

# A CASE OF SECONDARY ABDOMINAL PREGNANCY FOLLOWING RUPTURE OF MYOMECTOMY SCAR

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“Secondary abdominal pregnancy was first described by the celebrated anatomist Berengario de Carpi in 1535. His case was considered to have resulted from rupture of the gravid uterus, the ovum escaping into the peritoneal cavity. Cornel and Lash in 1933” collected 266 cases of secondary intraperitoneal abdominal pregnancy (Masani).

The incidence of advanced ectopic pregnancy was 1 in 15000 pregnancies (Eastman), 1 in 6450 (Gordon King), 1 in 4300 (N. Subhadra Devi), 1 in 930 (Dixon and Stewart). Recently there have been numerous reports of cases of advanced ectopic pregnancy, following primary tubal pregnancy; but cases of secondary abdominal pregnancy following primary uterine pregnancy are quite rare, as seen in Table I.

A. H. Badawy reported a case of secondary abdominal pregnancy after rupture of posterior uterine wall, with delivery of a live foetus. E. K. King (quoted by Eastman) directed attention to secondary abdominal

TABLE I

Author	Primary tubal	Pregnancy uterine
1. Gordon King	12	0
2. Dixon and Stewart	10	0
3. N. Subhadra Devi	7	1
4. P. M. Naidu	7	1
5. D. L. Podar	10	0
6. Government General Hospital, Guntur	13	0
7. Government General Hospital, Kurnool	3	2
Total	62	4

pregnancy due to postoperative separation of uterine wound of previous caesarean section and reported 4 cases.

N. Subhadra Devi reported a case of advanced ectopic pregnancy following primary uterine pregnancy and rupture of scar in the posterior wall of uterus, due to Haultain's operation. P. M. Naidu, reported a case of rupture of classical caesarean scar, with 6½ months' amenorrhoea and the passage of foetal bones per abdomen. A. M. Shaw's case resulted from spontaneous rupture on the right side of uterus extending into broad ligament, with signs of intestinal obstruction. C. Savithri had a case admitted at Government General Hospital, Kurnool, on 6-1-1961 with a history of classical caesarean section, perform-

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ed 3½ years ago for the treatment of transverse lie. As the foetus was in oblique lie and full-term, external version was tried on 7-1-1961 but it was reversed as the foetal heart sounds became irregular. On 8-1-1961 she was posted for elective caesarean section, and at laparotomy, rupture of uterine scar was noted and a live baby weighing 3 kilogrammes was delivered. The foetal sac was adherent to the endometrium of the uterus, which was retracted and about 24 weeks' size of pregnancy, lying behind it. Sterilisation and repair of the ruptured scar were done. This was thought to be a case of secondary abdominal pregnancy following silent rupture of classical caesarean scar as the foetus was in oblique lie; there were dense adhesions of the uterus to the parietal peritoneum, the placenta was adherent to parietal peritonium and there was no haemorrhage in the peritoneal cavity.

TABLE II  
*Rupture of Myomectomy Scar  
in Pregnancy*

Author	Number of pregnancies	Number of ruptures of scars
1. Munnell & Martin	81	1.2%
2. Pedowitz & Felmus (1905-52)	?	35
3. Ahltrop	1300	20 (1.5%)
4. A. M. Davids	240	Nil

J. Mackie, Davidson and Bowen reported one case each of rupture of myomectomy scar in pregnancy. Pedowitz (quoted by Eastman) stated that the incidence of rupture of myomectomy scar reaching the endometrial cavity was about the same as after caesarean section.

Munro Kerr and Moir stated:—  
“There are very few, if any, authentic cases of rupture of uterus following myomectomy even when the operation was performed in pregnancy. Bonney had never witnessed a case; this is also my experience”. G. L. Bownen reported a case of secondary abdominal pregnancy with delivery of a live baby, which apparently re-implanted following rupture of the uterus from an old myomectomy scar at 5 months' gestation (quoted by Douglas and Stromme). To our knowledge this is the first recorded case of secondary abdominal pregnancy following rupture of myomectomy scar in pregnancy. Recently, we had an opportunity of treating another case and the rarity of this condition justifies reporting of the case.

#### Case Report

Mrs. N. L., aged 25 years, second gravida, was admitted on 20-12-1961 at 8-00 P.M. with history of apparent labour pains since 7 A.M. on the same day. She had received no antenatal care.

**History of Past Illness.** Patient had been married 15 years back. On 9-1-1961 Dr. C. Savithri performed abdominal myomectomy, enucleating an interstitial fibroid 4 inches in diameter in the anterior wall of the fundus at the left cornual region and another 3 inches in diameter in the anterior wall of the isthmus. As the latter was almost submucous the uterine cavity was opened into during enucleation of the fibroid and a small gestation sac 2 inches in diameter, was extruded. By a transverse incision in the posterior wall of uterus Bonney's hood operation was done. The post-operative period was uneventful. On 11-2-1961 the tubes were found to be patent on insufflation with air and the uterus was found enlarged to 10 weeks' size of pregnancy. She was advised not to become pregnant until 4 months later and to report when she becomes pregnant.

**History of Present Pregnancy.** She at-

tended the hospital labour ward with complaints of difficulty in micturition and pains in the lower abdomen since morning. On 20-7-1961 she attended the hospital with history of 2 months' amenorrhoea L.M.P. 10-5-61 and the uterus was found to be retroverted and enlarged to 10 weeks' size of pregnancy and bluish discolouration of vagina and cervix was present. Her next visit was on 20-12-1961, when she attended the hospital labour ward with 7½ months' amenorrhoea and complaint of difficulty in micturition.

**Condition on Admission.** Pulse rate 78 per minute, temperature 98.4°F and blood pressure 120/80 mm.Hg. The uterus was of size of full-term pregnancy and the foetal heart sounds were 134 per minute. The head was found to be high and unstable and palpation of foetal parts was not satisfactory due to diffuse tenderness over the lower abdomen. In view of the previous myomectomy, the possibility of rupture of the scar was thought of and laparotomy was considered. As blood was not available for transfusion, the patient was kept under observation.

**Examination on 21-12-1961.** She was anaemic and had guinea worm infection of the left foot. The pain in the lower abdomen was not accompanied by backache as in labour pains. The general condition was fair, pulse and temperature were normal.

**Per Abdomen.** There was a subumbilical midline scar and the abdomen was distended, more on the left side over the colon. The foetal parts were felt with unusual ease as if just below the abdominal wall and the head was felt in the right iliac fossa. The size of the foetal sac was 32 weeks' pregnancy; Braxton Hicks sign could not be elicited. There was vague tenderness all over the lower abdomen but no fluid in the peritoneal cavity. The foetal heart sounds could not be heard since 4 A.M.

**Per Vaginam.** There was no bleeding and no draining of liquor. The cervix was pointing downwards and was tubular with closed external os. The body of the uterus was felt posteriorly, being pushed back by the cystic mass in the anterior fornix and enlarged to about 12 weeks' size of pregnancy. The head was quite high above the

pelvic brim, separate from uterus. A tentative diagnosis of secondary abdominal pregnancy was made and she was kept under observation in the ward for further investigations and to improve her general condition.

**Investigations.** (1) Pitocin test: 2 Units of syntocinon were given intramuscularly, without eliciting contractions of the uterus.

(2) Plain X-ray abdomen—AP view: The head was seen in the right iliac fossa and the foetus was in transverse lie, with dorso-superior position. A shadow of gas in the colon was seen over the gestation sac on the right side.

(3) Hysterography was done on 26-12-1962 just before laparotomy, using Foley's catheter. The picture revealed radio-opaque shadow in a localised area, outside the uterus.

(4) Frog test for chorionic gonadotropins was negative on 25-12-1961.

(5) Blood urea 0.025 gms.%. Serum proteins 5.6 gms.%. Serum bilirubin less than 1 mg.%. H.B. (%) 11.5 gms. RBC. 3.7 million per cml. Packed cell volume 29 ml.%. WBC count 6000 per cm. ESR 60 mm. per one hour. Blood group B. Urine and motion nil abnormal.

**Treatment.** Her symptoms of pain and distension of the abdomen were much relieved after 22-12-1961. Streptomycin and penicillin, calcium pantothenate and sedatives were given preoperatively. Blood transfusion of 400 c.c. group B, was given on 23-12-1961 and 300 c.c. again on 25-12-1961. Her temperature range was between 99 and 100.5°F from 22nd to 25th of December 1961.

On 26-12-1961, at laparotomy, done under general anaesthesia, with right paramedian incision, the amniotic sac covered by adherent omentum was seen, having flimsy adhesions to parietal peritoneum. The sac was opened into and a dead male foetus was delivered by grasping the breech. The placenta was found to be adherent to the upper part of the amniotic sac, and to the omentum. The amniotic sac was adherent to the greater omentum, small intestines, descending colon and posterior parietal peritoneum. The lower pole of foetal sac was adherent to the sigmoid

colon and ventral surface of the uterus. The sigmoid colon was adherent to the left cornu of the uterus. The placenta with foetal sac was removed without difficulty or bleeding, but the lesser sac of peritoneum was opened into. The uterus was found to be flat, with gaping of the uterine cavity due to the retraction of torn edges of myomectomy scar. Sub-total hysterectomy with left salpingo-oophorectomy was done, since the uterus could not be preserved as a normal functioning organ.

**Postoperative Period.** Two pints of blood and 1 bottle of dextraven in saline were given post-operatively. She had an uneventful post-operative course, being afebrile after the 5th day and the abdominal wound healed well.

**Pathological specimen.**

**Uterus.** There is a triangular deficiency in the anterior wall and the lumen could be seen through. The surface of the uterine cavity was haemorrhagic and no scar tissue could be made out as of previous myomectomy. Decidual reaction is seen and a few trophoblastic cells are seen in the myometrium in the posterior wall. The uterus was about 14 weeks' size of pregnancy and there was no evidence of placental attachment in the uterine wall.

**Placenta.** It was thinned out but otherwise normal. The umbilical cord was normal. Histologically the villi were small and fibrin clots were seen at the periphery. Weight of the placenta was 1 lb.

**Foetus.** Weight 5 lbs., Length 21 inches, length of the cord 14 inches. The foetus was macerated but there were no congenital abnormalities.

*Discussion*

In our case the adhesions of the placenta and sac extended from the omentum and lesser sac of the peritoneum to the uterus and bladder lower down and laterally to the colon and parietal peritoneum. Myomectomy was done at about 6 weeks' pregnancy and the uterine cavity was opened into during the operation. Conception occurred  $4\frac{1}{2}$  months later resulting in the silent rupture of the

scar at about 12 to 14 weeks. The microscopic and the macroscopic examinations of the uterus could not determine the site of placental attachment in the uterus. Probably the insertion of the placenta over the scar in the anterior wall of the uterus led to slow and silent rupture of the scar, with placental blood supply from the omentum and later the upward migration of the placenta on the upper surface of the foetal sac resulted.

She was asymptomatic during the course of pregnancy till the date of admission. Transverse lie of the foetus with dorsoposterior position, absence of Braxton Hick's contractions, diffuse tenderness over the abdomen and the unusual ease of palpation of foetal parts were suggestive of ectopic pregnancy. On bimanual examination the tubular cervix, displacement of uterus posteriorly and the high foetal head, separate from uterus, were confirmatory findings. The radiological examination revealing the foetal parts and abnormal lie of the foetus and localised collection of radiopaque material outside the uterus, gave definite proof of extra-uterine pregnancy preoperatively.

In view of the previous myomectomy, rupture of the scar was suspected but the diagnosis between recent rupture of the uterus and secondary abdominal pregnancy with spurious labour was difficult. The general condition of the patient, presence or absence of signs of shock and haemorrhage are useful guides in the diagnosis. Absence or presence of vaginal bleeding, radiological investigations, absence of foetal heart sounds the

ease of palpability of foetal parts and abnormal foetal position are common features of both the conditions. Signs of acute peritonitis and rapid worsening in the condition of the patient under observation may favour the diagnosis of rupture of uterus, but infection of the foetal sac may simulate the clinical picture. As Gordon King said, most cases were missed because the possibility of extrauterine pregnancy was not kept in mind. In our case, the presence of foetal heart sounds on admission, with their disappearance after 8 hours, absence of signs of internal haemorrhage and the improvement in the condition of the patient after 24 hours of admission were suggestive of spurious labour. The findings at laparotomy — the absence of haemorrhage, the dense adhesions of the amniotic sac to the uterus and other intra-peritoneal structures confirmed rupture in early pregnancy.

Although many authors advocate laparotomy as soon as the diagnosis is made, the method of dealing with the placenta is the crux of the problem. There is grave risk of haemorrhage in removing the placenta, depending on its maturity and site of implantation. It is better to remove the placenta whenever it is possible and is not obviously difficult, in view of the dangers later of leaving it in the peritoneal cavity (i.e., sepsis, secondary haemorrhage, abdominal mass, gas formation, calcification and fibrinogenopaenia. In our case, in addition to extraction of the foetus and placenta with membranes, subtotal hysterectomy had to be done as the condition of the uterus with ad-

hesions ruled out the possibility of preserving it with suture of the edges.

#### *Summary*

A case of secondary abdominal pregnancy, in a second gravida, following asymptomatic rupture of myomectomy scar in early pregnancy, continuing up to 32 weeks, with transverse lie of a live foetus and spurious labour on the day of admission, is reported. A clinical diagnosis was made pre-operatively and extraction of a macerated foetus, weighing 5 lbs and placenta, entire with membranes, and subtotal hysterectomy with left salpingo-oophorectomy were performed.

#### *Acknowledgement*

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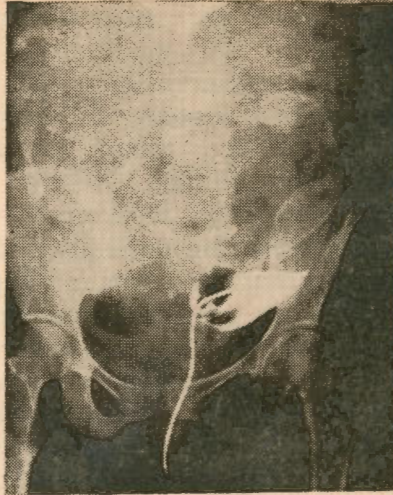


Fig. 2.

A.P. view of abdomen, showing radio-opaque medium and Foley's Catheter.

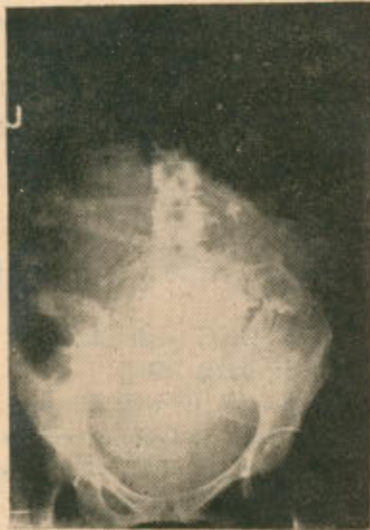


Fig. 1.

A.P. view of abdomen, showing transverse lie of foetus—Dorso-superior.

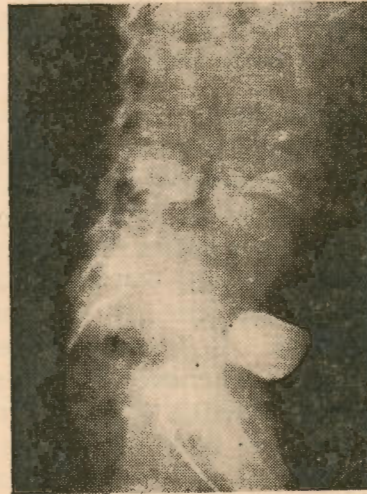


Fig. 3.

Lateral view of abdomen, showing the radio-opaque medium in abnormal shape.