

# PLACENTA ACCRETA LEADING TO INVERSION OF UTERUS

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Abnormalities of implantation and separation of placenta are relatively rare, but often tragically dangerous, complications of pregnancy. The definite diagnosis of placenta accreta depends upon the demonstration of microscopic evidence of penetration of myometrium by villi. It was not until 1889, that Hart presented the microscopic description of this entity which has since remained an important diagnostic criterion.

Placenta accreta is an abnormal adherence of placenta due to partial or complete absence of decidua basalis, the chorionic villi being in juxta-position to or invading the myometrium. Three degrees of involvement are known, total, where the entire placental surface is involved, partial, in which a large portion of placenta is adherent, and local, in which one or more cotyledons are involved. In addition to this, three degrees of penetration are described — placenta accreta — in which there is juxta-position of the chorionic villi and myometrium; placenta in-

creta — the myometrium is invaded by villi and placenta percreta in which the invasion is extended to the peritoneal coat of the uterus. The types occur with decreasing frequency from local to total and from accreta to percreta.

In modern obstetric practice, one should not meet with the complication of inversion of the uterus as a result of placenta accreta, due to the better understanding of management of adherent placenta, which consists of abandoning all attempts at manual removal when placenta accreta is suspected. Occasionally, when the diagnosis is missed and efforts to remove the placenta manually are carried out, inversion of uterus may occur, as in the case reported below:

## Case Report:

R. a 30 year-old woman, para 6, was admitted on 11-8-65 at 10-30 a.m. to Government Maternity Hospital, with the history of having delivered a live female infant in a district hospital, 100 miles away, at 2-30 a.m. i.e. 8 hrs. previous to admission; placenta was retained. Manual removal of placenta was attempted but had failed, so she was referred to this hospital. Her previous obstetric history showed that she had had 5 full-time normal deliveries in her village. All the children were alive. There was no history of manual removal of placenta in any of the previous labours nor did she ever have curettage done.

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On examination, she was of average build, clinically very anaemic. Her pulse rate was 120 per minute, and blood pressure 70/40 mm. of Hg. haemoglobin 30%. The other systems were normal. Abdominal palpation revealed tenderness over the lower abdomen; the uterus was of the size of 16 weeks' gestation.

Vaginal examination: half of the placenta was found to be inside the vagina, the rest in the uterine cavity. There was slight bleeding per vaginam. She was shifted to the theatre after Reverine 275 mg. was given intravenously and after blood transfusion was started.

Under general anaesthesia of gas and oxygen, the right hand was introduced into the uterus. No cleavage between the placenta and the uterine wall could be made out. The fundus of the uterus was found to be partially inverted. Hysterectomy was thought to be the best line of treatment. Abdomen was opened by a sub-umbilical midline incision. Findings: There was 3 ozs. of free blood in the peritoneal cavity with few old clots. The fundus of the uterus was inverted partially, the tubes and ovaries were oedematous and lying in the cup of the inverted fundus. The uterus was also found to be perforated at its left cornu. Total hysterectomy with bilateral salpingo-oophorectomy was done without correcting the inversion, taking care that the bladder, which was drawn in the cup of the uterus, was mobilised and pushed well down. The total blood loss was 16 ozs. She was transfused with 3 units of whole blood during the operation. Condition at the end of operation was good, the pulse rate 90 per minute and blood pressure 100/70 mm. of mercury. She was kept on broad spectrum antibiotics. Her post-operative progress was uneventful and she was discharged on 22-8-65.

Histopathological report (Biopsy No. 5197-5201/65). The chorionic villi were in juxta-position to the myometrium with no decidua in between. Section of tubes and ovaries showed marked congestion.

### Discussion

Incidence: Since Irving and Hertig's classic review in 1937, there

have been increasingly frequent reports. The incidence varies from 1 in 540 (Sumawong *et al*) to 1 in 40,000 deliveries (Hirst, reported by Harer). True incidence is probably greater as many more minor cases are probably not diagnosed or no histological evidence is available. In our hospital there were only 2 cases of true placenta accreta, in 56,370 deliveries from 1961 to 1965, an incidence of 1 in 28184 deliveries. The second case was a multigravida admitted with ruptured uterus due to placenta percreta, proved histologically.

### Aetiology

Many causes such as infection, trauma, surgery, implantation in areas of endometrial deficiency have been listed, but have not been substantiated.

Placenta accreta can be found at any age. High parity does not appear to have any influence on incidence. Both the patients who were admitted to our hospital were grande multiparae.

Previous manual removal of placenta and infection have been incriminated most frequently, although not constantly present. If previous curettage for abortions and manual removal of placenta were of any significance, one would expect a very high incidence of placenta accreta considering the many thousands of operations of this type performed annually. It is more likely that a curettage or manual removal in a previous pregnancy was necessary on account of partial adherence of placenta, possibly due to decidual deficiency which may be primary or

secondary due to absorption of the decidua by excessive trophoblastic activity. A primary decidual deficiency is more likely because the histological examination shows no evidence of any abnormality or change in the appearance of the trophoblastic tissue compared with the normal. Begnaud *et al* (1965) reported the presence of placenta accreta as early as the 6th week of pregnancy. Thus the condition is present soon after placentation is complete and will manifest whenever the termination of pregnancy occurs. The high incidence of placenta praevia (Dyer *et al* 1954; Irving and Hertig 1937; Kistner, Hertig and Reid 1954) and placenta membranacea (Miller 1959, Irving and Hertig 1937) in adherent placenta also supports the theory of primary decidual deficiency.

Inversion of uterus occurred in 2 cases (14.3%) out of 14 reported by Miller (1959). In a review of 73 cases of placenta accreta, Kaltreider (1945) found 3 cases complicated by inversion of uterus, an incidence of 4.1 per cent. It is rather surprising that inversion of uterus in placenta accreta has not been reported more frequently, although the circumstances would theoretically predispose to inversion, specially where the adherent placenta is implanted at the fundus. Das (1940) in a review of 391 cases of inversion of the uterus noted the high frequency of fundal implantation of placenta but did not quote a single instance of placenta accreta. Bell, Wilson and Wilson (1953) reviewed a further 76 cases of inversion of the uterus, but there was not mention of placenta accreta in

any case. One of the earliest recorded cases of placenta accreta complicated by inversion of uterus is that described by Stone (1898). The patient was a primigravida and the placenta was found in the vagina firmly attached to the inverted uterus. It was torn off piecemeal with great difficulty following which the patient died of haemorrhage. Stone reviewed 24 cases of inversion and in 10 the placenta was said to be adherent.

Spontaneous rupture of the uterus results from perforation by the chorionic villi in the rare cases of placenta percreta; Miller (1959) gives an incidence of 7.1 per cent and in Kaltreider's series the percentage is 15.1.

The safest treatment is hysterectomy. If there is no bleeding following attempted removal and the bulk of the placenta seems firmly attached, then it would be reasonable to adopt a conservative attitude. But one has to be alert to the risk of secondary post-partum haemorrhage some days later.

Before the advent of antibiotics and blood banks, the morbidity and mortality due to haemorrhage and sepsis were very high. Use of antibiotics has reduced the maternal mortality and morbidity in these cases but haemorrhage still takes a heavy toll of life, specially when the condition is not immediately recognised, manual removal attempted and decision for hysterectomy is delayed or undertaken when the patient is in irreversible shock. Persistent attempts at separation of an abnormally adherent placenta should be sharply desisted from as this will result in fatal haemorrhage.

*Summary*

(1) A case of inversion of uterus and perforation due to attempted manual removal of placenta accreta is presented, with a review of literature.

(2) Possible complications are haemorrhage, inversion, traumatic or spontaneous rupture of uterus.

(3) The treatment of choice is hysterectomy.

(4) The maternal mortality and morbidity can be reduced only by correct diagnosis of placenta accreta before attempting manual removal for a retained placenta, prompt treatment with antibiotics, blood transfusion and timely hysterectomy.

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*Figs. on Art Paper VIII*