

LETTER TO EDITOR

Perioperative Management in Patient with Severe Idiopathic Thrombocytopenia for Emergency Caesarean Section

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Sir,

Incidence of Immune Thrombocytopenia (ITP) is 1 to 2 per 1,000 pregnancies [1]. Pathophysiology includes immune mediated destruction of platelets coated by IgG anti-platelet autoantibodies and diminished platelet production [2]. In absence of platelet count prior to pregnancy, significant thrombocytopenia in first trimester with decreasing trend with advancement of gestation makes the diagnosis of ITP more likely [2]. Perioperative bleeding is the major risk in these patients. Neonatal thrombocytopenia may occur due to transplacental transfer of maternal antibodies [2]. We present anaesthesia management of a 21 year patient, G₃P₁A₂ having severe idiopathic ITP with fetal distress for emergency caesarean section. Her present obstetric, medical, surgical and drug history was unremarkable except for incidental thrombocytopenia during first trimester. Patient was evaluated for malaria, dengue, systemic lupus erythematosus and antiphospholipid antibody syndrome in view of thrombocytopenia and recurrent abortion and was negative for same. Patient was started on tablet prednisolone 50 mg daily by physician in view of thrombocytopenia (50000/mm³). Platelets were further dropped to 28000/mm³ within two weeks of therapy hence she was started on oral azathioprine 50 mg and dapsone 100 mg daily. In the third trimester she again had severe thrombocytopenia (10000/mm³)

with purpuric patches and required platelet transfusion and IV IgG infusion in dose of 45 gm daily for three days followed by adequate recovery. On the day of surgery, patient had received four random donor platelets in view of thrombocytopenia (60000/mm³). Her general and systemic examination was normal. She received IV hydrocortisone 100 mg, ranitidine 50 mg, metoclopramide 10 mg, ondansetron 4mg and tranexamic acid 500 mg preoperatively. Adequate blood and blood product were kept ready. Standard monitoring was done. Two wide bore venous accesses were secured. General anaesthesia was planned in view of fetal distress and thrombocytopenia. Rapid sequence induction was done with IV thiopentone 250 mg and succinyl choline 75 mg followed by orotracheal intubation. Gentle laryngoscopy was performed to avoid airway trauma. Anaesthesia was maintained with oxygen: Nitrous oxide (40:60), isoflurane and intermittent doses of vecuronium. A 2.5 kg newborn was delivered with Appearance, Pulse, Grimace, Activity, Respiration (APGAR) score 9 and 10 at 1 and 5 min, respectively. Oxytocin 20 U slow IV infusion and IV methylergometrine 0.2 mg was given as uterotonic. IV Fentanyl 75 µg was given for analgesia. Intraoperative and postoperative period was uneventful with blood loss upto 1000 ml. Patient was extubated after adequate neuromuscular and neurological

recovery. Postoperative platelet count was 75000/mm³. Her medicines were continued postoperatively. Postoperative day one and two platelet count was normal. There was no neonatal thrombocytopenia or haemorrhagic complications. Post-operative pain was managed with IV tramadol.

Patients with known case of ITP were less likely to require therapy for same than those with newly diagnosed ITP [3]. Our patient also had recent onset severe thrombocytopenia which had poor responsiveness to steroid. Immunosuppressant and IV IgG 1g/kg had improved platelet count in her. IV Ig G is the effective therapy for severe thrombocytopenia and thrombocytopenic bleeding and acts by inhibiting Fc-receptor mediated platelet phagocytosis and decreasing antiplatelet antibody formation [2, 4]. Perioperative IV hydrocortisone, tranexamic acid

(antifibrinolytic) and single donor platelet transfusion should be considered to reduce the operative blood loss and blood transfusion. Single donor platelets helps to prevent allo-immunisation and increase the platelet count to approximately 7000–11,000/mm³/m² body surface area, with a platelet half-life of about 4 days [5]. Neuraxial anaesthesia was avoided in our patient due to risk of hematoma and possible neurological complication. Non-steroidal anti-inflammatory drugs for analgesia and intramuscular injections should be avoided. Unnecessary airway instrumentation also should be avoided.

Perioperative platelet transfusion, preference to general anaesthesia, avoidance of airway trauma and monitoring of maternal haemorrhagic complications results in good perioperative outcome.

References

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