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Anaesthetic Management of Unexplained Thrombocytopenia

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Abstract:

Gestational thrombocytopenia is seen in 6.6% to 11% of all pregnancies. Platelet count in gestational thrombocytopenia (GT) is usually more than 70,000/dL. Usually no treatment is required and fetal or neonatal risk is also very low. Platelet counts below 70,000/dL calls for further investigation. We describe an unusual presentation of gestational thrombocytopenia with very low platelet count.

Key words: Anemia, Blood Platelet Disorders, Platelet Count, Pregnancy, Thrombocytopenia.

Introduction

Thrombocytopenia affects 6.6% to 11% of all pregnancies [1]. Thrombocytopenia in pregnancy is defined as platelet count of less than 1.5 lakhs/dL. There are three main causes of thrombocytopenia in pregnancy: preexisting thrombocytopenia (usually immune thrombocytopenia), thrombocytopenia newly discovered in pregnancy or worsened during pregnancy (gestational thrombocytopenia) and thrombocytopenia associated with preeclampsia (HELLP syndrome). Gestational thrombocytopenia (GT) accounts for majority of the cases of thrombocytopenia in pregnancy [2]. GT is characterized by a platelet count of more than 70,000/dL and resolves within 6 weeks postpartum. We present an unusual presentation of gestational thrombocytopenia with platelet count of 29,000/dL.

Case Report

A 25 year old primigravida with 36 weeks of gestation was referred from the primary care centre due to low platelet count. On receiving the patient at our centre and after complete work up of the patient, the patient was posted for an elective caesarean section. The patient had no history of bleeding, jaundice, blood transfusion, or any drug intake or drug allergies. On examination there was no pallor, icterus, clubbing, cyanosis, lymphadenopathy or edema. No evidence of petechiae or ecchymosis, hepatomegaly or splenomegaly was found. The patient was afebrile, had a blood pressure of 120/70 mmHg, pulse rate was 64 beats/minute. The laboratory investigations showed Hb: 10.8 g%, hematocrit: 31.3%, RBC count: 3.3 L/ mm^3, WBC count: 8,000/dL, platelet count: 29,000/dL, prothrombin time: 14 sec, activated

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partial thromboplastin time: 32 seconds with INR of 1.00. Urine investigations showed absent sugar, protein and no evidence of infection. Beside tests ordered to rule out causes of thrombocytopenia included reticulocyte count: 1%, normocytic-normochromic anemia on peripheral blood smear, SGOT: 45 IU/mL, SGPT- 40 IU/mL. Viral screening was negative for HIV, HCV, HBV. Thyroid function tests were within normal limits. Antiphospholipid antibodies, antinuclear antibodies, direct Coomb's test were normal. vWF levels were within normal limits. Fibrinogen and fibrin degradation products, Vitamin B12, folic acid levels were within normal limits. Dengue (IgG and IgM), malarial parasite were negative. Chest X-ray, ECG were within normal limits. Ultrasound did not reveal hepatosplenomegaly or splenomegaly.

Preoperatively, four units of random donor platelets were transfused over two days after which the platelet count on the day of surgery was 50,000/dL. Two units of whole blood were arranged preoperatively. General anaesthesia was planned. After overnight fasting, injection transexemic acid 1000 mg was infused intravenously one hour before shifting the patient to operating room. In the operating room, the patient identification and consent were checked. On attaching the monitors, her preoperative vitals were blood pressure: 130/80 mm Hg, pulse rate: 80/min, Spo_2: 100%. Two large bore (18G) intravenous cannulae were secured. The patient was premedicated with injection ranitidine 50 mg intravenously; metoclopramide 10 mg intravenously and glycopyrrolate 0.2 mg intravenously. The patient was induced using 2 mg/kg of injection propofol intravenously. Inubation was facilitated with 2 mg/kg of injection succinylcholine by rapid sequence induction. The patient was maintained on nitrous oxide and oxygen mixture in a ratio of 50:50, isoflurane and injection atracurium intravenously. A healthy female child was delivered uneventfully. 10 units of injection syntocinon was given through slow intravenous transfusion. Injection fentanyl 80 microgram was given intravenously. At the end of the surgery, the patient was reversed with injection neostigmine and glycopyrrolate. Postoperatively, the patient was given injection diclofenac 75 mg thrice daily.

Following surgery patient was shifted to the post anaesthesia care unit, for monitoring and further management, recovery was uneventful. On postoperative day 14, the hemogram showed platelet count as 1 lakh/ mm^3. Blood tests test for the newborn child was done immediately after birth which showed no coagulation abnormality.

Discussion

Gestational thrombocytopenia is the second most common hematologic abnormality during pregnancy after anaemia [1]. GT is an incidental finding. Immune thrombocytopenic purpura and gestational thrombocytopenia are often confused [3,4]. According to some researchers, platelet count, in a case of GT never goes below 40,000/mm^3 [5]. The diagnosis of GT requires a high index of suspicion. Platelet count should be monitored at every prenatal visit and through the post natal period. It is the diagnosis of exclusion. Women with a platelet count less than 30,000/mm^3 and no bleeding manifestations do not require treatment until delivery is imminent.

A battery of tests were advised to rule out other diagnosis. These were complete blood count, reticulocyte count, peripheral blood smear, liver function tests and viral screening for HIV, HCV, HBV. If there is clinical evidence of the same, tests like antiphospholipid antibodies, antinuclear antibodies, thyroid function tests, prothrombin time, partial thromboplastin time, fibrinogen and fibrin degradation products etc. should also be done. According to some authors, the platelet count usually comes back to normal within 2-12 weeks [6,7,8].

Choice of anaesthesia should be based on the safety of the mother. There are no clear recommendations for the minimum safe cut off of platelet count for administering regional anaesthesia. Institutional protocols vary considerably. Preoperative platelet transfusions to facilitate spinal anaesthesia are not advised. General anesthesia is preferred over regional anaesthesia as there is a potential risk of spinal hematoma in regional anaesthesia.

Conclusion

This is an unusual case of GT where we found very low platelet count. Although, the choice of anaesthesia largely depends on the clinical profile of the patient, it is safer to administer general anaesthesia to a patient with gestational thrombocytopenia. Regional anaesthesia, though not an absolute contraindication does pose a risk of spinal hematoma in these patients.

References

1. Soldo V, Cutura N, Andjelic S, Zamurovic M. An unusual case of gestational thrombocytopenia: Case report and review of the literature. OA Case Reports. 2013;2(2):14.
2. Rajasekhar A, Gernsheimer T, Roberto S, *et al*. 2013 Quick Reference, 2013 clinical practice guide on thrombocytopenia in pregnancy, American Society of Hematology.
3. Lescale KB, Eddleman KA, Cines DB, Samuels P, Lesser ML, McFarland JG. Antiplatelet antibody testing in thrombocytopenic pregnant women. Am J Obstet Gynecol. 1996;174(3):1014-1018.
4. Boehlen F. Thrombocytopenia during pregnancy. Importance, diagnosis and management. Hamostaseologie. 2006;26(1):72-74.
5. James DK, Steer PJ, Weiner CP, Gonik B. High risk pregnancy. Management options. Thrombocytopenia and bleeding disorders. 2006;41901-24.
6. Silver R, Berkowitz R, Bussel J. Thrombocytopenia in pregnancy. Practice bulletin, No 6. Chicago: American College of Obstetrics and Gynecology. 1999;42317-26.
7. Kam PC, Thompson SA, Liew AC. Thrombocytopenia in the parturient. Anaesthesia. 2004;59(3):255-264.
8. Burrows RF, Kelton JG. Thrombocytopenia at delivery: a prospective survey of 6715 deliveries. Am J Obstet Gynecol. 1990;162(3):731-734.