Urgent Cesarean Section In An Obese Multiparous Parturient With Chronic Anemia, Posterior Placenta Previa, Preterm Premature Rupture of Membranes, and Twin Gestation

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Case Presentation: Patient is a 34 year old G8P3043 female, BMI 35, with a past medical history of HIV and chronic anemia. Obstetric history includes 3 normal spontaneous vaginal deliveries, 4 vaginal terminations of pregnancy with 4 dilation & curetages, and a treated gonorrhea infection. Social history was positive for daily marijuana smoking. Patient was admitted at 24 weeks and 1 day for Preterm Premature Rupture of Membranes (PPROM) of Twin A and vaginal bleeding. Patient had a posterior placenta previa for Twin A. Patient was managed on the Antepartum Service until 26 weeks and 3 days, at which point patient had her third episode of bleeding. The decision was subsequently made to proceed with delivery via spinal.

Hospital course prior to cesarean section was complicated by chronic anemia for which she received 3 units of packed red blood cells. Hemoglobin at the time of the cesarean section was 9.7. Postoperatively and prior to discharge, the patient’s hemoglobin was 9.0 and 8.7 respectively.

Patient had one 20 gauge IV. Numerous attempts were made to obtain additional peripheral intravenous access without success. Due to difficulty obtaining IV access and possibility for significant blood loss, a right internal jugular central venous catheter was placed prior to administration of the spinal anesthetic. Patient was awake during the placement of the central line.

Spinal anesthetic was achieved using a 25 gauge 9 cm Spinal Needle. Adequate surgical anesthesia for the duration of the case was accomplished with 1.8 ml of 0.75% Bupivacaine plus epinephrine 0.1 mg. In addition, Duramorph 200 mcg was administered.

Surgery revealed a normal appearing gravid uterus, bilateral tubes and ovaries. Twin A was in complete breech presentation, weighed 670 g, and had a 9/9 APGAR score. Twin B was in a transverse, back down position, weighed 670 g, and had a 4/7 APGAR score. Both twins were transferred to the NICU. Twin B was intubated.

Patient was stable throughout the case. EBL was 1L. No transfusions were given. Patient received 3L of lactated ringers.

Discussion: Placenta previa is a condition where the placenta abnormally implants on the lower uterine segment with partially or total occlusion of the internal cervical os. It complicates approximately 0.4% of pregnancies, resulting in up to 0.9% incidence of maternal mortality and a 17-26% incidence of perinatal mortality. Risk factors for developing placenta previa include previous cesarean section, uterine surgery, or pregnancy termination. Other risk factors are smoking history, advanced maternal age, multiparity, multiple gestation, and cocaine abuse. The
risk for placenta previa increases in proportion with the number of previous pregnancies and previous cesarean deliveries. The relative risk increases from 4.5 (one prior cesarean section) to 44.9 (four prior cesarean sections). Diagnosis can be made with ultrasound, MRI, or vaginal examination. Vaginal examination for diagnosis of previa is only reserved for patients when diagnosis can’t be made by ultrasound or MRI. The vaginal exam must take place in the operating room with emergency induction of general anesthesia and cesarean delivery available if profuse hemorrhage occurs during or after the exam.

Placenta previa usually presents with painless, bright red vaginal bleeding, usually after the seventh month of pregnancy. The bleeding can range from very mild and intermittent to profuse and life threatening. It may also be associated with an unstable or abnormal lie. If the bleeding is not profuse and the fetus is immature, obstetric management is conservative to prolong pregnancy. If the fetus is mature, prompted delivery, usually by cesarean section, is indicated.

If the mother is hemodynamically stable, neuraxial anesthesia may be used for delivery. General anesthesia is associated with greater blood loss and greater need of transfusion. Patients with a history of prior uterine surgeries including previous cesarean section are at greater risk for hemorrhage. The risk of placenta accreta in women with previa increases from 3% in primary cesarean section to 61% in quaternary section.

Anesthetic management of a patient with placenta previa includes large bore IV access and type and crossed blood available. These must be available prior to induction of anesthesia, whether spinal or general. If spinal anesthesia is used, quick conversion to general anesthesia must be prepared if significant hemorrhage and maternal hemodynamic instability develop. General anesthesia should be the initial plan in cases with significant hemorrhage, and an arterial line should be placed.

Sources:

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