



Prophylactic internal iliac artery ligation in a case of placenta accreta

KEYWORDS

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Introduction:

Morbid adherence of the placenta to the uterine wall is a potentially life threatening obstetric complication that frequently requires interventions such as caesarean hysterectomy and high volume blood transfusion. With the rising caesarean delivery rate and increasing maternal age, the incidence of placenta accreta has significantly increased. With proper planning, thorough communication, and constant vigilance, the care of a patient with a dual diagnosis of placenta previa and placenta accreta can be safely accomplished.

Case report:

23 yrs old female second gravida with previous one lower segment caesarean section with short peri conceptual period came at 35.6wks of gestation. Her general condition was stable & obstetric ultrasound showed a single live intrauterine gestation of 36 wks with complete placenta previa with high suspicion of placenta accreta. MRI findings suggestive of placental tissue invading myometrium extending upto serosa with doubtful bladder invasion with type IV placenta previa. After needful investigations & adequate cross matched blood available in hands, we planned elective caesarean section keeping in mind the chance of caesarean hysterectomy. Intraoperatively increased vascularity over lower uterine segment was observed hence upper segment transverse incision was taken to deliver the baby. Placenta was covering internal os & invading the anterior myometrium upto serosa. Placenta was left in situ & directly proceeded for bilateral internal iliac artery ligation keeping in mind the prophylactic role of internal iliac artery ligation in reducing intraoperative blood loss. In view of morbidly adherent placenta we proceeded for caesarean hysterectomy. Intra-operatively she received 2 units of blood. Her post-operative period was uneventful & she discharge on day 9 with baby. Both mother & baby were in good health at tehe time of last check up.

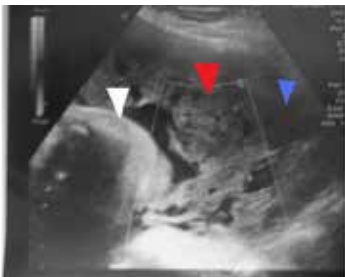


Fig 1 White arrow : Fetal head, Red arrow : Placenta, Blue Arrow : Cervix.

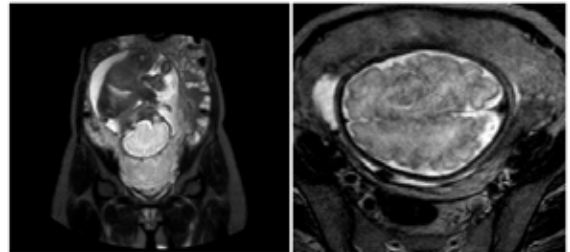


Fig.2 Antenatal MRI Sagittal & Coronal T2-weighted MR image shows a heterogeneous placenta which causes Focal interruption of myometrium and serosal extension of placenta.



Fig.intraoperative finding showing increased

Fig.internal iliac artery ligation before vascularity proceeding to hysterectomy

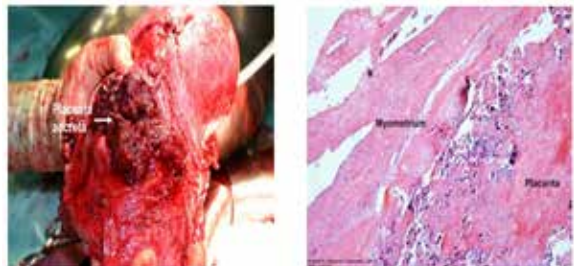


Fig.Photo of specimen showing placenta previa

Fig. Histopathology slide showing placenta

With morbidly adherent placenta invading uterine myometrium

Discussion:

Historically placenta accreta was an incidental finding at

the time of delivery and was associated with high maternal morbidity and mortality. The development of new imaging techniques, such as magnetic resonance imaging (MRI) and transvaginal color Doppler sonography, has allowed antenatal diagnosis of this condition and elective preoperative planning of the obstetric and anesthetic management of these patients well advance in time like elective Cesarean section & hysterectomy if necessary. Placenta accreta is defined as an abnormal adherence of the placenta to the uterine wall owing to an absent or faulty Nitabuch's layer of decidua . Because of this deficiency, the placenta does not separate cleanly from the uterus after delivery and maternal hemorrhage ensues. This decrease in decidua occurs after trauma to the uterus secondary to cesarean deliveries & . Clark et al find the risk of having placenta accreta rises from 24% with patients having 1 cesarean delivery to 67% in patients who have 3 or more prior cesarean deliveries when placenta previa was .

This form of abnormal placentation is further subdivided into placenta accreta, increta and percreta, depending on the depth of invasion of the uterine wall and surrounding structures.

The association of placenta accreta with other forms of abnormal placentation, such as low-lying placenta or placenta previa, is common. About 89% cases of morbidly adherent placenta are associated with placenta . In the presence of the risk factors, previous caesarean section and placenta previa, obstetricians must have a high index of suspicion for placenta accreta.

When placenta accreta is diagnosed antepartum, specific preoperative preparations such as autologous blood donation, arterial and central line insertion or hypogastric artery balloon placement, can be undertaken in preparation for surgery. Antenatal diagnosis, adequately planned caesarean hysterectomy without attempts at placental removal, prophylactic internal iliac artery ligation before proceeding to hysterectomy, reduce maternal morbidity & number of blood transfusions as seen in our . Daniel Frasca et al reported a 41yr old woman presented with undiagnosed placenta percreta invading the bladder. Patient lost 16000ml of blood before the haemorrhage was surgically controlled with successful cesarean delivery as well as cesarean She required massive blood transfusion. In women in whom hysterectomy is the definitive operative method, internal iliac artery ligation still might be useful by decreasing the total amount of blood . All obstetricians should familiarize themselves with this procedure and lower their threshold for its use in emergent situations. Placenta accreta still remains the leading indication for peripartum cesarean hysterectomy. The single greatest factor affecting a

positive patient outcome is early recognition. Unfortunately, many obstetricians have little or no experience with performance of obstetric hysterectomy, and many anesthesiologists are not aware of anesthetic implications of this condition. Anaesthetists must have plenty of assistance and be prepared for massive bloodloss in all cases of abnormal .

Conclusion:

High index of suspicion ,intelligent anticipation ,early diagnosis with USG & othe imaging modalities like MRI to assess the extent of myometrial involvement before delivery could increase obstetrician's preparedness. Prompt management of placenta accreta, and timely intervention with internal iliac artery ligation to reduce the obstetric haemorrhage even though patient required obstetric hysterectomy, could prevent maternal catastrophe.

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