

Maternal Thrombocytopenia: How Risky Is It?

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Disclosure Information	Authors and Co-authors have no relevant financial relationships to declare.
Supplemental Video	Supplemental Video
Category	Women's & Children's Health

Abstract

Background: Profound thrombocytopenia (platelets $<50,000/\mu$) is associated with hemorrhage morbidity. Risks are less well-defined when platelet counts are less than 50,000 and 100,000. The objective of this study is to determine the extent to which peripartum thrombocytopenia affects maternal and neonatal outcomes.

Methods: Retrospective chart review of thrombocytopenic women who delivered at Tulane-Lakeside Hospital between 2012 and 2016 was completed. Measured outcomes included maternal demographics, medical conditions, and platelet count; intrapartum and postpartum analgesia; neonatal platelet count, and neonatal outcomes. Descriptive and comparative analyses with Chi-square and Student's t-test were performed.

Results: 497 women met inclusion criteria. The most common adverse maternal medical condition was preeclampsia with severe features (8.7%). The most common adverse neonatal outcome was neonatal intensive care unit (NICU) admission (14.3%) and hyperbilirubinemia (14.3%). Maternal thrombocytopenia at the time of delivery was associated with older maternal age (29.6 $\pm$ 6.8 vs. 26 $\pm$ 5.3 years, $p=0.02$), earlier gestational age at delivery (38.0 $\pm$ 2.8 vs. 38.6 $\pm$ 1.3 weeks, $p<0.001$), preeclampsia with severe features (23.1% vs. 6.5%, $p<0.001$), and fetal growth restriction (17.9% vs. 5.6%, $p=0.026$). Additionally, a low maternal platelet count was associated with requiring general anesthesia (10.5% vs. 1.5%, $p=0.004$), and avoidance of NSAIDs postpartum (49.5% vs. 29.2%, $p=0.001$). Maternal hemorrhage and neonatal thrombocytopenia were not detected among those with thrombocytopenia (2.6% vs. 8.4%, $p=NS$ and 10.3% vs. 5.6%, $p=NS$). Neonates born to thrombocytopenic mothers were more likely to require evaluation for sepsis (20.5% vs. 5.6%, $p=0.029$).

Conclusion: Maternal thrombocytopenia is associated with older maternal age, younger gestational age at delivery, preeclampsia with severe features, fetal growth restriction, and evaluation for neonatal sepsis. Low platelet count at the time of delivery increased chances of receiving general endotracheal anesthesia. Maternal thrombocytopenia is not associated with maternal hemorrhage or neonatal thrombocytopenia.

Learning Objectives

Describe etiologies of thrombocytopenia in pregnancy.

Describe the possible association of thrombocytopenia with maternal and neonatal morbidity.

Discuss the effects of thrombocytopenia between 100,000 and 150,000 on maternal and neonatal outcomes as risks in this range are less well-defined