Placenta accreta and anesthesia: A multidisciplinary approach

ABSTRACT
Placenta accreta (an abnormally adherent placenta) is one of the two leading causes of peripartum hemorrhage and the most common indication for peripartum hysterectomy. Placenta accreta may be associated with significant maternal hemorrhage at delivery owing to the incomplete placental separation. When placenta accreta is diagnosed before delivery, a multidisciplinary approach may improve patient outcome.

Key words: Anesthesia; hemorrhage; placenta accreta

Introduction
Normally, the placenta adheres to the decidua basalis layer, allowing for a smooth separation of the placenta from the uterine wall after delivery. In patients with abnormal placentation, the placenta has invaded past the decidua basalis layer. The incidence of placenta accreta among deliveries is low (0.04%). However, it accounts for up to 50% of all cesarean hysterectomies most of which are unplanned. Placenta accreta (an abnormally adherent placenta) is one of the two leading causes of peripartum hemorrhage and the most common indication for peripartum hysterectomy. This has anesthetic implications because it is necessary to prepare for the potential danger of major hemorrhage. Anesthesia management of the hemorrhage consisted of blood and fluid replacement, guided by an assessment of the amount of blood loss along with heart rate, urine output, and systemic blood pressure. General anesthesia is preferred due to the longer operating times, massive hemorrhage and need for an extension of surgery including iliac vessel exposure. A multidisciplinary approach may improve patient outcome. We report a case placenta accreta with planned hysterectomy using multidisciplinary approach resulting in decrease morbidity and mortality.

Case Report
A 35-year-old female, weighing 70 kg, gravida six presented for an elective cesarean section. Her past obstetric history included five previous cesarean sections for cephalo-pelvic disproportion and expected lengthy procedures under general anesthesia uneventfully. There was no significant past medical or surgical history. All routine laboratory results were in normal range except hemoglobin that was 9 g/dl. Ultrasonography of abdomen showed placenta accreta. Hence, elective cesarean section with consented hysterectomy, under general anesthesia was planned. In view of expected massive blood loss, adequate packed red blood cells (PRBCs) and blood products were available in the operation theater. The patient was on the operating theater table with a wedge under the right hip. Standard monitors (electrocardiogram,
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The incidence of placenta accreta has increased steadily during the past several decades — Most likely secondary to the rising rate of cesarean deliveries — and currently occurs at a rate of 1:500 deliveries.[6] Placenta previa, especially with a history of cesarean delivery, is a major risk factor for placenta accrete.[7] The rate of cesarean delivery in the United States has risen by 53% from 1996 to 2007. As of 2007, one-third of all deliveries in the United States was by cesarean, with Louisiana having the third highest cesarean delivery rate in the country.[6] The incidence of abnormal placentation in patients with a placenta previa increases from 3% with no history of cesarean delivery to >60% in patients with more than 2 prior cesarean deliveries. As the incidence of cesarean delivery rises, so will cases of abnormal placentation.[10] However, it is important to remember that abnormal placentation can occur even in patients without a prior history of cesarean delivery. Multiparity, advanced maternal age, previous dilation and curettage, hypertensive disorders, and tobacco use are also risk factors for accreta in patients with a placenta previa.[10]

Patients with placenta accreta usually require a hysterectomy. As diagnosis cannot be established definitively with ultrasound, diagnosis can be made only at surgery. When placenta accreta is diagnosed antenatally, generally the placenta is left attached while hysterectomy is performed.[11] In our hospital, we have assembled an obstetric hemorrhage team that consists of a maternal fetal medicine specialist, obstetrician, anesthesiologist, intensivist, and neonatologist. After initial case review, an interventional radiologist, urologist, and a blood bank physician are consulted if deemed necessary. In our case by use of multi-disciplinary team approach and pre-operative preparations, we decrease the patient morbidity, and mortality and patient’s outcome was good.

Conclusion

Patients with placenta accreta are at risk for significant hemorrhage at delivery. The key to a successful outcome in these cases is a multidisciplinary approach, appropriate communication, and early planning. Favorable maternal and fetal outcomes have resulted from this team-based approach.

Financial support and sponsorship
Nil.

Conflicts of interest
There are no conflicts of interest.
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