INTRODUCTION

Pathologically adherent placenta, although a rare clinical condition, can result in significant morbidity and mortality because of obstetric hemorrhage. It is also a major independent risk factor for peripartum hysterectomy.

Placenta accreta, increta and percreta occur when there is abnormally invasive implantation of the placenta into the substance of the uterus. The extent of adherence and invasion varies from superficial as in accreta, into the myometrium as in increta and up to the serosa and possibly beyond to adjacent organs as in percreta. About 0.008% of births have been observed to be complicated by the most severe form of adherence (percreta) and only about 5-7% of all abnormal implantations have been observed to extend to the serosa and beyond.

The incidence of placenta accreta and its variants is seen to be rising because of the increasing caesarean section rates worldwide. Usually the diagnosis is made intra-operatively when attempts to separate the adherent placenta cause massive hemorrhage. However, the case that we present is that of primary and recurrent secondary postpartum hemorrhage following vaginal delivery.

CASE REPORT

A 35-year-old woman with a previous low transverse caesarean section 2-1/2 years back was referred on post-delivery day 50 for secondary postpartum hemorrhage. Antenatally, she was booked at a local maternity home and her antenatal period was unremarkable. A caesarean section was planned because of previous section and low-lying placenta reported in an early antenatal ultrasound scan. However, at 39 weeks’ gestation, she went into spontaneous labor and was delivered vaginally at the same maternity home. She developed primary postpartum hemorrhage, which was managed conservatively with injectable oxytocics and transfusion of two units of fresh blood. A week later, she developed secondary postpartum hemorrhage and underwent exploration and evacuation under general anesthesia. Another two units of fresh blood were transfused. Ultrasonography examination did not show presence of any products of conception. She had another episode of heavy bleeding following evacuation. A transvaginal ultrasonographic examination was done and showed an anteverted enlarged uterus with the lower segment bulging into the bladder. A non-homogeneous mass with hyper-vascularity was seen within the anterior wall of the lower segment, suggesting placental invasion of uterine substance (Figure 1). Consequently, she was referred to our tertiary care hospital for further evaluation and management but she declined admission.

There was another episode of massive bleeding the following day and she presented in the emergency room. Her uterus was palpable per abdominally and on vaginal examination, the uterus was 12 weeks in size. The os was closed and about 200 ml of clots were present in the vagina that were removed manually. She was admitted and a transabdominal ultrasound examination confirmed the presence of a mixed echogenic area in the anterior wall of the lower uterine segment measuring 5.4 cm x 4.1 cm. Magnetic resonance imaging was advised but was refused on financial grounds. Counseling was done and the options of conservative management by uterine artery

ABSTRACT

Morbidly adherent placenta is a rare clinical condition resulting from abnormally invasive implantation of the placenta into the uterine substance and potentially into the surrounding organs (percreta). We report a case of invasive placental extension through the uterine wall into the bladder and causing primary and recurrent secondary postpartum hemorrhage. It is emphasized that to avoid catastrophic complications, efforts to reach an early antenatal diagnosis should be made through various imaging modalities available in patients with a history of lower segment caesarean section.

Key words: Postpartum hemorrhage. Adherent placenta. Caesarean hysterectomy. Urinary bladder.
embolization and surgical management by removal of the uterus were given. Subsequently, the decision of abdominal hysterectomy was taken by the patient and her family.

A senior obstetric consultant and anesthetist were informed. In anticipation of significant bladder involvement, a senior urologist was also present. A Pfannenstiel incision was given and upon entering the abdominal cavity, the uterus was seen to be enlarged with broadened curves. A mass was visible in the anterior part of the lower segment. The bladder was high and firmly adherent to the previous caesarean section scar. Total abdominal hysterectomy with conservation of the ovaries was performed. The bladder was opened from the dome during the procedure and repaired after removal of the adherent mass. A Foley’s catheter was left in place. Foul smelling fluid and few placental pieces were present inside the uterine cavity.

Postoperatively, the patient was monitored closely for hemorrhage, hematuria and infection. There was leakage of urine per vagina despite placement of the catheter. Therefore, it was decided to leave the catheter in place for 3 weeks. She was discharged on post-operative day 5 and monitored, as an out-patient, thereafter. The catheter was removed at the end of 3 weeks, at which time, she did not have any active complaints.

Histopathological examination confirmed penetration of chorionic villi into the myometrium and serosa without any evidence of intervening decidua.

**DISCUSSION**

Placenta accreta and its variants are classified by the extent of myometrial villus infiltration. Placenta accreta is characterized by chorionic villi on the myometrial surface, increta by villi extending into the myometrium, and percreta by infiltration through the myometrium to breach the serosal surface and possibly beyond. The exact etiology being unknown, it has been postulated that in placenta accreta the barrier function of decidua is absent and, therefore, invasive trophoblastic epithelium invades the myometrium.5

The risk factors for invasive placentation include placenta previa, previous myomectomy, previous caesarean section, Asherman’s syndrome, submucosal fibroids, maternal age more than 35 years,5 previous trophoblastic disease, uterine malformation, septic endometritis and previous manual removal of placenta.6 About 75% of placenta accreta cases are associated with placenta previa, the incidence of which increases from 0.65% after one caesarean section to 10% after four or more.7

A majority of cases present at the time of caesarean section. Other presentations include antepartum hemorrhage,3 shock from ruptured uterus or hematuria, resulting from bladder involvement.7 However, this case was an unusual presentation with recurrent secondary postpartum hemorrhage occurring after an initial episode of primary postpartum hemorrhage.

In view of the morbidity and mortality, associated with the condition, attempts ought to be made at identifying risk factors and reaching an antenatal diagnosis. The primary screening tool for at-risk patients should be real-time ultrasonography, preferably using the transvaginal approach.8 Ultrasound findings suggestive of placental invasion are: (a) obliteration of the retroplacental hypoechoic zone; (b) presence of multiple irregular vascular spaces within the placenta (vascular lacunae); and (c) disruption of the hyperechoic boundary between the uterine serosa and posterior bladder wall.9 The presence of placental lacunae has the highest sensitivity for detection of placenta accreta (78.6%) followed by obliteration of retroplacental zone (57%).9 Other modalities such as Doppler sonography and Magnetic Resonance Imaging may be useful adjuncts in diagnosis.

Following diagnosis or suspicion of one, a multi-disciplinary approach, including consultant obstetrician, anesthetist, interventional radiologist and urologist, is recommended. Traditional management is by caesarean hysterectomy which has a significant risk of intra-operative and post-operative complications. These include massive bleeding, bowel and urologic injuries during the procedure; and deep vein thrombosis, sepsis, bleeding and adult respiratory distress syndrome postoperatively.10 Conservative management involves leaving the placenta in the uterine cavity complemented by bilateral uterine artery embolisation, parenteral methotrexate or both.1 Appropriate management should be decided on a case-by-case basis.
REFERENCES


