapse uterus—3rd degree (Shaw's classification).

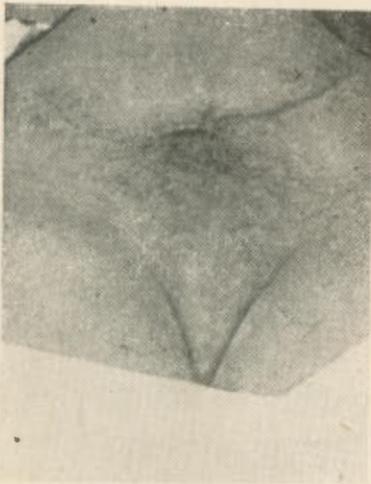


Fig. 7  
Abdominal scar on discharge from hospital.



Fig. 8  
Effects of straining in standing posture on abdominal muscles and pelvic organs two months after the operation.

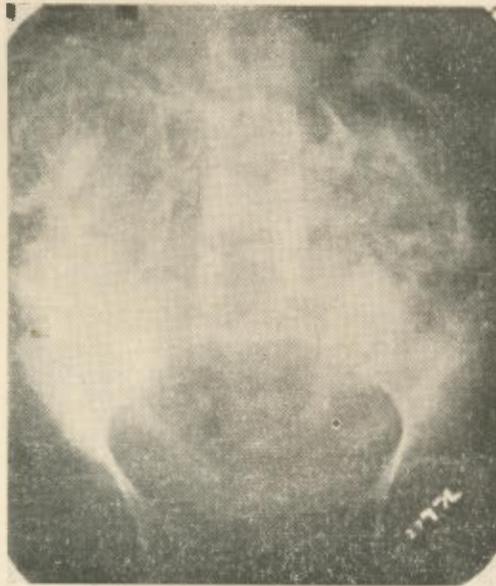


Fig 1  
X-ray of abdomen depicting the transverse lie  
of the foetus and absence of uterine shadow.

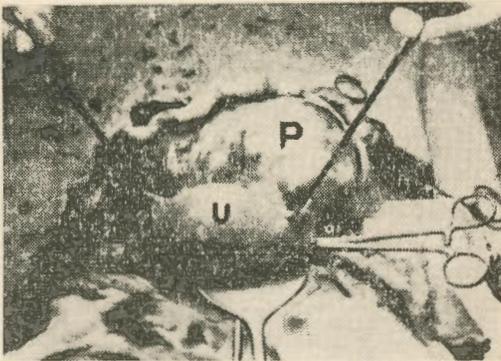


Fig. 2  
The placenta (p) with the cord seen arising  
from left tube, separate from the uterus (U).



Fig. 3  
Female mature live baby with congenital  
deformities.