Original Research

A STUDY ON THE ASSOCIATION BETWEEN PRE-DELIVERY PLATELET AND COAGULATION PROFILES AND IMMEDIATE POST PARTUM HAEMORRHAGE IN A TERTIARY CARE HOSPITAL

Dr. Ragashree V[1*], Dr. Vimal Chander[2], Dr. Saranyabai S[3], Dr. Priyadharshini K[4], Dr. Pavithra V[5], Dr. Bargavi B[6]

[1*]MBBS, Post graduate, Department of Pathology, A.C.S. Medical College & Hospital, Dr. M.G.R. Educational & Research Institute (Deemed to be university).

[2]MD, Professor, Department of Pathology, Rajalakshmi Medical College Hospital and Research Institute Sriperumbadur - 602117.

[3]MD, Associate Professor, Department of Pathology, A.C.S. Medical College & Hospital, Dr. M.G.R. Educational & Research Institute (Deemed to be university).

[4]MD, DNB, Assistant Professor, Department of Pathology, A.C.S. Medical College & Hospital, Dr. M.G.R. Educational & Research Institute (Deemed to be university).

[5]MD, Assistant Professor, Department of Pathology, A.C.S. Medical College & Hospital, Dr. M.G.R. Educational & Research Institute.(Deemed to be university).

[6]MBBS, Post graduate, Department of Pathology, A.C.S. Medical College & Hospital, Dr. M.G.R. Educational & Research Institute (Deemed to be university).

Corresponding Author: Dr. Ragashree V

Email: [1*]ragashreevaradharajan@gmail.com, [2]rvimalchander@gmail.com, [3]ever8472@gmail.com, [4]priyadharshinikumar1@gmail.com, [5]alwazinmyheart@gmail.com, [6]bargaviqueen@gmail.com

ABSTRACT

Background: Postpartum haemorrhage (PPH) is a major cause of maternal morbidity and mortality worldwide. Although pregnancy is associated with a physiological hypercoagulable state, abnormalities in platelet count and coagulation parameters may increase the risk of excessive bleeding**.**

Aim and Objectives: To assess the association between pre-delivery platelet count and coagulation parameters with immediate postpartum haemorrhage in a tertiary care setting.

Materials and Methods: This prospective observational study was conducted in the Department of Pathology at Medical College and Hospital over six months (January 2026–May 2026). A total of 113 pregnant women at ≥37 weeks gestation were included. Demographic and obstetric details were recorded. Pre-delivery blood samples were analyzed for platelet count, prothrombin time (PT), activated partial thromboplastin time (aPTT), thrombin time (TT) and international normalized ratio (INR).Inferential statistics was performed with $p < 0.05$ statistically significant.

Results: Out of 113 participants, 13 (11.5%) developed immediate PPH. Thrombocytopenia was significantly associated with PPH, with approximately 10-fold increased odds (OR = 10.73, $p < 0.001$). Mean APTT and TT were significantly higher among PPH cases ($p = 0.042$ and $p = 0.013$, respectively). PT and INR were elevated in PPH cases but did not show statistical significance. No significant association was observed between PPH and age, gravidity, or mode of delivery.

Conclusion: Pre-delivery thrombocytopenia and elevated APTT and TT are significant predictors of immediate PPH. Routine assessment of these parameters may help identify high-risk women and improve maternal outcomes.

Keywords: Postpartum Hemorrhage, Thrombocytopenia, Coagulation Tests, Pregnancy, Risk Factors.

Key Message: Pre-delivery thrombocytopenia and abnormalities in APTT and TT can serve as simple, cost-effective predictors for early identification of women at risk of postpartum haemorrhage, enabling timely intervention and improved maternal care.

www.ajmrhs.com
eISSN: 2583-7761

Date of Received: 19-04-2026
Date Acceptance: 26-04-2026
Date of Publication: 02-05-2026

INTRODUCTION

Postpartum haemorrhage (PPH) is one of the major cause of maternal morbidity and mortality, defined as a cumulative blood loss of >500ml in vaginal delivery or ≥1000 mL in Caesarean section or any amount of bleeding associated with signs of hypovolemia, regardless of the mode of delivery. Although uterine contraction and the coagulation system normally limit blood loss after childbirth, failure of these mechanisms can result in life-threatening haemorrhage(1).

Primary PPH occurs within the first 24 hours after delivery, while secondary PPH develops from 24 hours up to 12 weeks postpartum. During pregnancy, haemostatic system shifts toward a hypercoagulable state, characterized by increased levels and activity of procoagulant factors along with reduced anticoagulant function and fibrinolytic activity. This physiological adaptation increases the risk of thromboembolic events, such as venous thrombosis and pulmonary embolism, compared to non-pregnant women. The degree of hypercoagulability progressively rises throughout pregnancy and reaches its peak at term. However, despite these procoagulant changes, postpartum haemorrhage (PPH) remains a frequent and significant obstetric complication(2).

Early identification of women at risk is crucial for prompt management and prevention of maternal mortality. Established risk factors include advanced maternal age (≥35 years), placental abruption, placenta previa, and severe pre-eclampsia conditions that compromise uterine contractility and increase the likelihood of uterine atony(3).

PPH affects millions of women annually and is responsible for more than 20% of all maternal fatalities worldwide. PPH-related deaths are mostly avoidable and have considerably decreased in high-income nations (HICs). South Asia and sub-Saharan Africa account for more than 80% of maternal PPH mortality(4).

Thrombocytopenia (GT), defined as a platelet count below 150 × 10^9/L, occurs in approximately 4.4%–11.6% of pregnancies and accounts for nearly 75% of thrombocytopenia cases during pregnancy(5).

Platelet count and coagulation parameters such as prothrombin time (PT), activated partial thromboplastin time (aPTT), and international normalized ratio (INR) are routinely assessed in high-risk pregnancies and prior to operative deliveries. Thrombocytopenia, platelet dysfunction, and coagulation abnormalities have been implicated as potential contributors to increased blood loss during and after childbirth. However, the predictive value of pre-delivery platelet and coagulation profiles for immediate PPH remains inadequately explored, particularly in tertiary care settings where high-risk pregnancies are more prevalent(3).

Early identification of women at risk for PPH through readily available laboratory parameters could facilitate timely preventive strategies, appropriate resource allocation, and improved maternal outcomes. Therefore, this study aims to evaluate the association between pre-delivery platelet count and coagulation profiles and the occurrence of immediate postpartum haemorrhage in a tertiary care hospital setting.

MATERIALS AND METHODS

This hospital-based prospective observational study was conducted in the Department of Pathology at ACS Medical College and Hospital over a period of five months, from January 2026 to May 2026.

The sample size was calculated based on a study by Arcudi et al., assuming a prevalence of 37% and an absolute precision of 9%, resulting in a final sample size of 113 participants (6)**.**

The study included pregnant women at >37 weeks gestation presenting with thrombocytopenia (platelets <150,000 cells/mm^3) and a confirmed immediate PPH of >500 mL within two hours of delivery. Women with conditions that could independently influence bleeding risk such as placenta previa, severe preeclampsia, liver disorders, hypertensive disorders of pregnancy, known coagulation or bleeding disorders, or those receiving anticoagulant therapy were excluded from the study.

After obtaining informed consent, relevant demographic and obstetric data were collected using a predesigned proforma. Venous blood samples were obtained prior to delivery for the assessment of platelet and coagulation parameters, including platelet count, prothrombin time (PT), activated partial thromboplastin time (aPTT), international normalized ratio (INR), and fibrinogen levels. All analyses were performed using automated haematology and coagulation analyzers in the Department of Pathology.

Statistical Analysis

SPSS version 26.0 was used to analyze the data. Frequency and percentage results are presented for categorical variables. For continuous variables, the independent t test, mean, and standard deviation are used. The odds ratio was calculated using univariate analysis. Statistical significance was defined as a p value of less than 0.05.

RESULTS

A total of 113 pregnant women participated in the study. Many of the participants (57.5%) were between the ages of 21 and 30, with 42.5% falling between the ages of 31 and 40. The majority of women were multigravida (60.2%), while 39.8% were primigravida. In terms of mode of delivery, 54.9% had a normal vaginal birth, whereas 45.1% had a lower segment cesarean section. Most of them (77.9%) had platelet counts <1,50,000 cells/cu.mm, whereas 22.1% had levels >1,50,000 cells/cu.mm.

Based on the thrombocytopenia and coagulation profile 76 women were categorized as low risk, none of whom developed postpartum haemorrhage (PPH). Among 27 intermediate-risk cases, 6 developed PPH, while 3 out of 6 high-risk cases and all 4 very high-risk cases developed PPH, indicating

an increasing incidence of PPH with higher risk categories.

Table 5 shows Univariate logistic regression analysis showed that age, gravidity, and type of delivery were not significantly associated with the occurrence of PPH ($p > 0.05$). However, women with thrombocytopenia had approximately 10 times higher odds of developing immediate PPH, which was found to be statistically significant (OR = 10.73, $p < 0.001$).

Independent sample t-test analysis revealed that APTT and TT were significantly higher in women who developed PPH compared to those who did not ($p = 0.042$ and $p = 0.013$, respectively). In contrast, PT and INR were higher in PPH cases but did not reach statistical significance ($p > 0.05$). These findings suggest that abnormalities in certain coagulation parameters, particularly APTT and TT, may be associated with an increased risk of postpartum haemorrhage.

Table 1: Demographic and Obstetric Characteristics of the Study Participants (n=113)

Variables		Frequency	Percentage
Age	21-30	65	57.5%
	31-40	48	42.5%
Gravida	Primi	45	39.8%
	Multi	68	60.2%
Type of Delivery	Normal Vaginal Delivery	62	54.9%
	LSCS	51	45.1%
Platelet	<1,50,000	88	77.9%
	>1,50,000	25	22.1%

Table 2: Distribution of Coagulation Profile Parameters (APTT, PT, INR, and TT) Among Study Participants

S.no	Variable	Mean	Standard Deviation
1	APTT	34.89	3.6684
2	PT	15.30	2.10
3	INR	1.12	0.036
4	TT	2.75	1.41

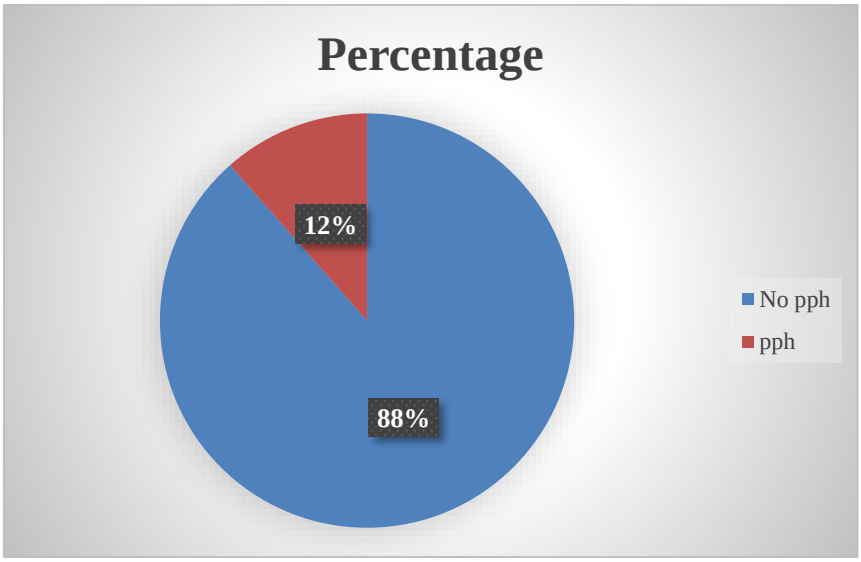

Figure 1: A pie chart depicting the percentage of women who developed immediate PPH

Table 3: Platelet Count–Based Risk Categorization for Postpartum Haemorrhage

Platelet value	Risk Category
More than 2,00,000 per microliter	Low risk
1,50,000-1,99,000 per microliter	Intermediate risk
81,000 – 1,49,000 per microliter	High risk
Less than 80,000 per microliter	Very high risk

Table 4: Distribution of Postpartum Haemorrhage (PPH) Cases According to Risk Stratification

S.no		No. of pregnant women	No of women developed immediate PPH
1	Low risk	76	0
2	Intermediate risk	27	6
3	High risk	6	3
4	Very high risk	4	4

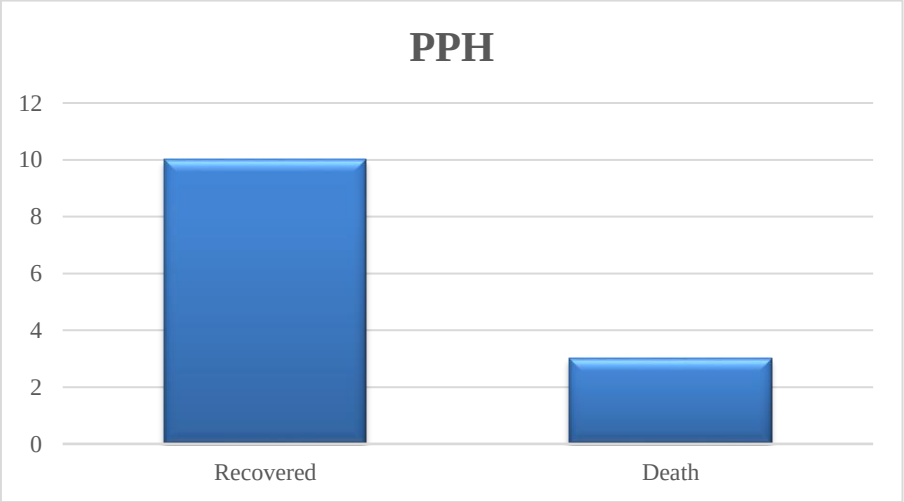

Figure 2: Distribution of Recovery and Mortality among PPH Cases

Table 5: Univariate logistic regression of Demographic, Obstetric, and Platelet Parameters with Postpartum Haemorrhage.

Variables		PPH	No PPH	Total (n=113)	OR (p value)
Age	21-30	8(61.5%)	57(57%)	65(57.5%)	1.49 (0.63)
	31-40	5(38.5%)	43(43%)	48 (42.5%)	
Gravida	Primi	8(61.5%)	37(37%)	45 (39.8%)	0.32 (0.16)
	Multi	5(38.5%)	63(63%)	68(60.2%)	
Type of Delivery	Normal Vaginal Delivery	5(38.5%)	57(57%)	62(54.9%)	1.96 (0.31)
	LSCS	8(61.5%)	43(43%)	51(45.1%)	
Platelet	<1,50,000	4(30.8%)	84(84%)	88(77.9%)	10.73 **(<0.001)**
	>1,50,000	9(69.2%)	16(16%)	25(22.1%)	

p value < 0.05 is considered significant.

Table 6: Independent Sample t-Test Analysis of Coagulation Parameters in Relation to PPH

Variable	PPH	N	Mean	Std. Deviation	Mean Difference	p value
APTT	Yes	13	39.12	7.52	4.77	**0.042**
	No	100	34.35	2.39		
PT	Yes	13	17.77	4.97	2.78	0.067
	No	100	14.99	1.06		
INR	Yes	13	1.16	0.09	0.04	0.163
	No	100	1.12	0.013		

TT	Yes	13	5.13	3.30	2.68	**0.013**
	No	100	2.44	0.31		

p value < 0.05 is considered significant.

DISCUSSION

In the present study, most women belonged to the 21–30-year age group and the majority were multigravida. However, maternal age and parity did not show a statistically significant association with the occurrence of postpartum haemorrhage. Similar findings were reported by Peng et al., who observed that demographic characteristics alone may not reliably predict postpartum haemorrhage in otherwise uncomplicated pregnancies. Kumar et al. and Sharma et al. also reported that maternal age and parity were not independent predictors of PPH when analysed alongside other obstetric and laboratory parameters (3,11,15).

In contrast, some earlier studies have suggested that advanced maternal age and multiparity may increase the risk of postpartum haemorrhage due to uterine atony and associated obstetric complications. For example, certain observational studies have reported a higher incidence of PPH among multiparous women, possibly due to reduced uterine tone following repeated pregnancies. However, the lack of association observed in the present study may be attributed to the relatively homogeneous study population and the absence of major obstetric risk factors among the participants (8).

A significant finding of the present study was the presence of thrombocytopenia in a considerable proportion of the study population. Women with platelet counts below 150,000 cells/mm³ had significantly higher odds of developing immediate postpartum haemorrhage compared with women with normal platelet counts (5).

The findings of the present study are consistent with those reported by Arcudi et al., who demonstrated that moderate thrombocytopenia during pregnancy was associated with an increased risk of postpartum haemorrhage. Similarly, Govindappagari et al. reported that even mild thrombocytopenia among nulliparous women at term was significantly associated with higher postpartum blood loss. Other investigators have also highlighted the role of platelet indices as potential predictors of obstetric haemorrhage, suggesting that reduced platelet counts may reflect diminished haemostatic reserve during labour and delivery (6,10,14,16).

However, some studies have reported findings that differ from the present study. Certain investigators have observed that mild gestational thrombocytopenia does not significantly increase the risk of postpartum haemorrhage in otherwise healthy pregnant women. These studies suggest that physiological thrombocytopenia during pregnancy may not always translate into clinically significant bleeding complications. The discrepancy between these findings and the results of the present study may be explained by differences in study design, sample size, and the inclusion of varying degrees of thrombocytopenia among the study populations (10).

Another important observation in the present study was the progressive increase in the incidence of postpartum haemorrhage with increasing risk categories based on platelet counts and coagulation parameters. None of the women in the low-risk group developed postpartum haemorrhage, whereas a considerable proportion of women in the high-risk and very high-risk groups experienced PPH. This pattern highlights the importance of incorporating laboratory parameters into obstetric risk stratification models. Peng et al. demonstrated that combining platelet indices with coagulation parameters improved the predictive accuracy for identifying women at high risk of immediate postpartum haemorrhage (3).

Similar observations have been reported in other studies where the integration of haematological parameters into risk assessment models improved early detection of obstetric haemorrhage. Singh et al. and Sharma et al. emphasised that identification of high-risk women before delivery allows clinicians to initiate preventive strategies such as active management of the third stage of labour, preparedness for blood transfusion, and closer intrapartum monitoring (9,15).

In the present study, analysis of coagulation parameters revealed that activated partial thromboplastin time (APTT) and thrombin time (TT) were significantly prolonged in women who developed postpartum haemorrhage compared with those who did not. Prolongation of APTT reflects abnormalities in the intrinsic coagulation pathway, whereas prolonged thrombin time indicates impaired conversion of fibrinogen to fibrin during clot formation. Disturbances in these pathways may compromise effective haemostasis following placental separation, thereby increasing the risk of excessive bleeding. Similar findings have been reported in studies evaluating coagulation abnormalities in obstetric populations, where alterations in clotting parameters were observed prior to the development of postpartum haemorrhage (7,12,13).

Although prothrombin time (PT) and international normalized ratio (INR) were observed to be higher among women who developed postpartum haemorrhage in the present study, the differences were not statistically significant. Similar findings have been reported by Peng et al. and Kumar et al., who observed elevated trends in PT and INR

without significant association with PPH (3,11). The absence of statistical significance in these parameters may be due to the relatively small sample size or the fact that intrinsic pathway abnormalities appear to have a stronger association with postpartum bleeding in certain populations.

Table 7: Discussion Summary

Study (Author, Year)	Study Focus	Parameters Studied	Key Findings	Prognostic Significance
Present Study	Pre-delivery platelet & coagulation profile in predicting immediate PPH	Platelet count, APTT, PT, INR, TT, age, gravidity, delivery type	Thrombocytopenia strongly associated with PPH; APTT & TT significant; PT & INR not significant; demographics not significant	Platelet count, APTT, and TT are strong predictors; combined risk stratification improves early detection
Peng et al., 2025	Predelivery platelet and coagulation indices as predictors of PPH	Platelet indices, PT, APTT	Lab parameters improved prediction; demographic factors not significant	Supports combined hematological predictors
Arcudi et al., 2022	PPH risk in moderate thrombocytopenia	Platelet count	Moderate thrombocytopenia increases PPH risk	Platelet count is strong predictor
Govindappagari et al., 2020	Mild thrombocytopenia and PPH	Platelet count	Mild thrombocytopenia linked to increased blood loss	Even mild reduction has predictive value
Nair et al., 2021	Coagulation parameters and PPH	APTT, PT	Coagulation abnormalities precede PPH	Useful for early detection
Charbit et al., 2007	Fibrinogen and PPH severity	Fibrinogen, TT	Early fibrinogen decline predicts severe PPH	Indicates severity
Collins et al., 2014	Clot formation in PPH	Clot markers, TT	Impaired clot formation predicts worsening PPH	Functional defects are key predictors

Limitations

The present study has certain limitations. The results may not be as applicable to other healthcare settings or demographics because it was only done in one tertiary care facility. The study's statistical connections may be influenced by the sample size and the very limited number of PPH cases. Therefore, larger multicentric investigations are needed to confirm these results and create reliable predictive models that include coagulation and platelet markers for the early detection of postpartum haemorrhage

CONCLUSION

The present study demonstrates that pre-delivery platelet count and coagulation parameters play a crucial role in predicting immediate postpartum haemorrhage (PPH). Thrombocytopenia was identified as a strong independent predictor, with significantly higher odds of PPH. Among coagulation parameters, activated partial thromboplastin time (APTT) and thrombin time (TT) were significantly prolonged in PPH cases, indicating the importance of intrinsic pathway abnormalities, while prothrombin time (PT) and international normalized ratio (INR) showed no significant association.

Demographic and obstetric factors such as maternal age, gravida, and type of delivery were not significantly associated with PPH in this study. However, they remain clinically relevant and may contribute when assessed alongside laboratory markers.

Risk stratification using combined platelet and coagulation profiles showed increasing PPH incidence with higher risk categories. Thus, routine pre-delivery evaluation of these parameters can aid in early identification, timely intervention, and improved maternal outcomes.

REFERENCES

1. Wormer KC, Jamil RT, Bryant SB. Postpartum Hemorrhage. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 [cited 2026 Feb 17]. Available from:

http://www.ncbi.nlm.nih.gov/books/NBK499988/ PubMed PMID: 29763164.

2. Dibiasi C, Jecel E, Falcone V, Schaden E, Gratz J. Association between laboratory coagulation parameters and postpartum hemorrhage in preterm and term caesarean section: a retrospective analysis. J Clin Med. 2024;13(6):2031.
3. Peng Y, Liu J, Liu P, Wu Y, Zhang G, Guo Y. Evaluating predelivery platelet and coagulation indices as predictors of immediate postpartum haemorrhage in low-risk women undergoing vaginal delivery. BMC Pregnancy Childbirth. 2025 Mar 17;25:298. doi:10.1186/s12884-025-07427-0 PubMed PMID: 40097957; PubMed Central PMCID: PMC11912657.
4. Second global call for data on postpartum haemorrhage [Internet]. [cited 2026 Feb 17]. Available from: https://www.who.int/news-room/articles-detail/second-global-call-for-data-on-postpartum-haemorrhage
5. Cines DB, Levine LD. Thrombocytopenia in pregnancy. Blood. 2017 Nov 23;130(21):2271–7. doi:10.1182/blood-2017-05-781971
6. Arcudi S, Ronchi A, Capecchi M, Iurlaro E, Ossola MW, Mancini I, et al. Assessment of post-partum haemorrhage risk among women with moderate thrombocytopenia. Br J Haematol. 2022 May;197(4):482–8. doi:10.1111/bjh.18098 PubMed PMID: 35266559; PubMed Central PMCID: PMC9314919.
7. Nair M, Chhabra S, Choudhury SS, Deka D, Deka G, Kakoty SD, Kumar P, Mahanta P, Medhi R, Rani A, Rao S, Roy I, Solomi V C, Talukdar RK, Zahir F, Kansal N, Arora A, Opondo C, Armitage J, Laffan M, Stanworth S, Quigley M, Baigent C, Knight M, Kurinczuk JJ; MaatHRI collaborators. Relationship between anaemia, coagulation parameters during pregnancy and postpartum haemorrhage at childbirth: a prospective cohort study. BMJ Open. 2021 Oct 4;11(10):e050815. doi: 10.1136/bmjopen-2021-050815. PMID: 34607867; PMCID: PMC8491293.
8. Patel M. Postpartum Hemorrhage: Enhancing Outcomes for Mothers by Effective Management. J Obstet Gynaecol India. 2024 Jun;74(3):191-195. doi: 10.1007/s13224-024-02022-3. Epub 2024 Jun 27. PMID: 38974747; PMCID: PMC11224172.
9. 9Ghosh K, Mandal PK. Usage of blood components in obstetric practice. J Hematol Allied Sci. 2023;3:93-102. doi: 10.25259/JHAS_51_2023
10. Govindappagari, Shravya MD; Moyle, Kimberly MD; Burwick, Richard M. MD, MPH. Mild Thrombocytopenia and Postpartum Hemorrhage in Nulliparous Women With Term, Singleton, Vertex Deliveries. Obstetrics & Gynecology 135(6):p 1338-1344, June 2020. | DOI: 10.1097/AOG.0000000000003861
11. Kazma, J., Ebner, M., Whitley, J. et al. Impact of anemia and thrombocytopenia on postpartum hemorrhage risk among women with term singleton pregnancy. J Thromb Thrombolysis 55, 571–575 (2023). https://doi.org/10.1007/s11239-022-02756-9
12. Charbit B, Mandelbrot L, Samain E, Baron G, Haddaoui B, Keita H, et al. Early fibrinogen decrease predicts the severity of postpartum hemorrhage. J Thromb Haemost. 2007;5(2):266–273.
13. Collins PW, Lilley G, Bruynseels D, Laurent DB, Cannings-John R, Precious E, et al. Fibrin-based clot formation as an early and rapid biomarker for progression of postpartum hemorrhage. Blood. 2014;124(11):1727–1736.
14. Van Dijk WEM, Nijdam JS, Haitjema S, de Groot MCH, Huisman A, Punt MC, et al. Platelet count and indices as postpartum hemorrhage risk factors: A retrospective cohort study. Journal of Thrombosis and Haemostasis. 2021 Nov;19(11):2873–83. doi:10.1111/jth.15481
15. Butwick AJ, Goodnough LT. Transfusion and coagulation management in major obstetric hemorrhage. Curr Opin Anaesthesiol. 2017;30(3):281–286.
16. Carlson LM, Dotters-Katz SK, Smid MC, Manuck TA (2017) How low is too low? Postpartum hemorrhage risk among women with thrombocytopenia. Am J Perinatol 34:1135–1141. https://doi.org/10.1055/s-0037-1604194
17. Shekar A, Raman LM, Pujari S, Goudappala P. Study on coagulation profile in women with pregnancy-induced hypertension in South Indian population. Asian Journal of Medical Sciences. 2022 Dec 1;13(12):127-30.
18. Salomon C, De Moreuil C, Hannigsberg J, Trémouilhac C, Drugmanne G, Gatineau F, et al. Haematological parameters associated with postpartum haemorrhage after vaginal delivery: results from a French cohort study. J Gynecol Obstet Hum Reprod. 2021;50(9):102168. doi:10.1016/j.jogoh.2021.102168.
19. Ozturk E, Karaca Y, Ince O, Karaca I. Can prepartum platelet indices be a parameter to predict postpartum hemorrhage? J Matern

Fetal Neonatal Med. 2022;35(15):2829–2835. doi:10.1080/14767058.2020.1803261.

How to cite this article: Dr. Ragashree V, Dr. Vimal Chander, Dr. Saranyabai S, Dr. Priyadharshini K, Dr. Pavithra V, Dr. Bargavi B, A STUDY ON THE ASSOCIATION BETWEEN PRE-DELIVERY PLATELET AND COAGULATION PROFILES AND IMMEDIATE POST PARTUM HAEMORRHAGE IN A TERTIARY CARE HOSPITAL, Asian J. Med. Res. Health Sci., 2026; 4 (1):-9-16.

Source of Support: Nil, Conflicts of Interest: None declared.