Bladder Saving Hysterectomy for Placenta Praevia Percreta

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Background: ***Placenta accreta is an abnormally firm attachment of placental villi to the uterine wall, which may cause postpartum hemorrhage. Placenta Percreta with invasion of the urinary bladder is a rare condition, which carries a high morbidity and mortality risk for mother and fetus.***
Case Report: ***The present case is of 26 year old female who was diagnosed as a case of placenta percreta invading bladder during surgery. She was treated by cesarean hysterectomy with bilateral anterior branch of internal iliac artery ligation. The part of placenta adherent to wall of uterus and bladder was left in situ to save bladder. Overall 7 units of blood and 7 units of FFP given to patient preoperatively. Postoperatively methotrexate was given to the patient and followed with β HCG levels.***
Conclusion: ***A multidisciplinary approach for preoperative, intraoperative, and postoperative management of placenta previa percreta optimizes maternal outcome.***

Introduction

Placenta percreta is a rare, life threatening complication of pregnancy with pathologic invasion of the full thickness of the uterine wall[1]. Medline search could reveal only 17 articles on this topic. Placenta percreta is a potentially fatal condition which results in 7% maternal death and 9%perinatal death. These figures further increase to9.5% and 24% respectively if the condition is complicated by bladder invasion[2]. Preoperative diagnosis of this entity is not always possible and intraoperative diagnosis needs a multidisciplinary approach in order to save maternal life because of excessive hemorrhage and conservative surgery in order to achieve haemostasis and save bladder. This rare case of placenta percreta invading the bladder is presented necessitating cesarean hysterectomy because of massive haemorrhage.

Case report

A 26 year old female G4P1A2 who gave birth to her last baby via cesarean section was admitted to emergency at 36 weeks with complaint of pain abdomen for one day. She had history of check curettage for incomplete abortion 1 year after last child birth. There were no complaints of bleeding or leaking throughout this pregnancy. On examination her vitals were stable; per abdominally uterus was 36 week size, with transverse lie with fetal heart rate of 140 per minute. Sonography revealed a single foetus with transverse lie with central placenta previa with no evidence of placenta accreta. Her hemoglobin was 8.0gm and urine was normal.

She was built up by transfusing 2 units of packed cell volume and taken for elective cesarean section at 38 completed weeks. Under spinal anesthesia the abdomen was opened by previous pfannensteil incision. The placenta was found completely penetrating the lower segment of uterus with numerous dilated vessels on peritoneal serosa extending over the bladder serosa. Bladder was densely adherent to previous scar and could not be pushed down. A high incision given and baby was delivered transplacentally. The baby's weight was 2.5 kg with an Apgar score of 7/10 and 9/10 at 1 and 5 minutes. Massive bleeding was present from the placental sinuses and patient went in hypertensive shock. She was resuscitated; the part of placenta above the incision was cut. There was profuse bleeding from the placental sinuses as well as atonic uterus.

Conservative measures like prostaglandins, haemostatic sutures, were tried but failed to control hemorrhage. Bilateral anterior branch of hypogastric arteries were ligated to control the hemorrhage. Decision of hysterectomy was taken, while doing hysterectomy there was no plane of cleavage between the bladder and anteriorly lower uterine segment and lower half of placenta was found

invading through the uterine wall as well as appeared invading bladder. Supracervical hysterectomy was done and haemostatic sutures taken from the adherent placenta to achieve haemostasis.

Cystoscopy was done and multiple punctuate hemorrhage with dilated blood vessels were visible. The part of placenta adherent to uterine wall and invading bladder was left in situ. Abdominal drain was put in and abdomen was closed in layers. Intraoperatively, 7 units of blood and 7 units of fresh frozen plasma given to patient. Postoperatively patient recovered well, but frank haematuria continued for 3 post operative days and microscopic haematuria persisted for 10 days. Self retaining catheter was removed on 14th postoperative day. In immediate postpartum period injection methotrexate 50mg/m2 was given intramuscularly to the patient and followed with β HCG levels.

Discussion

Placenta percreta is characterized by chorionic villi invasion to or through the serosal covering of uterus. It is the most serious but rare form of abnormality of adherent placenta with a reported incidence of 0.03 per 1000 births[3] . The main predisposing factors include history of uterine surgery principally cesarean section with probability of placenta previa being accreta rising as high as 67% after four cesarean sections. In present scenario with increasing incidence of cesarean section the incidence of placenta percreta is on rise[4]. Rarely prior curettage of uterus, Ascherman syndrome and submucous fibroids are also associated with this[4].

A high index of suspicion of placenta percreta with possibility of bladder invasion should always be kept in mind in patients with placenta previa with history of LSCS. The role of MRI in diagnosing placenta accreta is still debated. Two recent comparative studies have shown sonography and MRI to be comparable: in the first study 15 of 32 women ended up having accreta70 (sensitivity 93% versus 80% and specificity 71% versus 65% for ultrasound versus MRI); in the second study 12 of 50 women ended up having accreta and MRI and Doppler showed no difference in detection (P=0.74), although MRI was better at detecting the depth of infiltration in cases of placenta accreta (P<0.001). Many authors have therefore recommended MRI for women in whom ultrasound findings are inconclusive. Maternal serum levels of alpha fetoproteins also suggested recently for dagnosis[6].

Majority of the studies reported massive haemorrhage intraoperatively and different methods of conservative as well as extensive surgeries are suggested. Multidisciplinary approach including gynecologist, urologist, anesthetist, hematologist and radiologist is recommended. Peroperative cystoscopy can delineate bladder as well as ureteral involvement and cystoscopy obsolete need of cystostomy to assess bladder invasion. Almost all cases reported in the literature required hysterectomy with bilateral hypogastric ligation as in present case. Massive blood loss up to 17 liters is reported, maternal death[7] and reversible cardiac arrest are also reported[8].To reduce blood loss a few studies showed successful management with prophylactic arterial catheterization preceding cesarean section in order to perform immediate remobilization in case of preoperative haemorrhage[9,10]. In patients where placenta percreta with massive hemorrhage is an operative finding as in our case immediate ligation of anterior division of internal iliac artery bilaterally can considerably reduce blood loss.

As far as conservation of bladder, no attempt should be made to separate the adherent placenta as it will only multiplies the blood loss. Ideally cervix should be removed but this procedure can again invite hemorrhage and bladder injury. Postoperatively bladder fistulas are reported where such attempts were made. In the present case to avoid bladder damage supracervical hysterectomy was done and the adherent placenta left in situ.

Conclusion

- With this study we tried to emphasize that a high index of suspicion of placenta percreta should always kept in mind in cases of placenta previa with previous LSCS in spite of

diagnosis missed on ultrasound. For successful outcome in patients of placenta percreta invading bladder preoperative diagnosis, vigilance during surgery and multidisciplinary approach are main prerequisites.

- As per the latest guideline by RCOG: Surgeons delivering the baby by caesarean section in the presence of a suspected placenta praevia accreta should consider opening the uterus at a site distant from the placenta, and delivering the baby without disturbing the placenta, in order to enable conservative management of the placenta or elective hysterectomy to be performed if the accreta is confirmed. If the placenta fails to separate with the usual measures, leaving it in place and closing, or leaving it in place, closing the uterus and proceeding to a hysterectomy are both associated with less blood loss than trying to separate it.
- If the placenta partially separates, the separated portion(s) need to be delivered and any hemorrhage that occurs needs to be dealt with in the normal way. Adherent portions can be left in place, but blood loss in such circumstances can be large and massive hemorrhage management needs to follow in a timely fashion. The woman should be warned of the risks of bleeding and infection postoperatively and prophylactic antibiotics may be helpful in the immediate postpartum period to reduce this risk.
- Neither methotrexate nor arterial Embolization reduces these risks and neither is recommended routinely. Follow-up of the woman using ultrasound should supplement serum beta-human chorionic gonadotrophin measurements

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