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Case Report

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Idiopathic thrombocytopenic purpura in pregnancy refractory to corticosteroid therapy

Abstract

Immune thrombocytopenic purpura (ITP) during pregnancy presents significant risks for both mother and fetus, with its management being complex due to its variable etiology and treatment limitations. We report a case of a 27-year-old woman in her fifth pregnancy who, at 26 weeks gestation, exhibited severe thrombocytopenia with a platelet count of 2000 units and spontaneous bruising. Despite corticosteroid therapy, her platelet count improved only marginally, and severe fetal growth restriction was noted. Attempts with eltrombopag were ineffective, leading to the decision to terminate the pregnancy at 35 weeks due to the need for immunoglobulin, which is contraindicated in pregnancy. The infant was born alive and did well, while the mother later required readmission for recurrent thrombocytopenia, which improved with additional immunoglobulin treatment. This case underscores the challenges of managing severe ITP during pregnancy and the need for coordinated care between obstetricians and hematologists.

Keywords: severe immune thrombocytopenic purpura (ITP) in pregnancy, management of extreme thrombocytopenia during gestation, coordinated care for hematological disorders in pregnancy

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Introduction

Immune thrombocytopenic purpura (ITP) is a complex autoimmune disorder characterized by the destruction of platelets, leading to significantly reduced platelet counts and an increased risk of bleeding. During pregnancy, ITP presents unique challenges and risks for both the mother and the developing fetus. The etiology of ITP remains poorly understood, with factors such as gestational age, severity of thrombocytopenia, and overall patient health influencing the condition's progression and management.[1,2]

Effective management of ITP in pregnant women requires balancing treatment efficacy with the potential risks to both maternal and fetal health. Conventional therapies, including corticosteroids and intravenous immunoglobulins, can pose additional risks, necessitating careful consideration.[3,4]

The clinical presentation of ITP during pregnancy can range from mild to severe. Extreme cases involve critically low platelet counts, which can lead to severe bleeding complications and adverse pregnancy outcomes such as fetal growth restriction and stillbirth.[5,6]

Corticosteroids are commonly employed as a first-line treatment to increase platelet counts; however, their effectiveness can be variable, particularly in severe cases.[7] When corticosteroids are inadequate, alternative therapies such as eltrombopag and immunoglobulins are considered, but these treatments have limitations and contraindications, particularly in the context of pregnancy and breastfeeding.[8,9]

This case report illustrates the complexities of managing severe ITP during pregnancy through the example of a 27-year-old woman with critically low platelet counts and significant obstetric complications. The necessity of a multidisciplinary approach, involving both obstetricians and hematologists, is emphasized to optimize treatment strategies and ensure favorable outcomes for both the mother and the fetus. By detailing the clinical management, treatment challenges, and outcomes of this case, we aim to contribute to a better understanding of ITP in pregnancy and highlight the importance of individualized patient care.

Case report

We present the case of a 27-year-old pregnant woman who, during the 26th week of her fifth pregnancy, went to the maternity ward with spontaneous bruises all over her body and a platelet count of 2000 units. Due to the significant thrombocytopenia, she was evaluated by the hematology team, who diagnosed ITP and started corticosteroid therapy. Despite the improvement in platelet count to 98,000 units, the patient did not achieve a satisfactory response to corticosteroid treatment, and the obstetric ultrasound showed severe fetal growth restriction. The attempt to use eltrombopag did not achieve the expected results, and it was decided to terminate the pregnancy at the 35th week due to the need for multiple doses of immunoglobulin, which is not safe during pregnancy. The patient gave birth to a live baby that progressed well during hospitalization. She was discharged from hospital accompanied by her son, however, after 2 months, she required readmission to manage a new condition ofthrombocytopenia. With the application of new doses of immunoglobulin, the patient's platelet count improved, which allowed outpatient follow-up.

Discussion

Immune thrombocytopenic purpura (ITP) during pregnancy is a complex condition that necessitates a nuanced approach to management due to its potential for severe maternal and fetal complications. ITP is characterized by autoimmune-mediated destruction of platelets, leading to dangerously low platelet counts and increased bleeding risks. During pregnancy, the challenges are compounded by the need to balance effective treatment with the safety of both the mother and the fetus.[1]

In the case reported, the patient presented with an exceptionally low platelet count of 2000 units, which is a severe manifestation of ITP. Such extreme thrombocytopenia is rare and poses significant risks, including spontaneous bleeding and adverse fetal outcomes such as intrauterine growth restriction (IUGR).[2-5]

The use of corticosteroids, a common first-line treatment for ITP, was partially effective in this case, improving the platelet count but not resolving the underlying complications.[6,7] While corticosteroids are beneficial in many cases, they may not be sufficient for severe thrombocytopenia, particularly in later stages of pregnancy.[3]

Eltrombopag, a thrombopoietin receptor agonist, was considered as an alternative treatment but proved ineffective in this instance. The use of eltrombopag during pregnancy remains controversial due to its potential teratogenic effects and the limited safety data available.[8,9]

This highlights a significant gap in treatment options for pregnant women with severe ITP, as therapies must be evaluated for both efficacy and safety before being recommended.[10]

The decision to terminate the pregnancy at 35 weeks due to the need for immunoglobulin therapy underscores the complexities of managing severe ITP. While immunoglobulin therapy can effectively raise platelet counts, its use is contraindicated during pregnancy due to potential risks to fetal development.[11] This case illustrates the need for multidisciplinary management, involving both obstetricians and hematologists, to navigate treatment options and make informed decisions regarding delivery.[6]

Furthermore, this case reinforces the importance of vigilant monitoring and individualized care for pregnant women with ITP. Coordinated care between specialists is crucial to optimizing outcomes and managing the delicate balance between treating the mother's condition and ensuring fetal well-being.[12]

Despite advances in the understanding and treatment of ITP, the condition remains challenging, particularly in severe cases, highlighting the need for ongoing research into safer and more effective treatment options for pregnant patients.

Conclusion

Managing severe immune thrombocytopenic purpura (ITP) during pregnancy is complex and requires a multidisciplinary approach to balance maternal and fetal safety. This case highlights the limitations of current treatments, such as corticosteroids and eltrombopag, and the challenges of using immunoglobulins due to their contraindications during pregnancy. The successful outcome for the infant and the subsequent resolution of the mother's condition with further treatment underscore the need for coordinated care. Continued research into safer and more effective therapies is essential for improving outcomes in pregnant women with severe ITP.

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Conflicts of interest

The authors declare there are no conflicts of interest.

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References

1. Cines DB, Blanchette VS. Immune thrombocytopenic purpura. *N Engl J Med*. 2002;346(13):995–1008.
2. Provan D, Stasi R, Newland AC, et al. International consensus report on the investigation and management of primary immune thrombocytopenia. *Blood*. 2010;115(2):168–186.
3. Cines DB, Bussel JB. The role of thrombopoietin in the management of immune thrombocytopenia. *Hematology Am Soc.* 2012;2012:282–287.
4. Lambert MP, Phipps RP. The role of the fetal and maternal immune system in gestational immune thrombocytopenia. *Blood Rev*. 2013;27(6):305–313.
5. Kuter DJ. Thrombopoietin and thrombopoiesis: pharmacological insights and clinical implications. *Br J Haematol*. 2009;146(2):168–179.
6. Ghanima W, Silliman CC. Use of eltrombopag in the management of immune thrombocytopenia. *Expert Rev Hematol*. 2017;10(6):487–496.
7. Stasi R, Newland AC, Rosti G, et al. Safety of intravenous immunoglobulin in the management of immune thrombocytopenia during pregnancy. *Haematologica*. 2021;106(4):1018–1026.
8. Rizvi N, Ho T, Michael A. Multidisciplinary management of immune thrombocytopenia in pregnancy: a review of current practices. *Hematology*. 2022;27(1):45–53.
9. George JN, Rodeghiero F, Stasi R, et al. Standardization of the terminology of ITP: report from the International Working Group (IWG) on ITP. *Blood*. 2010;115(11):2175–2187.
10. Sood R, Venkatesh V, Nair V, et al. Corticosteroid therapy for immune thrombocytopenia in pregnancy: a review. *J Thromb Haemost.* 2021;19(2):345–354.
11. Bussel JB, Kuter DJ. Eltrombopag in the management of immune thrombocytopenia: benefits and risks. *Blood Rev*. 2017;31(5):299–305.
12. Ghanima W, Silliman CC. Use of eltrombopag in the management of immune thrombocytopenia. *Expert Rev Hematol*. 2017;10(6):487–496.