Anaesthesia management in a patient with severe idiopathic thrombocytopaenia with antepartum haemorrhage for emergency caesarean section

Sir,

Idiopathic thrombocytopaenic purpura (ITP) commonly occurs in young females of reproductive age group.[1] The major complication of ITP is peripartum haemorrhage. Neonatal thrombocytopaenia or haemorrhage is uncommon. These patients commonly present for anaesthesia management for caesarean section or natural birth. We present the anaesthesia management of a patient with severe chronic ITP with antepartum haemorrhage for emergency caesarean section. A 34-year-old multipara, 36 weeks gestation, known case of ITP, on oral prednisolone and dapsone was posted for emergency caesarean section due to low platelet count (14,000/mm^3) with antepartum haemorrhage. She weighed 38 kg. Her pulse rate was 112/min and blood pressure was 138/88 mm hg. Her systemic examination and other investigations were normal. She was administered intravenous (IV) methylprednisolone 1 g and transfused 8 units of random donor platelets (RDP). Pre-operative ultrasonography did not show foetal intracerebral bleed. Anti-aspiration prophylaxis included ranitidine 50 mg and metoclopramide 10 mg. After attaching standard monitoring, two wide bore IV cannulae were inserted. After pre-oxygenating the patient for 3 min, anaesthesia was induced with rapid sequence induction with thiopentone 250 mg and succinylcholine 75 mg, followed by oral intubation. Anaesthesia was maintained with isoflurane in 50% oxygen: Nitrous oxide mixture and intermittent administration of vecuronium as and when required. Tranexamic acid 500 mg was injected slowly. A 2.7 kg baby was delivered within 10 min with APGAR score 9 and 10 at 1 and 5 min, respectively. Fentanyl 100 μg and midazolam 1 mg were injected. Oxytocin 20 U in 500 ml of 0.9% saline was started and IV methylergometrine 0.2 mg was given. Intraoperative haemodynamics was stable. Total blood loss was 1.2 L. The patient was extubated on the table. Post-operative steroids were continued and her platelet count improved. There was no neonatal thrombocytopaenia or haemorrhagic complications. Post-operative pain was managed with pentazocine. Both mother and baby were discharged on day 3.

Although the incidence of ITP is 5% among pregnant patients, severe thrombocytopaenia (platelet count <50,000/mm^3) is rare.[1] There are autoantibodies against the platelet membrane glycoproteins. Exacerbation of thrombocytopaenia is known to occur in pregnancy and peripartum haemorrhage is very common in these patients.[2] Foetal and neonatal thrombocytopaenia and intraventricular bleed are possibilities but not very common.[2]

Management of severe thrombocytopaenia in ITP requires platelet transfusion before surgery. IV immunoglobulins 1 g/kg reduce platelet destruction, but it is expensive and was not available with us.[1-5] Perioperative methylprednisolone 1 g along with pre-operative 8 RDP transfusion covered the perioperative period. Since the surgery was emergency, platelet count was not repeated. Each unit of RDP is assumed to increase the platelet count by 3000–5000 units/mm^3. Thromboelastography can help us in this scenario, but it was not available with us. Tranexamic acid, an antifibrinolytic, helps to reduce operative blood loss and blood transfusions.[6] The intraoperative uterine contraction was confirmed with oxytocin and methylergometrine. Non-steroidal anti-inflammatory drugs (NSAIDs) including paracetamol were avoided. No intramuscular injections were given. Post-partum haemorrhage was not seen in our patient.

Anaesthesia goals in management of pregnant patient with severe thrombocytopaenia must include institution of general anaesthesia, platelet transfusion preferably single donor to prevent allo-immunisation, IV immunoglobulins or steroids to reduce platelet destruction, maternal and foetal/neonatal monitoring for haemorrhagic complications, abstinence from use of NSAIDs or other platelet lowering drugs and avoidance of airway trauma, nasal intubations and intramuscular injections. The maternal and foetal outcomes are good with appropriate management.

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