Idiopathic Thrombocytopenic Purpura in Pregnancy: A Case Report

GEBELİKTE İDİOPATİK TROMBOSİTOPENİK PURPURA: BİR VAKA SUNUMU

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Summary

Objective: To present the management of a case with immune thrombocytopenic purpura (ITP) during pregnancy.

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Case Report: We present our experience in a case with ITP near term. Thrombocytopenia was noticed at 34th week of gestation. Despite oral fluocortolone 40 mg/day and intravenous dexamethasone 10 mg/day, thromocyte count decreased to 23000/mm³ level. As cesarean delivery was planned, patient received 20g i.v. gammaglobulin two times twelve hours apart and the thromocyte count increased above 50000/mm³. During the postoperative period no maternal and neonatal complications occured.

Conclusion: Intravenous gammaglobulin is a safe method for increasing thromocyte counts of the mother and the fetus during pregnancy and the neonatal period.

Key Words: ITP, Pregnancy, Gammaglobulin, Emergency surgery

Anahtar Kelimeler: ITP, Gebelik, Gammaglobulin, Acil cerrahi

ITP is usually a consequence of an immune process in which antibodies are directed against platelets. Antibody coated platelets are destroyed prematurely in the reticuloendothelial system (1), especially in the spleen. ITP is characterized by a decreased platelet count due to destruction mediated by antiplatelet antibodies (2). There is no evidence that pregnancy increases the risk of relapse in women with previously diagnosed immune thrombocytopenia. Nor does it make the condition worse in women with active disease. It is certainly not unusual for women who have been clinical remission for several years to have recurrent thrombocytopenia during pregnancy; however, this may be because of closer surveillance. Hyperestrogenemia has been also suggested as a cause (1). ITP is present in 0,01 to 0,02% of women at the time of delivery (3).

Untreated ITP in adults may be life-threatening and the response to prednisone, splenectomy, with immuno-suppressive agents (4) or intravenous gammaglobulin (5) has been defined. The problem for the mother may be more serious in pregnancy (6), with additional hazards to the fetus (7) as a result of transplacental passage of maternal immunoglobulin (8). In a pregnant woman with ITP, these antibodies can cross the placenta and may cause a fall in fetal platelet number and at worst bleeding may ensue in the form of an intracranial hemorrhage (9,10). Several investigators have advocated cesarean section delivery to prevent intracranial hemorrhage in the fetus (11,12).

Case Report

A 24 year-old woman, gravida 1, para 0, was first diagnosed with ITP 15 years before the current pregnancy. At that time the patient had spontaneous nose bleeding. The patient was treated with medication which lasted 5 months. Since then, she didn’t receive any treatment.
The patient had her first prenatal visit at 31 weeks of gestation. She reported no complaints. She denied fevers, chills, and recent viral illness, as well as recent use of alcohol, drugs or any medications. Her blood pressure was normal. Laboratory results included a negative human immunodeficiency virus (HIV) test with normal liver function studies and electrolytes. Laboratory workup included a platelet count of 55,000/mm³ without a significant symptom. At the 34th week of gestation, she was given oral flucortalone 40 mg per day (2x20 mg) (Ultralan®, Schering, Istanbul). At the 36th week of gestation the platelet count was found to be 48,600/mm³. At that time, she was prescribed intravenous dexamethasone (Decort®, Deva, Istanbul) 2x5 mg daily for two days. The repeat platelet count was 31,600 mm³, on the third day, and 23,000 mm³ on the sixth day. The membranes ruptured spontaneously at 37 weeks. The patient received intravenous gammaglobulin (Tegeline® Lf Er-kim Istanbul) 20 g four hours before the rupture of the membranes. Twelve hours later, she received infusion of 20 g of gamma globulin again. She had uterine contractions. She was given 500 mg intravenous methyl-prednisolone (Prednol-L®, Mustafa Nevzat Istanbul). Due to intracranial bleeding during vaginal delivery, cesarean delivery was planned. We used a Pfannenstiel incision and the operation lasted approximately 30 minutes. The amount of blood loss was not extensive. The 2500 gr female newborn was assigned. The neonatal platelet was 28400/mm³. During the operation she received one unit of fresh whole blood, three units of platelet concentrate. The platelet count was 72,500/mm³ two hours after the operation. She received 300 mcg intravenous rhusus immune globulin (WinRh SD®, RA A.S. Ankara) at the first day of the operation. Her blood type was Arh(-), her husband’s blood type was BRh(+) and the newborn’s blood type was ABRh(+). In the postoperative period 15 units of oxytocin infused in 7 hours in a litre of Isolyte-M water. She was given oral flucortalone 40 mg (2x20 mg) (Ultralan® Shering, Istanbul) starting on the first day of the operation. The platelet count was 44,000 mm³ on sixth postoperative day. The platelet count was 14,400 mm³ at 24 days after the operation.

**Comment**

The differential diagnosis of severe thrombocytopenia during pregnancy includes systemic lupus erythematous, HIV, infection, antiphospholipid antibodies and HELLP syndrome (hemolysis, elevated liver enzymes, low platelets). All of these conditions were ruled out in this patient. In patients with a milder thrombocytopenia, the diagnosis of ITP is complicated because its presentation is virtually identical to gestaion thrombocytopenia (13). In our patient severity of her thrombocytopenia was inconsistent with a diagnosis of gestational thrombocytopenia.

Our intention was to perform cordocentesis using PUBS (percutaneous umbilical blood sampling) to measure fetal platelet count in pregnant women with ITP, utilizing the information thus derived as an aid in planning for delivery. PUBS in ITP is potentially harmful and must be questioned (14). Because of that we planned cesarean delivery.

This case illustrates the potential usefulness of corticosteroids and high dose intravenous gammaglobulin for the treatment of ITP in pregnancy. The rapid reversal of thrombocytopenia following intravenous gammaglobulin administration suggest that it is useful especially for emergency treatment of ITP in pregnancy. Massive doses of gamma globulin given intravenously over 5 days results in satisfactory platelet count elevation in two thirds of patients. Repeated administrations of high dose intra venous immunoglobulin were effective for a pregnant patient with steroid resistant severe ITP. They resulted in a safe delivery without any adverse effects (15). We applied combined corticosteroids and gammaglobulin in an attempt to impair synthesis of antibodies, modify cellular immune mechanisms and remove preformed antibodies. Glucocorticoids (1) exert their action by suppressing phagocytic activity of the splenic monocyte-macrophage system. This experience illustrates that major surgery can safely be undertaken in thrombocytopenic ITP patients, even as an emergency procedure, using this regimen.

For patients with no response to corticosteroid therapy in 2 to 3 weeks, those in whom massive doses are needed to sustain remission, or those with frequent recurrences, splenectomy is indicated. In about 60 percent, there is substantive improvement as the consequence of decreased removal of platelets by the spleen and reduced antibody production. After splenectomy, platelet count increases rapidly and is often normal within 1-2 weeks. This procedure is usually avoided during pregnancy because of a slightly increased risk of spontaneous abortion and preterm labor and technical difficulty in late gestation. Splenectomy during pregnancy is recommended only for women with platelet counts <10000/mm³ who are bleeding and who have failed to respond the steroids and intravenous gamma globulin (13). Platelet transfusions can be used to prepare a patient for splenectomy, cesarean delivery, or other surgery. We used platelet transfusions to prevent life threatening haemorrhage during the operation. In women with platelet counts <10000/mm³ before delivery or with epistaxis or other mucous membrane bleeding platelet transfusion is recommended (16).

Plasma exchange and pulse high dose oral dexamethasone therapy have been described in pregnancy with ITP. The other medications to treat ITP, such as vinca alkaloids, colchicine, azathioprine, cyclophosphamide, and danazol should be avoided during pregnancy due to toxicity and the potential adverse fetal effects.
Severe neonatal, thrombocytopenia occurs in about 10-15% of deliveries from women with immune thrombocyto-
penic purpura (17). In our case report the neonatal platelet
count at delivery was 284000/mm². The neonatal course was
uncomplicated. Maternal postpartum course was uncompli-
cated in our patient. Wound infection (18), death from un-
controllable hemorrhage (18), endometritis, hematoma post-
operative fever are reported after cesarean section.

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