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IDIOPATHIC THROMBOCYTOPENIC PURPURA IN PREGNANCY & NEONATAL EFFECTS – A CASE REPORT

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HOW TO CITE THIS ARTICLE:

Hema Priya L, Ambarish Bhandiwad. "Idiopathic thrombocytopenic purpura in pregnancy & neonatal effects – A case report". Journal of Evolution of Medical and Dental Sciences 2013; Vol2, Issue 32, August 12; Page: 6100-6103.

ABSTRACT: Thrombocytopenia, defined as a platelet count < 150,000/cu mm, is second only to anaemia as the most common hematologic abnormality encountered during pregnancy. Isolated thrombocytopenia may be due to gestational thrombocytopenia or primary immune thrombocytopenia. The second is thrombocytopenia associated with preeclampsia or thrombotic thrombocytopenic purpura and the hemolytic uremic syndrome. Our discussion includes the antenatal and perinatal management of both mother and fetus in idiopathic thrombocytopenic purpura. There are no large randomized controlled trials; however the guidelines based on available evidence to help guide practice. We report a case of a 29 year old Primigravida with placenta previa type II B, with chronic ITP and severe thrombocytopenia. The patient underwent an emergency LSCS as she started bleeding per vaginum. Neonatal thrombocytopenia was detected at 72 hours post partum and was managed successfully with intravenous immunoglobulin.

KEY WORDS: Thrombocytopenia, Pregnancy.

Mesh terms: Thrombocytopenia.

CASE REPORT: Mrs. X, a 29 year old primi gravida was referred to us with H/O 9 month's amenorrhoea for safe confinement.

She is a known case of chronic idiopathic thrombocytopenic purpura diagnosed one year back. The patient was admitted one year back at a private hospital with fever and chills. Routine investigations revealed severe anaemia and thrombocytopenia. Bone marrow aspiration was done and bone marrow hypoplasia ruled out. A provisional diagnosis of ITP was made and she was started on Tab prednisolone 1 mg/kg/day. Her platelet counts improved with steroids.

The patient has a history of irregular cycles, and her last menstrual period was not known. Her first trimester was uneventful. She was on oral steroids during the first trimester, after which she stopped medications on her own. She underwent regular antenatal check up at a primary health centre, which was uneventful till the 8th month. At 32 weeks she developed severe epistaxis, and was admitted to a private hospital. Her platelet count was 3,000/cu. mm. She received 4 units of Plasma rich platelets and 2 units of packed red blood cells. Steroids were restarted and her platelet counts improved.

Ultrasonography showed placenta praevia type II b. She was referred to us and was admitted for safe confinement. Her platelet count at admission was 5,000 cells/cu. mm. The patient was switched over to inj. Methyl prednisolone 1 gm IV OD. The patient was planned for an elective LSCS once platelet counts improved.

However she started bleeding per vaginum at 37 weeks. Repeat platelet count was 12,000 cells/ cu. mm. Decision was made for emergency LSCS. High risk consent was taken, 4 units of

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platelets was transfused pre operatively and 6 units intra operatively. Adequate blood was reserved in anticipation of major bleeding. A live term female baby was extracted via vertex weighing 3 kg, baby cried immediately after birth. Placenta previa type II b was noted. Placenta and membranes were removed in toto. Prophylactic oxytocin infusion was started, there was no major bleeding. Abdomen was closed after adequate haemostasis. Post operatively one unit of PRBC was transfused, oral steroids were re started and the post op course was uneventful. The baby was detected to have thrombocytopenia, after 72 hours of birth. Platelet count was 18,000 cells / cu mm. The baby received IV immunoglobulin @ 1gm / kg repeat platelet counts were 37,000 cells / cu mm. The baby was observed in NICU for 48 hours, there were no other major complications.

DISCUSSION: Idiopathic thrombocytopenic purpura is an autoimmune disorder in which anti platelet antibodies bind to the platelet surface antigens, leading to destruction of platelets. The incidence in pregnancy varies from 1 in 1000 to 1 in 10,000. (1) When detected for the first time in pregnancy, it is a diagnosis of exclusion. Other disorders such as gestational thrombocytopenia, HELLP syndrome, auto immune conditions (SLE, APLA), lymphoproliferative disorders and HIV must be excluded. (2) Gestational thrombocytopenia is seen in 5 – 8% of all pregnancies and accounts for at least 75% of all cases of thrombocytopenia at term. (3) Distinction of this condition from ITP may be difficult in the absence of prenatal platelet counts.

Pregnancy does not alter the course of the disease, nor does it alter platelet counts. In the absence of symptoms or treatment, platelet counts are monitored monthly up to 28 weeks, then biweekly, and weekly close to term. (4) Majority of the patients have an uneventful course. Minor bleeding episodes in the form of petichae, bruising, gingival and conjunctival bleeding may occur. There is no increased incidence of gestational hypertension, pre term labour or coagulopathy. However the incidence of intra partum bleeding is high (20 -30 %)

Oral prednisolone, at a dose of 1 mg/kg/day is the first line of management. However, a lower dose of steroids, up to 20 mg/day, along with IV Ig or Anti D may help prevent steroid related side effects. Platelet counts should be maintained above 20,000 cells/ cu mm throughout pregnancy, and above 50,000 cells/ cu mm close to term (1).

Modalities of Treatment for ITP in Pregnancy: Corticosteroids are effective and safe in pregnancy and are used as first line therapy but this can induce or exacerbate gestational diabetes, bone loss, hypertension and prematurity.(6)

Androgen analogs such as danazol and cytotoxic agents are contraindicated in the treatment of ITP in pregnancy due to its teratogenicity. (1) Splenectomy is considered only if above measures fail to elevate the platelet counts and patient has serious bleeding. This is best deferred until the second trimester to prevent miscarriage (2).

The mode of delivery depends primarily on the obstetric indications (1). Placing foetal scalp electrodes, foetal blood sampling and vacuum extraction of the foetus are best avoided.

Management in labour: Platelet count above $50 \times 10^9/L$ is safe for caesarean section under general anaesthesia but not epidural anaesthesia. (1) Epidural anaesthesia is best avoided because of the risk of epidural haematoma and cord compression. However, patients who prefer epidural analgesia

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need to be admitted earlier for IVIG infusion in order to raise the platelet counts above 70,000 cells / cu mm. (5)

If platelet counts are less than 50,000 cells/ cu mm and patient requires immediate caesarean delivery, administer IVIG and methylprednisolone. Give platelet transfusion just prior to surgery.

'Safe' Platelet Thresholds for delivery:

- Vaginal delivery: > 30, 000/ cu mm
- Caesarean section: > 50,000/cu mm
- Epidural anaesthesia: > 80, 000/cu mm

Approximately 5% of ITP neonates are born with severe thrombocytopenia (platelet counts < 20 000 cells/ cu mm). The severity of neonatal thrombocytopenia is often most marked 2 to 5 days after birth. (3) Marked discrepancies between the neonatal and maternal platelet count are not uncommon. Antenatal platelet counts do not reliably predict the neonatal platelet count, nor does the maternal response to treatment guarantee a favourable neonatal outcome. Pregnant women who have had a previous offspring with NITP or who have ITP refractory to splenectomy may be at particular risk of delivering an offspring with significant NITP.(4) The risk of ICH is estimated to be less than 1%. There is no evidence that the risk of ICH can be reduced by caesarean section. Cord platelet counts should be measured in all newborns and serial platelet counts should be obtained during the first week postpartum because the onset of severe thrombocytopenia may be delayed. Severe thrombocytopenia (<20,000 cells/ cu mm) or clinical haemorrhage can be treated with IVIG with good response in 75% of patients. Life threatening complications should be treated with immediate platelet transfusions and IVIG. Sonography, computed tomography scanning, or magnetic resonance imaging of the head should be performed in all neonates born with platelet counts less than 50,000 cells/ cu mm even in the absence of symptoms; finding a "silent" ICH demands immediate management and has implications for subsequent pregnancies.(3)

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Date of Submission: 17/07/2013.
Date of Peer Review: 26/07/2013.
Date of Acceptance: 06/08/2013.
Date of Publishing: 12/08/2013.