



CASE REPORT ON SUCCESSFUL MANAGEMENT OF A CASE OF PLACENTA ACCRETA

Obstetrics & Gynaecology

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ABSTRACT

As the incidence of Caesarean sections have increased, Placenta accreta also has increased and considered as an important cause of maternal and fetal/neonatal morbidity and mortality. In the present study, we report a case of placenta accreta presenting as obstetric emergency. Our patient is a 26 year old G2P1L1 with one previous caesarean section. She was booked and immunised outside. She has undergone previous caesarean section 2 years back for the indication of fetal distress. She had bleeding episodes during the 5th and 6th months of pregnancy and received blood transfusions during that time. MRI of abdomen and pelvis confirmed the diagnosis of complete placenta praevia with accreta. She was admitted at 36 weeks of gestation with complaints of spotting per vaginum. She was taken up for emergency LSCS which was proceeded to Caesarean Hysterectomy. She received multiple transfusions, elective mechanical ventilation and then she was stabilized. This case was successfully managed by a team of skilled Obstetrician, Anaesthesiologist, Intensivist and Urologist.

KEYWORDS

Placenta Accreta, Caesarean Section, Caesarean Hysterectomy

INTRODUCTION

Placenta accreta is defined as abnormal trophoblast invasion of part or all of the placenta into the myometrium of the uterine wall. Three levels of this abnormal placental attachments are outlined according to the profundity of invasion, namely Placenta accreta - the uterine decidua is absent and the chronic villi attaches to the myometrium directly. Placenta increta-the chronic villi invades into the myometrium. Placenta percreta-the chronic villi encroach through the myometrium and may permeate to close by organs[1]. Its incidence has been rising in recent years and this appears to correlate with the increase of caesarean section rates. Maternal morbidity and mortality can occur because of severe and sometimes life-threatening haemorrhage, which often requires blood transfusion. Clinically placenta accreta becomes baffling during delivery when the placenta does not entirely asunder from the uterus and is ensued by massive obstetric haemorrhage, leading to disseminated intravascular coagulopathy; the need of hysterectomy; surgical injury to the ureters, bladders, bowel, or neuromuscular structures; adult respiratory distress syndrome; acute transfusion reaction; electrolyte imbalance; and renal failure. The average blood loss at delivery in women with placenta accreta is 3000-5000 ml.

CASE DETAILS

In this paper we report a case of 26 years G2P1L1, a case of post caesarean pregnancy. She was booked and immunised outside. Her last child birth was 2 years back, LSCS was done for the indication of Fetal distress. She had bleeding per vaginum at 5th and 6th months of pregnancy, diagnosed to have low lying placenta. She had been given 3 blood transfusions. Later she was diagnosed to have complete placenta praevia with placenta accreta which was confirmed by MRI abdomen and pelvis. She was followed up periodically and planned for termination of pregnancy at 36 weeks and she and her family was counselled regarding the condition, need for hysterectomy, blood transfusions and other complications. But she was admitted in the emergency room with complaints of bleeding per vaginum for the past four hours and labour pains since then.

On examination, she was conscious, oriented, afebrile, not anaemic. Her Pulse rate was 100/min, blood Pressure was 110/60 mm Hg. On examining the abdomen, uterus was term and mildly acting. There was a supra pubic scar and the supra pubic area was swollen and congested. Fetal heart rate was good and on local pelvic examination minimal bleeding was present. Patient and patient attenders were informed about the placenta accrete, need for emergency LSCS followed by hysterectomy, massive blood transfusion and anaesthesia and per operative complications like bowel- bladder injury, ureteric injury and the need for post-op ventilation and post-operative complications and

infection. The baby will also require resuscitation and NICU care.

Immediately, a large bore IV canula was inserted and crystalloids started. Blood was taken for investigations – CBC, RFT, LFT, Serology, BT, CT and for cross match. 2 units of packed red cells were ordered to be brought to the OT and 4 units Packed cells and 6 units FFP were reserved and to be kept ready. Theatre anaesthetist, Paediatrician, intensivist, surgeon and urologist were informed. High risk informed consent was obtained and shifted to OT.

General anaesthesia was given, patient in dorsal position abdomen was opened by Pfannenstiel incision. The whole lower uterine segment was engorged and highly vascular [Figure 1]. Bladder was drawn up and adherent. Upper uterine incision was given in order to avoid cutting through the placenta and delivered an alive term female child weighing 2.7 kg. Baby cried immediately. Cord was clamped and cut and baby was handed over to paediatrician. Placenta was completely covering the os, partly got separated and partly adherent to the lower segment. There was profuse bleeding, so we proceeded to Hysterectomy by clamping, cutting and ligating bilateral round ligaments, infundibulo-pelvic ligaments. Bladder was pushed down. Uterine vessel and Mackenrodt's ligaments were clamped, cut and ligated. Total Hysterectomy was done. Vault closed. Urologist was called over and urinary bladder was found to be intact. In the mean time, there was sudden hypotension which was managed by transfusing 3 whole blood, 4 units packed cells and 8 units of fresh frozen plasma and 4 units of platelets. Hemostasis was secured and instruments and mop pad counts were found to be correct. Abdomen was closed in layers after keeping an intra- peritoneal drain. Urine output was 400 ml and clear. Duration of the procedure was two hours. Blood loss estimated was 2500 ml. Post operatively, patient was electively ventilated for 8 hours in view of hemodynamic instability. She was monitored in the Intensive care unit. Investigations were sent. She was on higher antibiotics, Inj Tranexemic acid 500 mg iv tds.

After recovery, she was extubated. Post-operatively she was given 3 packed red cells. Patient was managed by intensivist, calcium and electrolytes were corrected. Drain was minimal.

Slowly she was mobilised and started on oral liquids. Foley catheter and Drain were removed on second post-operative day. Patient recovered well and sutures were removed on 7th day. Wound was healthy. Baby was feeding well and doing good. She was discharged on 8th post-operative day. The specimen was sent for histopathological examination which reveals placental villi extending deeply into the myometrium of the lower uterine segment, suggestive of placenta accreta in the lower uterine segment.

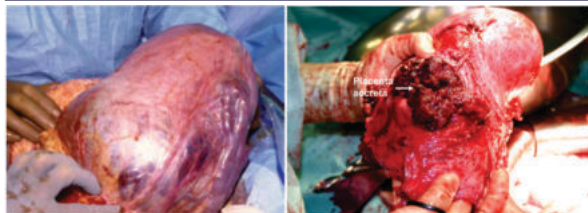


Fig 1: Intraoperative picture

DISCUSSION

The incidence of placenta accrete has increased from approximately 0.8/1000 deliveries in the 1980s to 3/1000 deliveries in the past decade [2]. The early diagnosis of placenta praevia is usually made by ultrasound, although in recent years there has been an interest in the use of MR imaging [3]. Despite the early and accurate prenatal diagnosis, hysterectomy remains the most common surgical procedure in cases of PPH for placenta praevia accreta.

Risk Factors

Placenta accreta occurs when all or part of the placenta attaches abnormally to the myometrium. Three grades of abnormal placental attachment are defined according to the depth of invasion: Accreta - Chorionic villi attach to the myometrium, rather than being restricted within the decidua basalis. Increta - Chorionic villi invade into the myometrium. Percreta - Chorionic villi invade through the myometrium. Among patients with a histologic diagnosis of abnormal placental invasion, 81.6% of cases were placenta accreta, 11.8% of cases were placenta increta, and 6.6% were placenta percreta in one observational study [4]. An important risk factor for placenta accreta is placenta previa in the presence of a uterine scar [5]. For women with placenta praevia, the risk of placenta accreta is 3%, 11%, 40%, 61% and 67% for the first, second, third, fourth and fifth caesarean respectively. Additional reported risk factors for placenta accreta include maternal age and multiparity, other prior uterine surgery, prior uterine curettage, uterine irradiation, endometrial ablation, Asherman syndrome, uterine leiomyomata, uterine anomalies, hypertensive disorders of pregnancy, and smoking.

Diagnosis

When the antepartum diagnosis of placenta accreta is made, it is usually based on ultrasound findings in the second or third trimester.

Sonographic findings that have been associated with placenta accreta are

- (1) Loss of normal hypoechoic retroplacental zone
- (2) Multiple vascular lacunae (irregular vascular spaces) within placenta, giving "Swiss cheese" appearance
- (3) Blood vessels or placental tissue bridging uterine-placental margin, myometrial-bladder interface, or crossing uterine serosa
- (4) Retroplacental myometrial thickness of ≤ 1 mm
- (5) Numerous coherent vessels visualized with 3-dimensional power Doppler in basal view [6] [Figure 2]

A positive predictive value of 78% and a negative predictive value of 94% has been reported.

Magnetic Resonance Imaging (MRI) is the other major tool used for antenatal diagnosis of placenta accreta spectrum. The accuracy of MRI for the prediction of placenta accrete spectrum is reasonably good, with a systematic review reporting sensitivities of 75-100% and specificities of 65-100% [7].

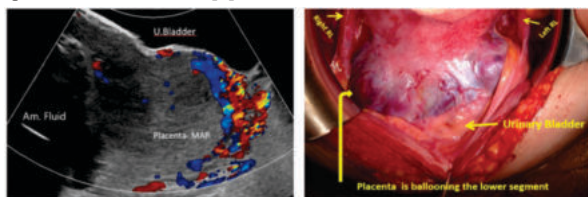


Fig 2: USG picture with colour flow mapping

Antenatal considerations

Because significant hemorrhage is common and it is likely that cesarean-hysterectomy will be required, women with a suspected

placenta accreta should be scheduled for delivery in an institution with appropriate surgical facilities and a blood bank that can facilitate transfusion of large amounts of various blood products. Supplementation with oral iron is recommended to maximize iron stores and oxygen-carrying capacity. The optimal timing for scheduled delivery will depend on clinical circumstances, and the extent of placental invasion. If there is no antepartum bleeding or other complications, planned late preterm delivery around 36 weeks is acceptable to reduce the likelihood of unscheduled emergent delivery at term.

Preoperative consultation with anaesthesiologist and notification of the blood bank are indicated before scheduled surgery when placenta accreta is diagnosed antenatally. Additional surgical services such as gynecologic oncology, urology, general surgery, and/or vascular surgery may provide additional surgical expertise if needed. Patient and her family should be adequately sensitised about the potential complications of the condition, need for hysterectomy, massive blood transfusion. When the patient requests conservative management to preserve fertility or for other reasons, the risks and benefits of this approach and criteria for abandoning conservative surgery should be discussed and documented. Regarding treatment, The American College of Obstetricians and Gynecologists (ACOG) generally recommends cesarean section hysterectomy in cases of placenta accreta because removal of placenta associated with significant hemorrhage. However, Segmental uterine resection may be an alternative to cesarean hysterectomy, to preserve fertility or to protect the uterus, in cases in which there is no placenta previa. Others conservative methods and fertility sparing can be applied, these methods include placenta left in situ, cervical inversion technique and triple-P procedure [8]. Placenta left in situ and methotrexate use have serious risks, such as late postpartum hemorrhage, infection, and pulmonary embolism.

Intraoperative considerations

While usually a Pfannenstiel incision is used, a median or paramedian vertical skin incision may offer improved visualization and improved access for a fundal or posterior uterine wall hysterotomy and for hysterectomy. Once the abdomen is entered, the uterine serosa may be distended by dilated vessels over the region of placental insertion. It is recommended that the uterine incision be located to avoid the placenta during entry into the uterine cavity if possible. The most generally accepted approach to placenta accreta spectrum is caesarean hysterectomy with placenta left in situ after delivery of the fetus because attempts at placental removal are associated with significant risk of hemorrhage, a total hysterectomy is required because lower uterine segment or cervical bleeding frequently precludes a supracervical hysterectomy. Careful dissection in the retroperitoneal space with attention to devascularization of the uterine corpus in proximity to the placenta is often required given the overwhelming vascularity and friability of involved tissues. Frequent assessment of volume status (blood loss, maternal vital signs, urine output) and laboratory parameters (hemoglobin/hematocrit, platelets, coagulation factors and function) can enable the operative team to initiate fluid resuscitation and transfusion in a timely manner. Initial crystalloid and/or volume therapy may be helpful during the management of acute blood loss. Prompt blood product transfusion is generally needed with heavy bleeding such as that seen at cesarean hysterectomy [9]. In the setting of large hemorrhage, the administration of fresh frozen plasma and platelets in a 1:1 ratio with packed red blood cells can result in more rapid correction of coagulopathy, decreased need for packed red blood cell transfusion in the intensive care unit, and reduced mortality [10].

Post-operative care

The patient requiring hysterectomy for placenta accreta is at risk for postoperative complications related to intraoperative hypotension, persistent coagulopathy and anemia, and prolonged surgery. Renal, cardiac, and other organ dysfunction is common and should be considered. Specific attention should be paid to frequent evaluation of vital signs (blood pressure, heart and respiratory rate). Urine output should be measured via an indwelling urinary catheter. Intensive care admission, central venous monitoring, and assessment of peripheral oxygenation by pulse oximetry can be helpful in some cases. Correction of coagulopathy and severe anaemia with blood products should be undertaken. Early ambulation, and intermittent compression devices for those requiring bedrest, can reduce the risk of thromboembolic complications.

CONCLUSION

Placenta Accreta is potential life-threatening condition for both mother and baby. In spite of early diagnosis of placenta accreta/increta through MRI, Hysterectomy remains a common preferred procedure. This case highlights need for further research into the prevention of abnormal placental development and to prevent their risk of massive hemorrhage.

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