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Anesthetic management of the parturient with ITP and HELLP syndrome

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Introduction: Immune thrombocytopenic purpura (ITP) is an autoimmune disease characterized by a low platelet count and mucocutaneous bleeding. It affects 1/1000 to 1/10000 pregnant patients, and the mode of delivery is determined by obstetrical indications. If a patient with ITP develops HELLP syndrome, immediate delivery is usually necessary. We describe the management of a patient that had 22000 platelets when the anesthesia team was consulted.

Case: A 38-year-old female G1P0 was admitted to the department at 32 weeks of gestation for elevated liver enzymes (AST=230, ALT=388) with a one-year history of ITP. The patient was started on magnesium sulfate and dexamethasone, and hematology, hepatology and anesthesia consults were ordered. With normal blood pressure and no significant proteinuria, the patient was diagnosed with “transaminitis” by the hematology team. In the absence of any other reason for the elevated liver enzymes and with a decreasing platelet count, a tentative diagnosis of HELLP was made. The hematology team recommended a Cesarean Section and suggested that 2 units of single donor platelets should be given – one before and one after the incision. The CBC ordered immediately before the procedure showed a platelet count of 30000. The anesthesia team chose general anesthesia with balanced anesthesia technique with sevoflurane before and morphine and nitrous oxide after the delivery of the baby. A healthy, male infant was delivered 14 minutes after incision, and Apgar scores were 3 and 8 at 1 and 5 minutes respectively. To the surprise of the surgical and anesthesia teams, there were no problems with hemostasis during the case. Estimated blood loss was 1000 ml. The patient received 2600 ml of crystalloid, and urine output was 200 ml. With an improving platelet count and decreasing liver enzymes, the patient was discharged home on post-operative day 5.

Discussion: The differential diagnosis of thrombocytopenia in pregnant patients includes: gestational thrombocytopenia, HELLP syndrome, DIC, SLE, TTP, hemolytic uremic syndrome, HIV infection, hematological malignancies, congenital thrombocytopenia, and drug-induced thrombocytopenia. Corticosteroids are first-line therapy, followed by intravenous immunoglobulin or intravenous antibody infusions. Splenectomy, cytotoxic and immunosuppressive agents have been used in resistant cases. It takes 12-48 hours for intravenous immunoglobulin to raise the platelet count, which is time that we did not have; platelet transfusion might have helped with hemostasis during our case. The surgeon made a vertical incision, which is associated with less bleeding, and a general surgeon was on stand-by in case a splenectomy became necessary. A high level of vigilance is always necessary in patients with ITP. Medical and expectant management can suddenly change into surgical management if the patient develops HELLP syndrome. A “two-sided” etiology for thrombocytopenia, although rare, is always possible.