



Mini Review

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Gestational Thrombocytopaenia



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Abstract

Thrombocytopaenia is a condition in which the blood platelet count is low. Gestational thrombocytopaenia is described as thrombocyte counts of $<150 \times 103/\mu\text{L}$ in gravida females and it appears in about 4.4%-11.6% of pregnancies, representing about 75% of the thrombocytopaenia cases during pregnancy. Gestational thrombocytopenia (GT) occurs more with multiple gestations than single-baby pregnancies, and is 14-fold higher in women with a previous GT history. Thrombocytopenia during pregnancy has many causes. These include, but are not limited to, anemia, hypertensive disorders, liver enzyme abnormalities, hypothyroidism, and infections. Because thrombocytopenia is common in pregnant women, determining the burden, severity, and predictors of thrombocytopaenia in pregnant women will help develop interventions to reduce risk and public health impact.

Keywords: Pregnancy; Thrombocytopaenia; Anaemia; Infections; Platelets

Introduction

Thrombocytopenia

According to Havas et al. [1] thrombocytopenia is a disease in which the number of platelets decreases. This type of thrombocytopenia is called pregnancy-induced thrombocytopenia. However, it is commonly known as gestational thrombocytopenia (GT) and is more common in women with a history of GT and multiple pregnancies [2]. It is also important to note that pregnancy induces multiple changes in the hematopoietic system [3-6]. Thrombocytopenia is the second most common blood abnormality during pregnancy, after anemia. It is common during pregnancy and accounts for about 7-8% of all pregnancies [7].

Gestational Thrombocytopaenia (GT)

Gestational thrombocytopaenia (GT) is described as thrombocyte counts of $<150 \times 103/\mu\text{L}$ in gravida females and it appears in about 4.4%-11.6% of pregnancies, representing about 75% of the thrombocytopenia cases during pregnancy. Gestational thrombocytopenia (GT) occurs more with multiple gestations than single-baby pregnancies, and is 14-fold higher in women with a previous GT history [1]. According to Haile *et al.* [8]), thrombocytopenia in pregnant women can be explained as a blood platelet (PLT) count below $150 \times 109/\text{L}$, and it is categorized as mild (PLT, $100-150 \times 109/\text{L}$), moderate (PLT, $50-100 \times 109/\text{L}$), and severe thrombocytopenia (PLT, $<50 \times 109/\text{L}$).

Thrombocytopaenia is a common hematological disorder during pregnancy next to anemia. Pregnant women with thrombocytopenia have complications of excessive bleeding during or after childbirth, cesarean section incision site oozing, stillbirth and neonatal thrombocytopaenia [9].

Gestational Thrombocytopaenia and Underlying Factors

According to Havas et al.[1] the decreased platelet count may be due to increased fluid retention, increased platelet clearance rates due to increased platelet volume and platelet width, and high levels of platelet-derived cyclooxygenase products. Thrombocytopenia is a global public health problem in pregnant women and is associated with significant maternal and fetal complications and mortality [8].

According to Ruiru et al. [10], thrombocytopenia is her second most common blood disorder worldwide after anemia, affecting 7-10% of all her pregnancies. In sub-Saharan Africa, the prevalence is slightly higher at 15.3%. The disease is responsible for up to 10 cases of postpartum hemorrhage in developing countries, and the maternal mortality rate he is 5.26%.

Kurban et al. [11] studied the incidence of thrombocytopenia in pregnant women attending the Rasheed Latif Medical College, Lahore, Pakistan, and found that the incidence of thrombocytopenia

in 40 pregnant women was 10.5% of hers. was shown. On the other hand, women had moderate thrombocytopenia, approximately 81.0% in the third trimester, 76.0% in the second trimester, and 74.0% in the first trimester. According to Singh et al. [7] the degree of thrombocytopenia during pregnancy is greater in Indian women, with causes including anemia, hypertensive disorders, liver enzyme abnormalities, hypothyroidism, infections (viral and bacterial), among others., etc. In addition, the majority of patients with thrombocytopenia were her 21–25 years old, in the third trimester of pregnancy (93.3%), and blood group B and Rhesus D positive.

According to Getawa *et al.* [9], the overall pooled prevalence of thrombocytopaenia among pregnant women in Africa was 10.23% (95% confidence interval (CI): 7.44, 13.02%). Its level of severity showed that, 77.95% (I2=43.1%), 15.62% (I2=53.4%), and 5.60 (I2=0.0%) of pregnant women had mild, moderate and severe thrombocytopaenia, respectively. The highest prevalence of thrombocytopaenia was occurred in the third trimester of pregnancy (54.05% (95% CI: 29.48, 78.61).

According to the Jali and Nkambule [12] study, "Prevalence and etiology of moderate and severe thrombocytopenia in tertiary and quaternary centers in KwaZulu-Natal", the incidence of The prevalence was 14.9%. Hematology or oncology wards and clinics accounted for 55.2% of thrombocytopenia cases, and adult and pediatric intensive care units accounted for 29.3%. Chemotherapy was the most common cause of thrombocytopenia, accounting for 38.5% of all causes.

Ergodwi et al. [13] found that thrombocytopenia during pregnancy was associated with pregnancy disorders (70-80%), hypertensive disorders (15-20%) and immune-mediated disorders in a study conducted in the Tripoli region (Libya). pointed out that it may have (3). -5%), chronic infections, hematologic malignancies, folic acid deficiency, and drug side effects.

According to Strong [14], impaired platelet production or destruction, increased platelet sequestration and aggregation, and increased platelet consumption in peripheral tissues are the main factors that may contribute to the development of thrombocytopenia during pregnancy. It's the underlying mechanism. According to Luyeko et al. [15] in a study of preeclamptic pregnant women in the Iringa region of Tanzania, 44% had diastolic measurements ≥ 160 mmHg, 44% had platelets ≤ 150 , and 31% had High hematocrit and 59% had hypotension. Low hemoglobin level. 78% of her respondents had poor maternal outcomes. Patients with a gestational age of less than 37 weeks had statistically significant poorer maternal outcomes. Blood loss greater than 500mL was statistically significant and had a poor maternal outcome.

Effect on Maternal and Fetal Outcome

Zussy et al. [16] studied the prevalence of gestational thrombocytopenia (GT) in prenatal patients at Vardman Mahavir

Medical College (VMMC) and Safdarjun Hospital, New Delhi, India, and found that the prevalence of GT The disease rate was shown to be his 12.82%. Fetal results were good. A total of 5 (2.5%) patients had abortions and about 7(3.5%) had postpartum haemorrhage. Approximately 13 patients (6.5%) required blood transfusions, including platelet transfusions, and there were no maternal deaths.

Management of Gestational Thrombocytopaenia

According to Schwartz [17], the main goal in treating pregnancy-related thrombocytopenia is to deliver a healthy child without unduly endangering the health of the mother. Severe intracranial hemorrhage in infants can cause long-term disability or even death.

According to Fogerty [18], thrombocytopenia is a common hematologic problem faced by obstetricians and hematologists and is present in approximately 10% of all pregnancies. In most cases, thrombocytopenia is thought to be due to gestational thrombocytopenia (GT), which is mild, does not require aggressive treatment, and poses no risk of maternal or fetal bleeding. is not.

Schwartz [17] also stated that "proper management of thrombocytopenia in pregnant patients is important for maternal and fetal health". Healthy-appearing mothers with mild thrombocytopenia have either benign gestational thrombocytopenia that does not cause fetal thrombocytopenia, or immune-mediated thrombocytopenia that can cause fetal thrombocytopenia. may suffer from

Conclusion

Because thrombocytopenia is common in pregnant women, determining the burden, severity, and predictors of thrombocytopenia in pregnant women will help develop interventions to reduce risk and public health impact. Very important.

References

1. Habas SE, Rayani A, Alfitori G, Ahmed GE, Elzouki ANY, et al. (2022) Gestational thrombocytopenia: a review on recent updates. *Cureus* 14(3): e23204.
2. Obeagu EI, Adepoju OJ, Okafor CJ, Obeagu GU, Ibekwe AM, et al. (2021) Assessment of Haematological Changes in Pregnant Women of Ido, Ondo State, Nigeria. *J Res Med Dent Sci* 9(4): 145-148.
3. Okoroiwu IL, Obeagu EI, Obeagu GU (2022) Determination of clot retraction in pregnant women attending antenatal clinic in federal medical centre Owerri, Nigeria. *Madonna University Journal of Medicine and Health Sciences* 2(2): 91-97.
4. Okoroiwu IL, Obeagu EI, Vivian Egwim V (2021) Assessment of White Blood Cell Count and Platelet Count in Women on Hormonal Contraceptives in Owerri, Imo State, Nigeria. *J Res Med Dent Sci* 9(12): 498-501.
5. Okorie HM, Obeagu EI, Eze EN, Jeremiah ZA (2018) Assessment of coagulation parameters in malaria infected pregnant women in Imo state, Nigeria. *International Journal of Current Research in Medical Sciences* 4(9): 41-49.

6. Obeagu EI, Okoroiwu IL, Obeagu GU (2022) Relationship between Thrombopoietin and Interleukin 3: A Review. *Int J Curr Res Chem Pharm Sci* 9(1): 7-13.
7. Singh S, Balhara K, Oberoi M (2021) Prevalence and Etiology of Thrombocytopenia in Pregnant Women in a Tertiary Care Hospital in Delhi. *MAMC Journal of Medical Sciences* 7(3): 239.
8. Haile K, Kebede S, Abera T, Timerga A, Mose A, et al. (2022) Thrombocytopenia Among Pregnant Women in Southwest Ethiopia: Burden, Severity, and Predictors. *J Blood Med* 13: 275-282.
9. Getawa S, Getaneh Z, Melku M (2022) Thrombocytopenia among pregnant women in Africa: a systematic review and meta-analysis. *Pan Afr Med J* 41: 334.
10. Ruiru D, Byonanuwe S, Oguttu B, Nzabandora E (2021) Severity Patterns and Determinants of Thrombocytopenia among Women Delivering at Kampala International University Teaching Hospital, Western Uganda. *Medical Journal of Obstetrics and Gynecology* 9(1): 1141.
11. Qurban S, Arshad S, Hussain S, Imran S, Munawar A, et al. (2022) Frequency of Thrombocytopenia in Pregnant Females. *Pakistan Journal of Medical & Health Sciences* 16(07): 997-997.
12. Jali AG, Nkambule BB (2020) Prevalence and aetiology of moderate and severe thrombocytopenia in a tertiary and quaternary centre in KwaZulu-Natal. *Afr J Lab Med* 9(1): 1-5.
13. Elgodwi S, Lawar M, Saadallah A (2020) Prevalence of thrombocytopenia among pregnant women in Tripoli region/Libya. *J Med App Sci* 3(3): 83.
14. Strong J (2003) Bleeding disorders in pregnancy. *Current Obstetrics & Gynaecology* 13(1): 1-6.
15. Luyeko SS, Lilungulu A, Rweyemamu MA (2021) Haematological Indices and Obstetric Outcomes among Pregnant Women with Preeclampsia at Iringa Regional Tanzania. *Systematic Reviews in Pharmacy* 12(11): 3627-3632.
16. Zutshi V, Gupta N, Arora R, Dhanker S (2019) Prevalence of gestational thrombocytopenia and its effect on maternal and fetal outcome. *Iraqi Journal of Hematology* 8(1).
17. Schwartz KA (2000) Gestational thrombocytopenia and immune thrombocytopenias in pregnancy. *Hematology/oncology clinics of North America* 14(5): 1101-1116.
18. Fogerty AE (2018) Thrombocytopenia in pregnancy: mechanisms and management. *Transfusion medicine reviews* 32(4): 225-229.



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