Combined spinal-epidural and general anaesthesia for cesarean section in pregnant patients with placental anomalies - two case reports

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Background

Placental anomalies can be associated with massive blood loss at delivery and with high maternal mortality.

Placenta previa (PP) is the insertion of the placenta in the lower segment of the uterus. Placenta accreta (PA) is defined as an abnormal attachment of the placenta to the myometrium.

Prenatal diagnosis allows a reduction of maternal morbimortality, as it makes possible to plan the surgical approach and anticipate hemorrhagic control methodology.

We present two pregnant women, ASA II, admitted for elective c-sections due to placental abnormalities.

Clinical Cases

Case 1

40 years-old, G3P2, diagnosis of placenta *previa*

Previous history: Two c-sections (fetus pelvic presentation)

Preoperative tests: Hg 10.2 g/dL, platelets 167 000 / mm³ blood. No changes in coagulation tests (aPTT, TP, fibrinogen)

Case 2

35-year-old, G2P1, diagnosed with total central placenta previa with accretism on the uterine scar.

Previous history: Caesarean section because of fetus pelvic presentation.

Preoperative tests: Hg 10.3 g/dL, platelets 163 000/mm³. No changes in coagulation tests (PT, aPTT and fibrinogen)

Monitoring: *standard*; invasive arterial pressure; three-way catheter introduced in the right subclavian vein.

Technique:

- Subarachnoid anaesthesia, with 10 mg of 0,5% levobupivacaine and 0,002 mg of sufentanil, performed by a sequential technique, for bilateral placement of ureteral double J catheters and placement of balloon catheters in the common iliac arteries.
- Rapid sequence general anaesthesia with propofol 2mg/kg and succinylcholine 1mg/kg for cesarean

Maintenance of anaesthesia with a mixture of O₂/N₂O and sevoflurane.

Newly born extracted: APGAR index 8/10/10 to 1, 5 and 10 minutes respectively.

Intra-operative:

- Total blood loss: ~3600 ml; Hg 8.4 g/dL
- Balloons of the common iliac arteries inflated and vasopressor support.
- Total of 8 U of blood cell concentrate and 6 units of fresh frozen plasma administered.
- Balloon catheters removed. Patency of both lower limbs arteries confirmed bilaterally via Doppler.

End of the surgery: Hg 9.3 g/dL, 50,000 platelets/mm³, aPTT 129 s, TP 16.8 s and fibrinogen 181 mg/dL.

Post-operative: Intensive Care Unit for 3 days, maintaining hemodynamic stability with favorable analytical and clinical evolution. Discharge from hospital after 14 days.

Maintenance of anaesthesia with a mixture of O₂/N₂O and sevoflurane.

Newly born extracted: APGAR index 7/9/10 to 1, 5 and 10 minutes respectively.

Intra-operative:

- Total blood loss: ~3500 mL; Hg 5.9 g/dL
- Vasopressor support, with no need to insufflate the balloon catheter
- Total of 5U of blood cell concentrate, 1 pool of platelets, 4g of fibrinogen and 2U of FFP.
- Balloon catheters were removed. Patency of lower limbs arteries was confirmed bilaterally via Doppler.

End of the surgery: Hg 8.2 g/dL, 128,000 platelets/mm³, aPTT 36.4 s, TP 13.3 s and fibrinogen of 323 mg/dL.

Post-operative: Intensive Care Unit for 2 days, maintaining hemodynamic stability with favorable analytical and clinical evolution. Discharge from hospital after 7 days.

Discussion

We performed combined neuroaxial anaesthesia to enable the setting of double J catheter and the iliac artery balloon catheter, followed by general anesthesia to perform cesarean, protecting the fetus from the deleterious effects of prolonged general anaesthesia. Induction of general anaesthesia was motivated by the predictable complexity of the surgical intervention.

The epidural catheter was used to administer post-operative analgesia.

References:

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