



LETTERS

Case Report: Management of Elective Cesarean Delivery in the Presence of Placenta Previa and Placenta Accreta

We read with interest the article by Sarah A. Bergakker, CRNA, MSN, in the October 2010 *AANA Journal* regarding the perioperative management of a patient with placenta previa and placenta accreta.¹ At our institution we experienced a similar situation in which a gravida 3, para 2, 30-year-old woman with a history of 2 cesarean deliveries was admitted to the hospital at 35 weeks' gestation. The patient presented with the diagnosis of total placenta previa and placenta percreta invading the bladder. Perioperative management included the use of bilateral internal iliac artery (IIA) balloon occlusion catheters for elective cesarean delivery.

Placenta percreta refers to an abnormal attachment of the placenta to the uterine wall due to an absent or faulty decidua basalis. As a result, chorionic villi abnormally adhere (eg, placenta accreta vera), invades (eg, placenta increta), or penetrates the myometrium (eg, placenta percreta).² Placenta percreta with invasion of the urinary bladder is a rare condition, with significant risk of maternal hemorrhage and can

result in maternal and fetal mortality. Since the 1960s, transcatheter arterial embolization has been used as a method to control hemorrhage. Because of collateral vasculature in the pelvis, balloon occlusion of IIA does not completely stop uterine blood flow; therefore, the success rate in arresting hemorrhage with this technique is as low as 42%.² However, by reducing the arterial pulse pressure distal to the site of occlusion, balloon catheters: (1) slow the rate of blood loss and improves the surgical field, (2) reduce the risk of surgical complications, and (3) decrease intraoperative blood loss.²

The use of bilateral IIA balloon occlusion catheters was lifesaving in our experience. Although surgical blood loss was estimated at 25,000 mL (eg, 5 blood volumes) the rate of maternal hemorrhage was attenuated, providing the anesthesia care team an opportunity to replace surgical blood loss with blood products based on new massive transfusion protocols for obstetric hemorrhage.³ Over the course of the 9-hour surgical procedure, the patient received 38 U of packed red blood cells, 39 U of fresh-frozen plasma, 7 units of platelet pheresis, 1 unit of cryoprecipitate, 1 L of colloid, and 17 L of crystalloid.

The patient and neonate had an uneventful postoperative course.

Both were discharged within 2 weeks without long-term sequelae from this event.

Placenta percreta remains a leading cause of maternal hemorrhage and a risk factor for increased morbidity and mortality. A multidisciplinary approach must be instituted for management of these patients. Maternal outcome can be significantly improved with the use of novel interventional radiology techniques.

REFERENCES

1. Bergakker SA. Case report: management of elective cesarean delivery in the presence of placenta previa and placenta accreta. *AANA J*. 2010;78(5):380-384.
2. Mok M, Heidemann B, Dundas K, Gillespie I, Clark V. Interventional radiology in women with suspected placenta accreta undergoing caesarean section. *Int J Obstet Anesth*. 2008;17(3):255-261.
3. Shields L, Lee R, Druzin M, McNulty J, Mason H. Blood Product Replacement: Obstetric Hemorrhage. California Maternal Quality Care Collaborative. 2010. www.cmqcc.org/resources/856/download. Accessed December 28, 2010.

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