A Case Repot: Idiopathic Thrombocytopenic Purpura (ITP) and Pregnancy

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Abstract:

Introduction: Idiopathic Thrombocytopenic Purpura (ITP) is a haematological condition epitomised by a lower value of circulating platelet count. ITP is an auto-immune syndrome triggered by the growth of IgG autoantibodies heading for the destruction of platelet glycoproteins1.

A 23 year-old-woman, admitted to Gynae unit of MTI, HMC Hayatabad Peshawar, presented to labour ward at 32 weeks gestation with bruises and petichea over her body for last 3 days. There was no history of fever, bleeding per vaginum or any history of trauma antecedent to these symptoms.

In parallel to the initial symptomatic treatment and transfusion of platelets, other investigations were conducted to rule out secondary causes of thrombocytopenia that includes antinuclear antibodies, HIV, HBSag, antiHCV, Dengue serology and the results were negative. Post investigations analysis revealed that is a case of ITP with pregnancy.

At 37 weeks gestation, the patient was successfully induced and delivered a female baby weighing 2.5 kg with good APGAR score. The baby was asymptomatic & her platelet count was 120,000. Postpartum period was uneventful.

After a week postpartum stay in the hospital she was discharged on tapering doses of deltacortil 5mg for 4 weeks & tab azathioprine 50 mg twice daily. She was rapidly recovering after delivery at the time of discharge and her platelet count was 132000/ul.

Keywords: Idiopathic thrombocytopenic purpura, Pregnancy, Haematology, Petechiae, Platelets.

Introduction:

Idiopathic Thrombocytopenic Purpura (ITP) is a haematological condition epitomised by a lower value of circulating platelet count. ITP is an autoimmune disorder triggered by the growth of IgG autoantibodies heading for the destruction of platelet glycoproteins1. The incidence of ITP in pregnancy ranges between 3 to 4% of the cases and can be due to variety of causes including gestational thrombocytopenia, viral or bacterial infection and preeclampsia complicated by HELLP syndrome2.

We are presenting here an unusual case of Idiopathic Thrombocytopenic Purpura (ITP) in a pregnant woman with extremely low platelet count and additional therapeutic complication of adnexal dermoid cyst. Review of this case will outline some of the vital points in diagnosing and managing ITP.

Case Report:

A 23 year-old-woman, admitted to Gynae unit of MTI, HMC Hayatabad Peshawar, presented to labour ward at 32 weeks gestation with bruises and petichea over her body for the last 3 days. There was no history of fever, bleeding per vaginum or any history of trauma antecedent to these symptoms. , however the patient had a history of idiopathic thrombocytopenia purura for the last 4 years.

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Laboratory investigations revealed isolated thrombocytopenia (platelet of 4000 /ul) Haemoglobin of 12 gm% & TLC of 9900 /ul. Other routine laboratory investigations were within the normal limits.

Initially, the patient was given symptomatic treatment in consultation with haematologist and physician with transfusion of platelets for 3 days and in parallel other investigations were conducted to rule out secondary causes of thrombocytopenia that includes antinuclear antibodies, HIV, HBSag, antiHCV, Dengue serology and the results were negative. Post investigations it was declared a case of ITP with pregnancy.

At the time of taking an Ultrasound scan to monitor fetal growth & viability, a right adnexal dermoid cyst sizing 8.3x5.6 cm was spotted. To remove the cyst, laparotomy (right salpingo ophorectomy) was done after raising her platelet count to 47,000. Postoperatively the patient was given multiple platelets transfusion enabling her to safely recover after surgery. 38 units of platelets were transfused till this phase of the treatment.

Due to recurrent thrombocytopenia despite of multiple transfusions, she was put on an oral dose of prednisolone 2mg/kg daily which showed noticeable improvement initially but after 1 week her platelet count started going down again reaching to 28000, however she was asymptomatic this time. To improve the platelet count, 2 units of platelets were transfused with enhanced dose of prednisolone with no avail. So IV immunoglobulin was given 50-75 ug/kg intravenously for 5 days to build up her platelet count to 50,000 prior to her planned delivery time. Meanwhile megaplatelet were also arranged for delivery.

At 37 weeks gestation, she was successfully induced with misoprostol and the patient delivered a female baby weighing 2.5 kg with good APGAR score. Active management of third stage was done. The baby was asymptomatic & her platelet count was 120,000. Postpartum period was uneventful. During whole of her stay period in

the hospital, the patient received 67 transfusions in total including 2 megaplatlet and 65 platelets.

After a week postpartum stay in the hospital she was discharged on tapering doses of Deltacortil 5mg for 4 weeks & tab azathioprine 50 mg twice daily. Patient was advised for follow up after 2 weeks. She was rapidly recovering after delivery at the time of discharge and her platelet count was 132000 /ul.

This was a very difficult case but with a dedicated and unwavering efforts the patient survived with a healthy baby.

Discussion:

Generally, tendency of ITP in children is higher than adults. According to a study ITP occur in 6.4 per 100000 children compared to 3.3 per 10000 in adults3 however Idiopathic thrombocytopenic purpura prevail in 1 to 3 cases per 1000 pregnancies4. ITP is categorised in three stages5:

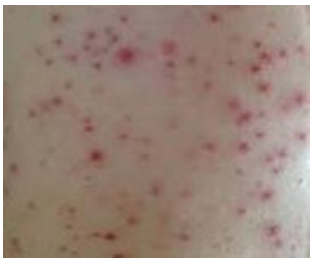
i. Mild thrombocytopenia, if platelet count is less than 1.5L/mm3.

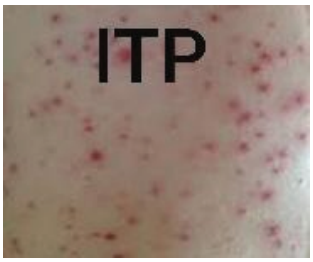
ii. Moderate thrombocytopenia, if platelet count is less than 1L/mm3.

iii. Severe thrombocytopenia, if platelet count is less than 0.5L/mm3.

Clinical indications include bleeding manifestations such as easy bruising, petechia, rash, epistaxis and gum bleeding. Clinical manifestations appears when the platelet count gets lower than 10000/mm3.

Diagnostic approach to ITP in pregnancy is identical to a non-pregnant state. Secondary causes of thrombocytopenia that includes antinuclear antibodies, HIV, HBSag, antiHCV,





Dengue serology etc. must be excluded through formal investigations. Though a safe platelet level in pregnancy and delivery has not been established, while planning for vaginal delivery, the recommended minimum platelet count is 50,000 /mm3, whereas for caesarean section the platelet count should be at least 80,000 /mm3.

Thrombocytopenia is a common outcome in pregnancy that prevail in 7 to 10% of pregnancies. 75% of the cases are due to gestational thrombocytopenia, 15 to 20% are due to thrombotic microangiopathies, 3 to 4% are related to immune causes and 1% are assigned to other causes including constitutional thrombocytopenia, infections and malignancy.

The British Society of Haematology (BSH) mentions that all women having platelet count less than 100x109/L should be investigated for clinical or laboratory evidence of coagulopathy, pre-eclampsia and autoimmune disease.

The goal of management is to ensure a safe platelet count during pregnancy. During the first two trimesters indications for starting the treatment are almost the same as for a non-pregnant woman unless there is defect in platelet functions or abnormal coagulation. Antenatally platelet count > 20-30x109/L need no treatment until the third trimester.

Treatment options are also identical to the non-pregnant women. Women who require treatment, first line is usually to give corticosteroids orally, beginning with prednisolone 20 mg daily and titrating the dose to response and/or intravenous immunoglobulin if a more prompt response is needed6.

In case where a woman with ITP goes into labour without giving time to correct the platelet count, intravenous immunoglobulin 1 mg/Kg ought to be given instantly which may be augmented with intravenous anti-D or high dose of dexamethasone until the platelet count exceeds 50000 u/L. Transfusion of platelet is necessary if life threatening haemorrhage occur.

In cases where corticosteroids in not responding and the platelet count is below 30000 u/L after 4 to 6 weeks therapy, the next recommended option is splenctomy however this may be deferred up to three years especially in patients with slow onset of ITP.

Patients with chronic ITP will ultimately need to be treated with monoclonal antibodies, for instance Rituximab, however there is limited data available about the use of this anti-CD 20 monoclonal antibody in pregnancy. Data regarding the use of eltrombopag and romiplostime as a treatment option for refractory primary immune thrombocytopenia during pregnancy is also limited.

Immune suppressants such as Danazol has been shown to improve platelet count in significant number of refractory ITP patients. Chemotherapeutic agents such as azathioprine have been used with similar succeeds.

Regarding mode of delivery in woman with ITP, the current recommendation do not support caesarean section as a preferred option for the fetus, except when it is required due to obstetric indications. Complicated instrumental delivery or the use of vacuum extraction is, however, contraindicated.

Conclusion:

ITP occurs due to destruction of platelets abruptly via complex process in immunological system. ITP
is a severe condition which might become mortal if not diagnosed at an earlier
stage. Therefore there is need to put emphasis on diagnosis of ITP when a patient presents with above manifestation to render appropriate treatment which can be lifesaving to the patient. Though there is much to be studied, this case review will outline some of the vital points in diagnosing and managing ITP.

References:

1. DeSwiet's textbook of medical disorders in obstetric practice; 60-68.
2. R Akther, T Hossain, MA Khan et al. "Pregnancy with Idiopathic Thrombocytopenic Purpura - A Case Report", J Bangla desh CollPhysSurg 2010; 28: 196-198.
3. Terrell DR, Beebe LA, Vesely SK, Neas BR, Segal JB, George JN. The incidence of immune thrombocytopenic purpura in children and adults: a critical review of published reports. Am J Hematol. 2010; 85: 174-80
4. Steven G. Gabbe, Jennifer R. Niebyl, Joe Leigh Simpson, Textbook of obstetrics- normal and abnormal pregnancies; 965-66.
5. https://www.medpulse.in/Gynacology/Article/Volume1Issue1/OBGY_1_1_2.pdf
6. Dewhurst's Textbook of Obstetrics and Gynaecology 9th Edition; 150-151.