International Journal of Reproduction, Contraception, Obstetrics and Gynecology
Mekala NM. Int J Reprod Contracept Obstet Gynecol. 2026 Jan;15(1):370-373
www.ijrcog.org
pISSN 2320-1770 | eISSN 2320-1789

DOI: https://dx.doi.org/10.18203/2320-1770.ijrcog20254317

Case Report

World's first successful caesarean delivery performed at the lowest documented maternal platelet count (1,000/µl) with sustained maternal and neonatal outcomes

Neethi Mala Mekala*

High Risk Pregnancy Expert, Medicover Hospitals, Chandanagar, Hyderabad, Telangana, India

Received: 08 December 2025
Revised: 22 December 2025
Accepted: 23 December 2025

***Correspondence:**
Dr. Neethi Mala Mekala,
E-mail: drneethimala@gmail.com

ABSTRACT

Severe thrombocytopenia in pregnancy poses a major challenge for obstetric management, particularly when platelet counts fall below critical thresholds. Cesarean delivery under such conditions carries an exceptionally high risk of hemorrhage and maternal morbidity. Reports of successful maternal and neonatal outcomes at platelet counts around 1000/µL are not available in literature. We present this high-risk pregnancy case of a woman with rare O negative blood group, decreased fetal movements, severe oligohydramnios, fetal distress and an extremely low platelet count (1000/µL)-severe immune thrombocytopenia at 35 week 2 days gestational age (GA). Despite the unprecedented hematological risk, fetal distress mandated urgent intervention. The surgery was successful, resulting in the survival of both mother and neonate. Follow-up over three years confirmed sustained maternal and neonatal health. This case represents a unique milestone in obstetric surgery worldwide-the first documented successful cesarean section performed during pregnancy at the lowest reported platelet count (1,000/µL) at the time of delivery, with long-term survival of both mother and child. It highlights the importance of individualised management, timely intervention, meticulous preparation, and sound clinical judgment in achieving favourable outcomes despite extraordinary hematological risk.

Keywords: Severe thrombocytopenia, Lowest platelet count, Successful cesarean section, Fetal distress, High risk pregnancy, Severe immune thrombocytopenia, ITP

INTRODUCTION

Thrombocytopenia (platelets count below 150,000/µl) complicates approximately 10% of pregnancies, with severe forms (<50,000/µl) posing significant risks of hemorrhage and maternal morbidity.[1] It may result from normal physiological adaptations of pregnancy or from pathological conditions, that carry significant maternal and fetal risks.

Gestational thrombocytopenia accounts for nearly three-quarters of cases, while secondary causes include hypertensive disorders of pregnancy (preeclampsia, eclampsia, HELLP syndrome), acute fatty liver of pregnancy, disseminated intravascular coagulation, and amniotic fluid embolism. Non-obstetric causes such as idiopathic thrombocytopenic purpura (ITP), thrombotic thrombocytopenic purpura, hemolytic uremic syndrome, systemic lupus erythematosus, antiphospholipid syndrome, infectious etiologies, sepsis, hypersplenism, and bone marrow disorders also contribute to the differential diagnosis.[1,2]

Severe thrombocytopenia, defined as platelet counts below 50,000/µl, complicates approximately 0.8-1 in 10,000 pregnancies and is linked to significant maternal morbidity, with recent studies underscoring that immune thrombocytopenia (ITP) remains the predominant cause of

platelet counts under 30,000/µl in pregnancy, where management requires carefully balancing maternal bleeding risk with fetal safety.[3,4]

ITP, an autoimmune disorder characterized by antibody-mediated platelet destruction and impaired platelet production. Maternal antiplatelet antibodies can cross the placenta, resulting in fetal thrombocytopenia and an increased risk of intracranial hemorrhage. In India, its incidence is estimated at 1-2 per 10,000 pregnancies, accounting for 3-5% of pregnancy-associated thrombocytopenia.[5,6] As a diagnosis of exclusion, ITP is the most frequent cause of platelet counts below 50,000/µl, especially during the first and second trimesters.[7] Severe ITP (<50,000/µl) is rare but clinically significant due to the heightened risk of peripartum hemorrhage and neonatal complications.

Severe thrombocytopenia carries a life-threatening risk of bleeding during surgery and is generally considered unsafe for operative intervention.[1,4] Notably, cesarean delivery at a critically low platelet levels of 1000 u/L has not been documented in the literature, underscoring both the rarity and clinical significance of this case. The present case therefore represents a unique milestone in obstetric practice, demonstrating favourable maternal and neonatal outcomes despite unprecedented hematological compromise.

CASE REPORT

In 2022, 25y/F Mrs X, primigravida at 35 weeks 2 days GA with blood group O negative, presented to us with history of decreased perception of fetal movements since 3-4 days with absence of fetal movements since morning and with a blood test done 2 days back showing severe thrombocytopenia ~5000/uL. The couple were residing at a rural area. Antenatal period was supervised at a local hospital. Patient had on and off bleeding per vagina, for which she was given oral progesterone therapy. She had progressive fall of platelet count on regular testing for which she was evaluated and diagnosed to have Immune thrombocytopenia and was started on tab wysolone 10 mg once daily dose in second trimester, which was increased to twice daily dose at 26 weeks GA (platelet count: 18000/uL). She was noncompliant to her checkups and steroid medication. She had antenatal checkup at 35 weeks GA in view of decreased perception of fetal movements since 3-4 days. Her blood test revealed, platelet count of 5000/uL. Antenatal ultrasonography was suggesting of oligohydromnios Amniotic fluid index (AFI) ~4, with increased umbilical artery S/D ratio- 4.1. The patient had consulted other hospitals of which they denied active fetal intervention until her platelet count improves. She reached us at 35 weeks 2 days GA with absence of fetal movements since morning. Vitals were within normal limits petechial rash (+) over upper arms. Blood investigations were sent antenatal scan and biophysical profile done at hospital revealed severe oligohydromnios AFI ~2-3 maximum vertical pocket ~1, biophysical profile score-4/8. After an extensive counselling, patient was admitted and arrangements been made to procure blood products. Blood tests revealed Hb:10.6 g%, TLC: 8330/mm^3, platelet count of around 1000/uL (repeated in 2 different labs: values were:983/uL, 1000/uL). Peripheral smear shown in Figure 1. On continuous fetal monitoring, persistent fetal tachycardia was present (~170 bpm). Nonstress test was non-reactive. After confirming that her coagulation profile was within normal limits, decision to proceed with a emergency cesarean section was made in view of fetal distress, to save the baby. Peri-operative stress dose of IV hydrocortisone and one SDAP unit transfusion given, intraoperative findings included minimally drained liquor, atonicity of the uterus managed by bimanual uterus compression, uterotonics, patient received one-unit PRBC, two units SDAP transfusion. During postoperative period continuous monitoring of vitals, bleeding per vagina done, SDAP transfusions done. Parenteral steroids (iv methylprednisolone) were given for 3 days followed by oral steroids. Baby details include a baby girl born with birth weight 2.1 kgs and Apgar score of 6/9. Baby blood group was O negative, platelet count of baby at birth was 90,000/ul, baby had falling platelet counts in initial 2 days of life for which baby received platelet transfusion. After 2-3 days platelet count became normal in the baby. Neurosonogram was normal. Patient with her baby were discharged under satisfactory condition. Mother and baby were followed up for 3 years and both of them are doing well.

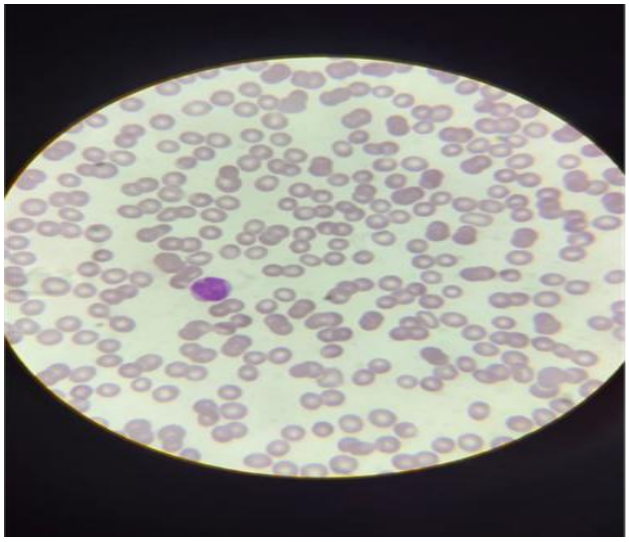

Figure 1: Peripheral smear.

*RBC: normocytic hypochromic to microcytic hypochromic, Leucocytes: normal, platelets severely decreased (less than 10,000/mm³), Hemoparasites: nil Impression: microcytic hypochromic anemia with severe thrombocytopenia

DISCUSSION

An individualized treatment plan is essential for managing platelet counts in pregnant women with severe ITP, as therapeutic responses vary significantly among patients. In the management of ITP during pregnancy, the priority is to

maintain safe platelet count levels that reduces maternal bleeding risk rather than aiming for complete normalization. Regular monitoring of platelet counts is essential throughout pregnancy, with closer surveillance warranted when levels are low or show a downward trend.[7,8] The most serious complication of ITP in pregnancy is the development of fetal or neonatal alloimmune thrombocytopenia (NAITP) and, in rare cases, intracranial hemorrhage (ICH), due to the transplacental passage of IgG platelet-specific autoantibodies.[9] Reported incidence of NAITP is approximately 10-15% in pregnancies affected by ITP, while ICH related to NAITP occurs in around 1% of cases.[9,10]

Effective peripartum care requires maintaining safe platelet counts to support child birth, with obstetric considerations shaping both the timing and mode of delivery. Multidisciplinary coordination, judicious clinical judgment, comprehensive antenatal surveillance, tailored care strategies are essential in safeguarding maternal and fetal health in pregnant woman with critically low platelet counts.[3,4] In non-bleeding pregnant patients, minimum platelet counts in the range of 20,000/uL-30,000/µl are generally considered safe for the course of pregnancy.[11] Maintaining platelet counts above 50,000/µl is considered important to reduce the risk of complications during childbirth. Although some references suggest a minimum threshold of 40,000/µl for vaginal delivery and 50,000/µl to 80,000/uL for cesarean section, most recommendations advocate aiming for at least 50,000/µl in both scenarios.[1,11] The ideal goal is to maintain platelet counts above 80,000/µl near delivery, ensuring a safe threshold for any mode of childbirth and permitting the use of analgesia during labor.[1,12] The role of platelet transfusion in ITP is limited to control episodes of acute bleeding or to raise platelet counts rapidly when an emergent procedure is being planned

But in real-world practice, clinical situations are often more complex than what these guidelines suggest. In the index case, patient was non-complaint to her antenatal checkups and steroid medication in her third trimester, which would have resulted in her extremely low platelet count at the time of presentation. The challenges in this case include the patient's rare blood group (O negative), an extremely low platelet count (1,000/µl), fetal distress, limited time available to raise platelet levels to an optimal therapeutic level, and a high risk of excessive bleeding. The presence of fetal distress necessitated urgent intervention. Thorough counselling was provided and after confirming that her coagulation profile was within normal limits and arranging for blood products to be transfused in the perioperative period, a cesarean section was therefore performed to save the baby. Baby had falling platelet counts in initial days of life for which baby received platelet transfusion. Considering the patient's financial constraints, a combination of steroid therapy and platelet transfusion was advocated in peri-operative period. On day 5 post operative period patient had her platelet count around 23,000/uL. Steroids remain a cost-effective and reliable option for sustaining adequate platelet levels, and can contribute to favourable maternal and neonatal outcomes with minimal morbidity.

There are few case series and studies reported in scientific literature where low platelet counts (less than 10,000/uL) were observed in few pregnant patients, tailored treatment was provided and optimal increase in platelet count was achieved at the time of delivery including in a case where patient had intrauterine fetal death at 28 weeks GA and platelet count of 1000/cu.mm was noted at that time.[12-15] She was given IVIg for 2 days and labor was induced resulting in delivery of a stillborn infant.[13] Carlos et al reported a case of a 28-year-old female with relapsed/refractory ITP and severe thrombocytopenia (5000/uL) at 30.5 GA who underwent emergent cesarean section with no hemorrhagic complications.[16] In contrast, the present case documents maternal and neonatal survival at platelet counts near 1,000/µl, thereby extending the boundaries of what has previously been considered feasible in obstetric practice.

Recent reviews highlight the importance of individualized care pathways rather than rigid platelet thresholds.[15,16] This case exemplifies that shift, as the decision was guided not by platelet count alone, but by urgent fetal distress and maternal survival priorities. It challenges conventional thresholds for operative safety in severe thrombocytopenia, showing that immediate intervention can be justified when risks are balanced with clinical context. Additional challenges, such as the mother's rare O negative blood group, underscored the need for proactive planning.

After reviewing the scientific literature, this case represents a unique medical milestone-the first case reported worldwide of a successful cesarean section performed at the lowest documented maternal platelet count, at the time of delivery, with long-term survival of both mother and child.[17,18] It highlights the importance of individualised management, timely intervention, meticulous preparation, and sound clinical judgment in achieving favourable outcomes despite unprecedented hematological risk.[17,18] Based on the available literature, I am blessed to be the first doctor to successfully perform cesarean delivery in a pregnant woman with the lowest reported platelet count, despite the calculated risks and challenges involved. Most published reports on severe thrombocytopenia in pregnancy focus primarily on immediate peripartum or early postpartum outcomes, with limited data on long-term prognosis.

In contrast, the present case includes a three-year follow-up of both maternal and neonatal health, which adds considerable strength to its clinical relevance. This outcome underscores that our intention was not merely to undertake a high-risk surgery, but to secure the long-term survival and well-being of both mother and child. The extended observation further highlights not only the safety of individualized management strategies in the acute setting, but also their durability in ensuring favourable long-term outcomes.

CONCLUSION

Managing platelet counts in pregnant women with severe ITP requires an individualized and carefully tailored therapeutic approach as each patient responds differently during pregnancy. The optimal mode and timing of delivery should be guided by obstetric indications. Proper counselling and clear communication with patients and families regarding disease risks, bleeding complications, and treatment compliance is vital to achieving safe outcomes. This case represents a unique milestone in obstetric surgery worldwide-the first documented successful cesarean section performed at the lowest reported platelet count (1,000/µl) at the time of delivery, with sustained maternal and neonatal outcomes. This case highlights the critical importance of timely intervention, meticulous preparation, and sound clinical judgment in achieving favourable outcomes even at unprecedently lower platelet counts. Although the clinical scenario posed significant challenges for me as an obstetrician, favourable maternal and fetal outcomes were achieved through a collaborative, multidisciplinary approach in a tertiary care setting.

ACKNOWLEDGEMENTS

The author wishes to acknowledge the contribution of Medicover Hospitals, Chandanagar Branch, Hyderabad, for providing the clinical facilities, multidisciplinary team, and supporting staff whose essential care and assistance helped in achieving the successful outcome in this case, alongside the Author's Expertise

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

REFERENCES

1. ACOG Practice Bulletin No. 207: Thrombocytopenia in Pregnancy. Obstet Gynecol. 2019;133(3):e181-93.
2. Wang X, Xu Y, Luo W. Thrombocytopenia in pregnancy with different diagnoses: Differential clinical features, treatments, and outcomes. Medicine. 2017;96(29):e7561.
3. Fogerty AE, Kuter DJ. How I treat thrombocytopenia in pregnancy. Blood. 2024;143(9):747-56.
4. Beltrami-Moreira M, Sharma A, Bussel JB. Immune thrombocytopenia and pregnancy: challenges and opportunities in diagnosis and management. Expert Rev Hematol. 2024;17(9):595-607.
5. British Committee for Standards in Haematology General Haematology Task Force. Guidelines for the investigation and management of idiopathic thrombocytopenic purpura in adults, children and in pregnancy. Br J Haematol. 2003;120(4):574-96.
6. Nisha S, Amita D, Uma S, Tripathi AK, Pushplata S. Prevalence and characterization of thrombocytopenia in pregnancy in Indian women. Indian J Hematol Blood Transfus. 2012;28(2):77-81.
7. Cines DB, Levine LD. Thrombocytopenia in Pregnancy. Blood. 2017;130:2271-7.
8. Stavrou E, McCrae KR. Immune thrombocytopenia in pregnancy. Hematol Oncol Clin North Am. 2009;23(6):1299-316.
9. Poston JN, Gernsheimer TB. Management of immune thrombocytopenia in pregnancy. Ann Blood 2021;6:5.
10. Fujimura K, Harada Y, Fujimoto T, Kuramoto A, Ikeda Y, Akatsuka, et al. Nationwide study of idiopathic thrombocytopenic purpura in pregnant women and the clinical influence on neonates. Int J Hematol. 2002;75(4):426-33.
11. Provan D, Arnold DM, Bussel JB, Chong BH, Cooper N, Gernsheimer T, et al. Updated international consensus report on the investigation and management of primary immune thrombocytopenia. Blood Adv. 2019;3(22):3780-817.
12. Sayed G, ElKourashy SA, Alnajjar M, Mallahi NA and Fareed S. Case Report: Thrombopoietin receptor agonists in resistant thrombocytopenia in pregnancy: a case series and review of literature. Front Hematol. 2023;2:1180156.
13. Pal S, Kansaria HJ. Case Series: Maternal and Fetal Outcome in Patients with Immune Thrombocytopenic Purpura Admitted to a Tertiary Care Institution. J South Asian Feder Obst Gynae. 2024;16(3):S259-62.
14. Kashyap R, Garg A, Pradhan M. Maternal and Fetal Outcomes of Pregnancy in Patients with Immune Thrombocytopenia. J Obstet Gynaecol India. 2021;71(2):124-30.
15. Ersan F, Alpay V, Boza B, Erenel H. Severe Thrombocytopenia in Pregnancy: Etiology, Management, and Outcomes Across Platelet Count Categories. J Clin Med. 2025;14:8162.
16. Vera-Aguilera C, Torres-Zazueta JM, Konkler J, VeraAguilera J, Soto-Hopkins SA. General Anesthesia for Cesarean Section in a Pregnant Woman with Immune Thrombocytopenic Purpura (ITP): A Case Report and Review of the Literature. Open J Anesthesiol. 2022;12:49-54.
17. The Times of India. Telangana: Pregnant patient at high risk saved. Available at: https://timesofindia.indiatimes.com/city/hyderabad/pregnant-patient-at-high-risk-saved/articleshow/90886557.cms. Accessed on 17 April 2025.
18. Deccan Chronicle. Nation/ DC correspondent: Doctors save rare high-risk pregnant woman, child. Available at: https://www.deccanchronicle.com/nation/in-other-news/160422/doctors-save-rare-high-risk-pregnant-woman-child.html. Accessed on 17 April 2025.

Cite this article as: Mekala NM. World's first successful caesarean delivery performed at the lowest documented maternal platelet count (1,000/µl) with sustained maternal and neonatal outcomes. Int J Reprod Contracept Obstet Gynecol 2026;15:370-3.