E-ISSN 2250-0944
ISSN 2250-1150
doi: 10.31838/ijprt/16.01.33

Research Article

A Study of Thrombocytopenia in a Pregnancy at a Tertiary Care Centre

Dr. Nilesh Narayanrao Bhalerao[1*], Dr. Bhaurao Yadav[2]
[1*]JR3 Department of OBGY, VDGMC, Latur.
[2]Associate Professor, Department of OBGY, VDGMC, Latur.
Corresponding Authors: Dr. Bhaurao Yadav
Associate Professor, Department of OBGY, VDGMC, Latur
Email: [1]drnileshbhalerao2488@gmail.com
Received: 05.12.25, Revised: 20.12.25, Accepted: 03.02.26

ABSTRACT
Background: Thrombocytopenia is the second most common haematological abnormality after anaemia encountered in pregnancy. Thrombocytopenia is defined as the platelet count of less than 150,000/ml. Pregnancy causes varied alterations in hematopoietic systems. Thrombocytopenia is second only to anemia as the most common hematologic abnormality in pregnancy. It occurs commonly during pregnancy and accounts for around 7–8% of the all the pregnancies. The causes are accelerated platelet consumption or decreased production
Aim and Objectives: "A Study of thrombocytopenia in pregnancy at a tertiary care center.2. To study proportion of thrombocytopenia in pregnancy at a tertiary care center. 3. To study the association of thrombocytopenia with risk factors. 4. To study clinical profile of thrombocytopenia cases
Methodology: Study Design: Cross sectional study**. Study Setting:** OBGY department of VDGMC Latur, Maharashtra. **Study Population:** All pregnant women with Gestational age from 28weeks to 40weeks with thrombocytopenia in ANC Clinic of OBGY department of VDGMC Latur such cases were included in the study. **Study Period:** 18months from 1 Dec 2023 to 1 July 2025. **Sample Size** = 140
Results: Proportion of Thrombocytopenia among ANC Women was 1.64%, most of cases presented with mild thrombocytopenia 120 (85.71%).The majority of cases occurred in the 20–30 years age group (75 cases, 53.6%), the majority were multigravida (97 cases, 69.2%), thrombocytopenia was most frequently observed beyond >37 weeks (61 cases, 43.6%), majority of cases reported vegetarian diet pattern 94 (67.14%),majority of cases reported no H/O platelets transfusion 134 cases (95%) and 6 cases (5%) had a history of platelets transfusion. majority of cases diagnosed with platelet count between 120001-150000, 88 cases , 31 cases (22.1%) had identifiable risk factors associated with thrombocytopenia. The most frequent association was anaemia (12 cases, 8.6%), followed by non-severe preeclampsia/gestational hypertension (4 cases, 2.9%) and infections including dengue (4 cases, 2.9%). The association between risk factors and thrombocytopenia was statistically significant ($p < 0.001$).
Conclusions: The present study provides a comprehensive overview of thrombocytopenia in pregnancy, its prevalence, severity, and associated determinants in a tertiary care setting. The proportion of thrombocytopenia was 1.64%, which, though relatively low, represents a clinically important condition due to the maternal and fetal risks involved.

Keywords: Thrombocytopenia, Platelet Count, Platelets Transfusion, Risk Factors.

INTRODUCTION

Thrombocytopenia is the second most common haematological abnormality after anaemia encountered in pregnancy.[1,2] Thrombocytopenia is defined as the platelet count of less than 150,000/ml. Pregnancy causes varied alterations in hematopoietic systems. Thrombocytopenia is second only to anemia as the most common hematologic abnormality in pregnancy. It occurs commonly during pregnancy and accounts for around 7–8% of the all the pregnancies. The causes are accelerated platelet consumption or decreased production. An International Working Group defines thrombocytopenia as a platelet count of 70×109/L. [1–4]

It is a benign condition and commonly occurs in the mid second to third trimester. [2,5] Platelet counts are normal outside of pregnancy. There are no confirmatory tests and the mechanism is unknown but postulated to be due to haemodilution and accelerated platelet clearance.[1,2] It is not associated with neonatal thrombocytopenia.[1,5] Federici L et al he reported that the prevalence of gestational thrombocytopenia was 74%.[65]

Immune thrombocytopenic purpura (ITP) is an autoimmune disorder characterised by autoantibody binding to platelet antigens causing premature platelet destruction by the reticulo-endothelial system, particularly the spleen.[3]

The American Society of Hematology defines ITP as isolated thrombocytopenia in the absence of identifiable and preeclampsia specific precipitants.[6] There are 3 no diagnostic tests for ITP; antiplatelet antibody tests have poor sensitivity and preeclampsia specificity and are no longer recommended.[2]

ITP is common in women of childbearing age and affects women in 1–2 of every 1000 pregnancies.[5,7] It can occur in any trimester but generally platelet counts start to decline in early pregnancy then continue to decline until delivery.[5]

Maternal concerns with ITP relate to bleeding risks particularly at the time of delivery. Fetal concerns relate to maternal antiplatelet antibodies crossing the placenta causing neonatal thrombocytopenia with a risk of cerebral haemorrhage. Significant thrombocytopenia in pregnancy causes anxiety amongst clinicians. Information is limited on risks of bleeding at the time of delivery, the likelihood of needing treatment during pregnancy and response to treatments.

The International working group (IWG) adopted a lower threshold of platelets, 100 x 10^9/L, to define immune thrombocytopenia, which is observed in less than 1% of all pregnancies.[9] Thrombocytopenia in pregnancy occurs either due to obstetric conditions (like gestational thrombocytopenia, pre-eclampsia/eclampsia) or secondary to systemic disorders (like thrombocytopenic thrombotic purpura, immune thrombocytopenia).[10] The management of thrombocytopenia focuses on the underlying cause. Platelet transfusion is usually not required to achieve a particular goal and is only for bleeding patients.[10]

Local hospital policies govern the goal of platelet counts and are quite variable between institutions. Nevertheless, a hematologist must be in- volved in the management of thrombocytopenia in pregnancy, preeclampsia Specially if the platelet count drops below 70 x 10^9/L, or if a coexistent bleeding disorder is either encountered or preeclampsia suspected.

Need for the Study: Thrombocytopenia, defined as a platelet count of under 150 x 10^9/l, is the second most common hematological abnormality in pregnancy. pregnancy-related thrombocytopenia requires an interprofessional approach to care. specialty-trained nursing staff (maternal-newborn and neonatal) will be on hand to assist with delivery, medication administration, and monitoring of the mother and baby before and throughout the delivery process. The various medications used in thrombocytopenia 4 require input from the pharmacists, who will verify dosing, check for interactions, and suggest therapeutic alternatives when necessary. Very few studies conducted in Maharashtra regarding study of thrombo-cytopenia in pregnancy. So i am interested to find out the proportion of thrombocytopenia in pregnant women at a tertiary care center, to identify the risk factors associated with thrombocytopenia in pregnancy and to study clinical profile of thrombocytopenia cases.

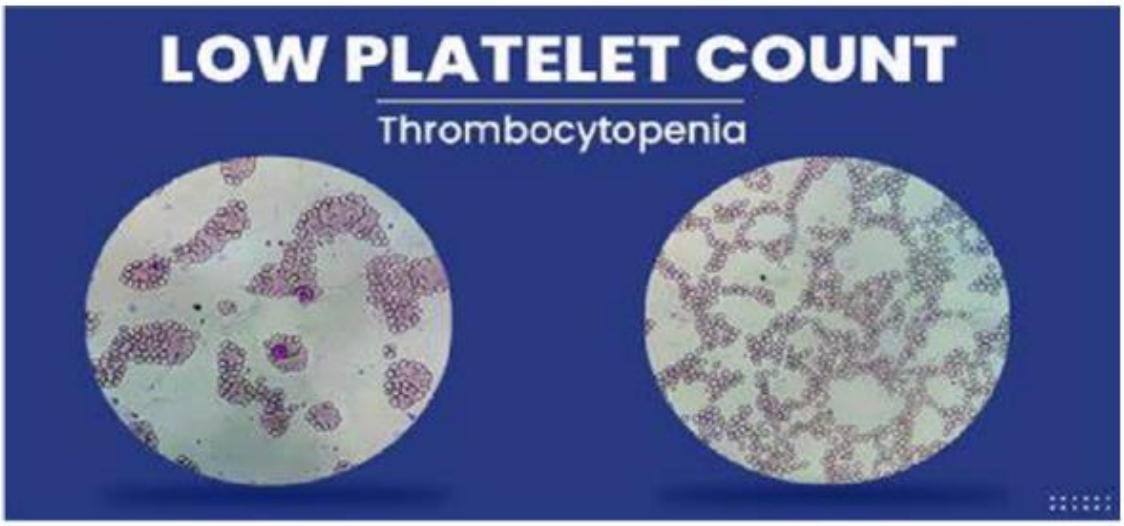

Image No: 1 Thrombocytopenia

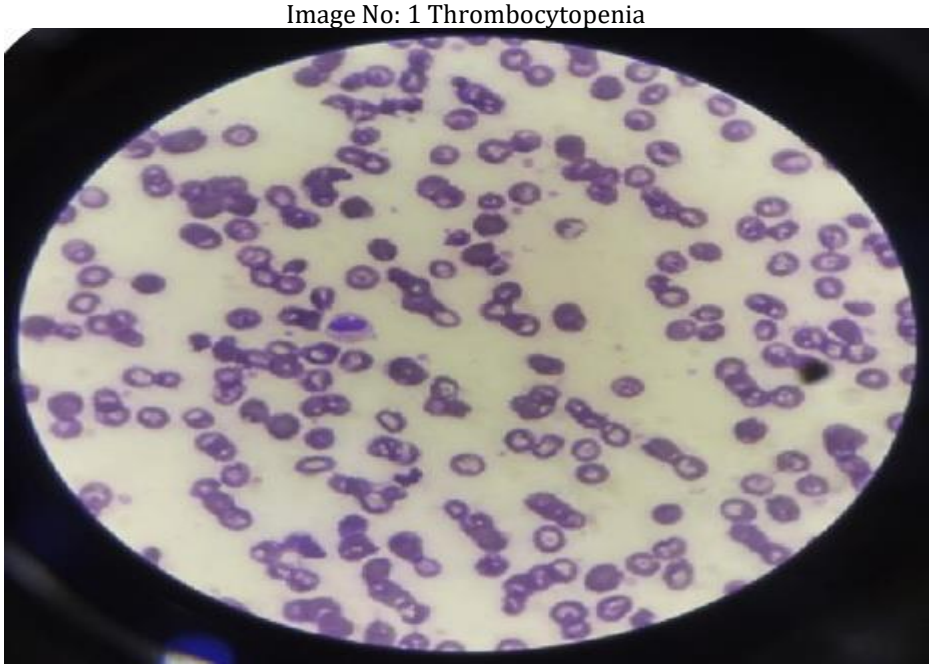

Image No: 2 Microscopic Image of Thrombocytopenia

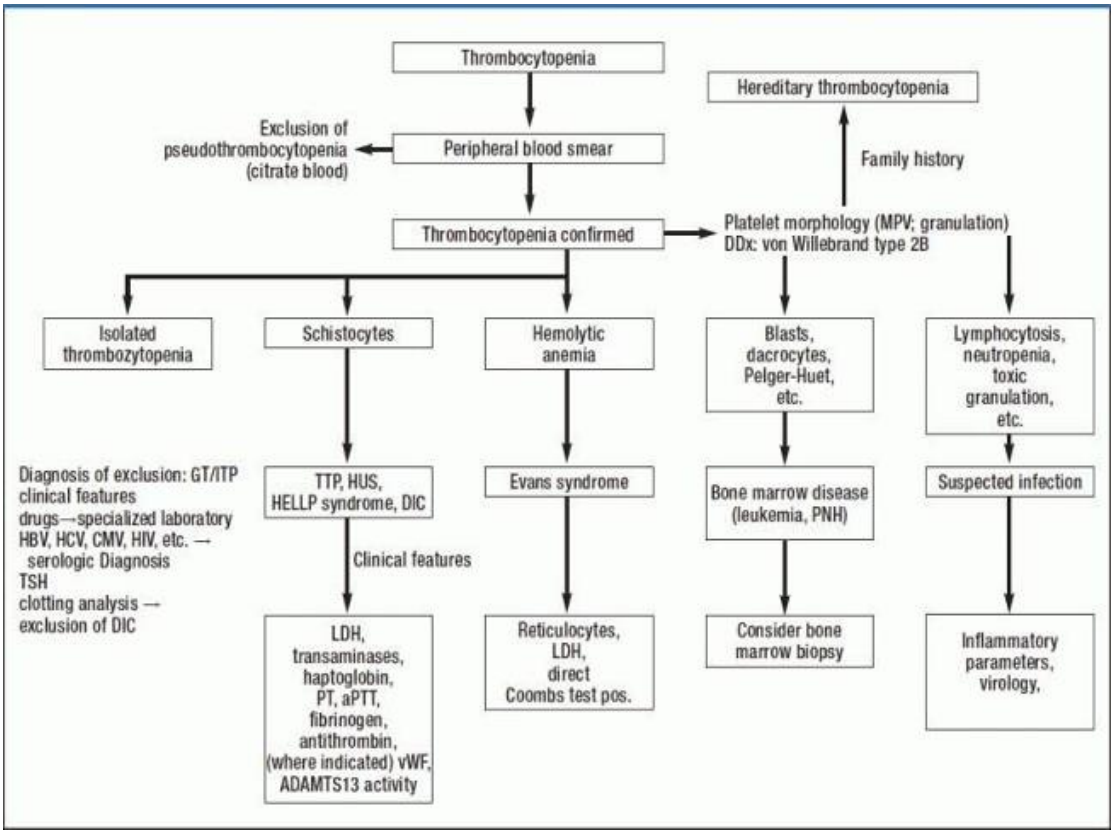

Image no: 3 Algorithm for the Differential Diagnosis of Thrombocytopenia

Aim and Objectives:

AIM:- "A Study of thrombocytopenia in pregnancy at a tertiary care center"

Objectives:- 1. To study proportion of thrombocytopenia in pregnancy at a tertiary care center. 2. To study the association of thrombocytopenia with risk factors. 3. To study clinical profile of thrombocytopenia cases.

MATERIAL AND METHODS

Study Design: Cross sectional study**. Study Setting:** OBGY department of VDGMC Latur,

Maharashtra. **Study Population:** All pregnant women with Gestational age from 28weeks to 40weeks with thrombocytopenia in ANC Clinic of OBGY department of VDGMC Latur such cases were included in the study. **Study Period:** 18months from 1 Dec 2023 to 1 July 2025. **Sample Size =** 140

Sample size: With reference to study by Federici L et al [11] he reported that the prevalence of gestational thrombocytopenia was 74%. Formula for sample size = 4* P* Q / L2 Where P= 74% Q= 100 -74= 26 L= Allowable error = 10% (Absolute error) Sample size = 4 * 74 * 26 /54.76 = 140 Sample size = 140

Inclusion Criteria

1. All pregnant women with gestational age 28weeks upto 40weeks with thrombocytopenia in ANC Clinic of OBGY department of Tertiary care center such cases were included in the study.
2. Willing to participate in study.
3. Patients with thrombocytopenia Not in labor.

Exclusion Criteria

1. Patients in who follow up will not feasible.
2. Not willing to participate in the study.
3. Patients below 28weeks of gestational age and after delivery.
4. Pregnant women with covid infection.
5. Pregnant women on antiplatelet drugs.
6. Normal platelet counts pregnant women.

Approval for the Study: Written approval from Institutional Ethics committee was obtained before hand. Written approval of OBGY and other related department was obtained. After obtaining informed verbal consent from all patients coming to our institute during study period according to exclusion and inclusion criteria attended OBGY opd of tertiary care center such cases were included in the study.

Sampling Technique: Simple random sampling technique used for data collection. All patients attended ANC Clinic of OBGY opd of tertiary care center from 1 DEC 2023 to 1 JULY 2025.

Methods of Data Collection and Questionnaire: Predesigned and pretested questionnaire was used to record the necessary information. Questionnaires included general information, such as age, Place of residence, maternal education, occupation, Socioeconomical status, Religion, Medical history- chief complain, past history, general examination, systemic examination.

Menstrual history: LMP, EDD, Obstetrics history-marriage duration, parity, maternal complications, No ANC visits, Gestational age at the time of admission, De- tails of their age, parity, gestational age & clinical features at presentation, detailed history of current pregnancy and previous pregnancies, history of warning bleeding etc are documented. Women are subjected to a detailed clinical examination. History of petechiae, bruising, drug usage, viral infection, thrombocytopenia in previous pregnancy was taken.

General, systemic and obstetric examination was done. All women were undergoing platelet count estimation at the time of enrollment. Platelet count assessment was done through automated blood count analyzer with routine antenatal hematological evaluation of the patient. The detailed work up of all cases of thrombocytopenia was done to ascertain the cause of thrombocytopenia.

All women were subjected to blood test for Hb, TLC, DLC, PT INR, bleeding time, clotting time, manual platelete count,peripheral smear,RFT, LFT, HBsAg & HIV. Women with fever were tested for Dengue IgM. Coagulation tests (PT, APTT, FDP and fibrinogen) was done in those with signs or symptoms of DIC.

Data Entry and Analysis: The data were entered in Microsoft Excel and data analysis was done by using SPSS demo version no 21 for windows. The analysis was performed by using percentages in frequency tables and $p<.05$. was considered as level of significance using the Chi-square test.

RESULT AND OBSERVATIONS:

The present cross sectional conducted on All pregnant women with thrombocytopenia in ANC Clinic of OBGY department of Tertiary care center such cases were included in the study. Proportion of Thrombocytopenia among ANC Women In this study, a total of 8497 pregnant women attended the ANC OPD during the study period. Out of these, 140 were found to have thrombocytopenia, giving a proportion of 1.64%.

Table no 1: Proportion of Thrombocytopenia among ANC Women

Total ANC women attended (OPD)	Thrombocytopenia cases	Proportion (%)
8497	140	1.64%

Table No 2: Distribution of Cases According to Proportion of Thrombocytopenia (N=140)

Type of Thrombocytopenia	Frequency	Percentage
Mild Thrombocytopenia	120	85.71%
Moderate Thrombocytopenia	14	10%
Severe Thrombocytopenia	06	4.28%

The above table shows most of cases presented with mild thrombocytopenia 120 (85.71%) followed by moderate thrombocytopenia 14 (10%) and 6 (4.28%) cases diagnosed with severe thrombocytopenia.

Table no 3: Distribution of Cases as per Age (n=140)

Age Group	Mild	Moderate	Severe	Total
<20 years	25 (86.2%)	3 (10.3%)	1 (3.4%)	29 (20.7%)
20-30 years	62 (82.7%)	9 (12%)	4 (5.3%)	75 (53.6%)
>30 years	33 (91.7%)	2 (5.6%)	1 (2.8%)	36 (25.7%)
Total	120 (85.7%)	14 (10%)	6 (4.3%)	140 (100%)

The majority of cases occurred in the 20–30 years age group (75 cases, 53.6%), followed by >30 years (36 cases, 25.7%), and 30 years,33 cases (91.7%) had mild, 2 cases (5.6%) moderate, and 1 case (2.8%) severe thrombocytopenia.

Table no 4: Distribution of cases as per Parity, (N=140)

Parity	Mild	Moderate	Severe	Total
Primigravida	39 (32.5%)	3 (21.42%)	1 (16.66%)	43
Multigravida	81 (67.5%)	11 (78.57%)	5 (83.33%)	97
Total	120 (85.71%)	14 (10%)	6 (4.28%)	140
Gestational Age				
28-34 weeks	27 (81.8%)	3 (9.1%)	3 (9.1%)	33
34-37 weeks	39 (84.8%)	6 (13%)	1 (2.2%)	46
>37 weeks	54 (88.5%)	5 (8.2%)	2 (3.3%)	61
Total	120 (85.7%)	14 (10%)	6 (4.3%)	140
Dietary Pattern	frequency	Total		
Vegetarian	94	67.14%		
Mixed Diet	46	32.86%		
Total	140	100%		

The majority were multigravida (97 cases, 69.2%), whereas primigravida accounted for 43 cases (30.8%). Mild thrombocytopenia was predominantly observed in multigravida women (81 cases), while severe thrombocytopenia also showed a higher occurrence in this group (5 cases compared to 1 case among primigravida). majority of mild thrombocytopenia cases presented with >37 weeks followed by 39 in 34-37 weeks, 27 cases in 28-34 weeks. Moderate thrombocytopenia 5 cases in >37 weeks, 6 cases in 34-37 weeks and 3 cases in 28- 34 weeks. Severe thrombocytopenia 2 cases in >37 weeks, one case in 34-37 weeks and 3 cases in 28-34 weeks. majority of cases reported vegetarian diet pattern 94 (67.14%) and 46 cases Mixed diet pattern (32.86%).

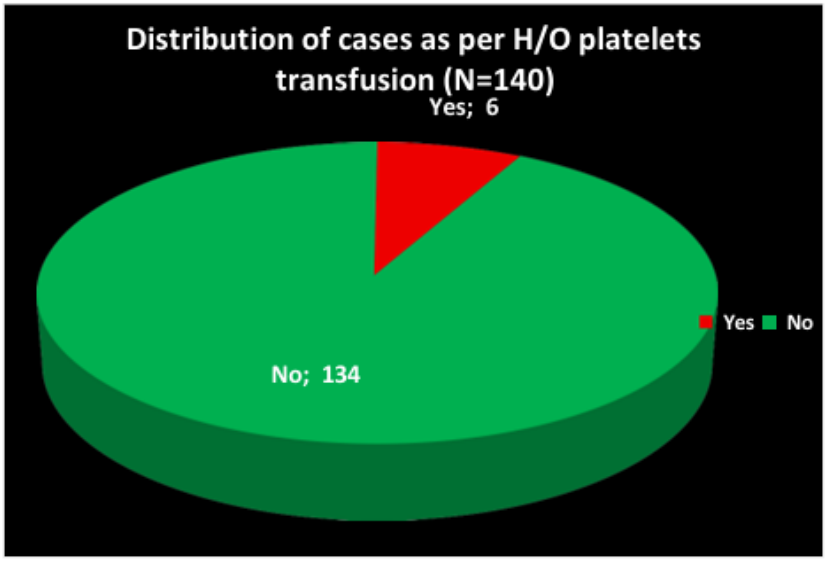

Figure no 1: Distribution of Cases as Per H/O Platelets Transfusion (N=140)

The above figure shows majority of cases reported no H/O platelets trans- fusion 134 (95%) and 6 cases (5%) had a history of platelets transfusion.

Table No 5: Association of Cases as Per Platelet Count with H/O Transfusions (N=140)

Platelet Count	Frequency	H/O Transfusion	P-value
<20,000	2	2	
20,001-40,000	3	3	
40,001-50,000	1	1	
50,001-80,000	3	0	
80,001-100, 000	11	0	
100,001-120,000	32	0	
120,001-150,000	88	0	0.04(Significant)
Total	140	6	

The above table shows majority of cases diagnosed with platelet count be- tween 120001-150000, 88 cases ,11 cases 80001-100000, 32 cases 100001-120000, 3 cases 50001-80000, 1 case 40001-50000, 3cases 20001-40000, and 2 cases <20000. Association of cases as per platelet count with h/o transfusions was statistically significant at p<.05.

Table No 6: Correlation of Moderate & Severe Thrombocytopenia with Risk Factors (N=140)

Risk factors	Frequency	moderate & severe thrombocytopenia	Fisher test
Preeclampsia	3	03	P value 0.00001 Significant at p<.05.
Thyroid disorders	4	01	
Infection	2	02	
Immune thrombo-cytopenia	1	01	
Polyhydramnios	2	02	
Twin pregnancy	1	01	
Total	13	20 (100%)	

Correlation of moderate & severe thrombocytopenia with risk factors was statistically significant at p<.05.

DISCUSSION

This study was undertaken to evaluate thrombocytopenia in pregnancy, a hematological condition of considerable clinical relevance due to its potential maternal and perinatal implications. By screening a large cohort of antenatal women at a tertiary care center, the study sought to determine the proportion of thrombocytopenia, analyze its severity distribution, and identify associated demographic, clinical, and nutritional risk factors.

The aim was to generate evidence that can guide clinicians in early detection and appropriate management of affected women, thereby improving maternal safety during pregnancy and childbirth. The significance of this study lies in its ability to highlight that while most cases are mild and self-limiting, a subset of women present with moderate-to-severe thrombocytopenia that requires timely recognition, close monitoring, and readiness for intervention. Understanding these patterns not only contributes to improved clinical outcomes but also informs public health strategies to strengthen antenatal care, particularly in resource-limited and high-risk populations.

Proportion of Thrombocytopenia among ANC Women

In the present study, out of 8497 antenatal women attending the ANC OPD during the study period, 140 cases were diagnosed with thrombocytopenia, giving a proportion of 1.64%. This prevalence indicates that thrombocytopenia is relatively uncommon but clinically relevant in pregnancy, warranting routine screening to detect cases early and prevent complications. Parnas et al. [12] reported that the main etiologies of thrombocytopenia in pregnancy were gestational thrombocytopenia (59.3%), immune thrombocytopenic purpura (11.05%), preeclampsia (10.05%), and HELLP syndrome (12.06%). The overall prevalence in their cohort was higher than our study.

Distribution of Cases According to Severity of Thrombocytopenia

Among the 140 women identified, 120 (85.71%) had mild thrombocytopenia, 14 (10%) had moderate, and 6 (4.28%) presented with severe thrombocytopenia. This indicates that the majority of thrombocytopenic pregnancies are mild, often gestational in nature, and carry limited clinical consequences. However, the 14.3% with moderate-to-severe disease are at greater risk of obstetric complications. Our findings are consistent with those of Nisha et al. [13], who reported 74.7% mild, 17.9% moderate, and 7.4% severe thrombocytopenia. The proportions are broadly comparable, with slight variation in moderate/severe groups. Deshmukh et al. [14] reported different proportions: 25% mild, 62% moderate, and 13% severe, with significant

maternal morbidity and mortality in severe groups.

Distribution of Cases as per Age

Age distribution showed that thrombocytopenia was most common in the 20–30 year group (75 cases, 53.6%), followed by >30 years (36 cases, 25.7%) and 0.05). Kavyashree et al. [66] also observed that the majority of cases fell in the 21–25 year group (42%), followed by< 20 years (26%). Joshi et al. [15] reported that 36.4% were in 25–29 years and 35.5% in 20–25 years, closely aligning with our data.

Distribution of Cases as per Parity, Gestational age and Dietary pattern

In the present study, out of 140 women, 97 (69.2%) were multigravida and 43 (30.8%) primigravida. These findings align with Joshi et al. [15], who reported that 56% were multigravida and 38.3% primigravida, confirming that multiparity is commonly seen with thrombocytopenia, although not necessarily as an independent risk factor. In our study, thrombocytopenia was most frequently observed at >37 weeks (61 cases, 43.6%), followed by 34–37 weeks (46 cases, 32.8%), and 28–34 weeks (33 cases, 23.6%). Severe thrombocytopenia was more frequent in 28–34 weeks (3 cases, 9.1%). Singh et al. [16] also found that 46.6% of cases occurred at 33–36 weeks, 32.2% at 29–32 weeks, and 21.1% at term, which is comparable to our gestational distribution. 94 (67.1%) were vegetarians and 46 (32.9%) consumed a mixed diet. Patne et al. [17] reported that megaloblastic anemia contributed to 21.66% of thrombocytopenia cases in their cohort, directly supporting our observation that dietary deficiencies play a significant role.

Distribution of Cases as per Platelet Transfusion History

In the present study, out of 140 women, only 6 (5%) had a history of platelet transfusion, while the majority, 134 (95%), did not require transfusions. Deshmukh et al. [14], however, reported a much higher requirement for transfusions, as severe thrombocytopenia was more common in their cohort (13%) and associated with poor maternal outcomes, including DIC and postpartum hemorrhage.

Association of Cases as Per Platelet Count with H/O Transfusions

Analysis showed that 88 women (62.8%) had platelet counts between 120,001 150,000/μL, followed by 32 (22.8%) in 100,001–120,000/μL, 11 (7.8%) in 80,001–100,000/μL, and only 6 (4.3%) had counts. This association was statistically significant ($p = 0.04$). These findings are in line with Patne et al. [17], who reported that most transfusions were required when counts fell below 10,000/μL, confirming the critical threshold for transfusion preparedness. Deshmukh et al. [70] also emphasized the prognostic role of severity, showing higher maternal morbidity and mortality at lower platelet counts.

Correlation of Moderate & Severe Thrombocytopenia with Risk Factors

In our study, 31 women (22.1%) had identifiable risk factors associated with thrombocytopenia. Among these, moderate-to-severe disease was significantly correlated ($p < 0.001$). Common associations included anemia (12 cases, 8.6%), preeclampsia (4 cases, 2.9%), infections (4 cases, 2.9%), thyroid disorders (4 cases, 2.8%), twin pregnancy (2 cases, 1.4%), polyhydramnios (2 cases, 1.4%), ITP (2 cases, 1.4%), and hypersplenism (1 case, 0.7%). Parnas et al. [12] reported preeclampsia (10.05%) and HELLP syndrome (12.06%) as major contributors, along with ITP (11.05%). This is comparable to our findings, where hypertensive disorders and ITP were notable, though anemia was the most frequent association in our setting. Kavyashree et al. [18] also reported HELLP (24%) and eclampsia (8%), higher than in our population, possibly reflecting different obstetric risk profiles.

CONCLUSION

The present study provides a comprehensive overview of thrombocytopenia in pregnancy, its prevalence, severity, and associated determinants in a tertiary care setting. The proportion of thrombocytopenia was 1.64%, which, though relatively low, represents a clinically important condition due to the maternal and fetal risks involved. The majority of women presented with mild disease, confirming that most cases of thrombocytopenia in pregnancy are benign, self-limiting, and likely gestational in origin. However, the small but significant subset of women with moderate and severe thrombocytopenia accounted for a disproportionate burden of complications, including transfusion requirements, and highlighted the importance of vigilance in

antenatal care.

RECOMMENDATIONS

I. Based on the study findings, several recommendations can be proposed to improve the detection and management of thrombocytopenia in pregnancy. ii. Universal platelet count screening during antenatal visits should be incorporated into routine protocols to enable early identification of women at risk. iii. Special attention should be directed toward vulnerable groups, particularly rural women and those adhering to vegetarian diets, who may benefit from targeted nutritional supplementation. iv. Women with platelet counts below 100,000/μL should be closely monitored and referred to higher centers for risk stratification. v. For those with counts below 50,000/μL, preparedness for platelet transfusion becomes essential to reduce complications during labor and delivery. vi. Every case of thrombocytopenia should undergo peripheral smear examinations to rule out spurious thrombocytopenia and based on peripheral smear examination findings then thrombocytopenia classified. vii. Integration of obstetric, medical, and hematological expertise in managing women with associated conditions such as preeclampsia, anemia, and infections is strongly recommended. viii. These measures, if implemented, would facilitate a preventive and multidisciplinary approach, thereby improving both maternal and perinatal outcomes in populations at risk.

BIBLIOGRAPHY

1. Rajasekhar A, Gernsheimer T, Stasi R, et al. 2013 Clinical practice guide on thrombocytopenia in pregnancy.Washington DC: American Society of Hema- tology. http://www.hematology.org
2. Gernsheimer T, James AH and Stasi R. How I treat thrombocytopenia in pregnancy. Blood 2013; 121: 38–47.
3. Wyszynski DF, Carman WJ, Cantor AB, et al. Pregnancy and birth outcomes among women with idiopathic thrombocytopenic purpura. J Pregnancy 2016; Article ID 8297407, 8 pages, http://dx. doi.org/10.1155/2016/8297407.
4. Gernsheimer T and Mcrae KR. Immune thrombocytopenic purpura in pregnancy. Curr Opin Hematol 2007; 14: 574–580.
5. Yuce T, Acar D, Kalafat E, et al. Thrombocytopenia in pregnancy: Do the time of diagnosis and delivery route affect pregnancy outcome in parturients with idiopathic thrombocytopenic purpura? Int J Haematol 2014; 100: 540–544.
6. Neunert C, Lim W, Crowther M, et al. The American Society of Hematology 2011 evidence-based practice guideline for immune thrombocytopenia. Blood 2011; 117: 4190–4207.
7. Gill JJ and Kelton JG. Management of idiopathic thrombocytopenic purpura in pregnancy. Semin Hematol 2000; 37: 275–289.
8. Stasi R. How to approach thrombocytopenia. Hematology Am Soc Hematol Educ Program. 2012;2012:191-7.
9. Rodeghiero F, Stasi R, Gernsheimer T, Michel M, Provan D, Arnold DM, Bus- sel JB, Cines DB, Chong BH, Cooper N, Godeau B, Lechner K, Mazzucconi MG, McMillan R, Sanz MA, Imbach P, Blanchette V, Kühne T, Ruggeri M, George JN. Standardization of terminology, definitions and outcome criteria in immune thrombocytopenic purpura of adults and children: report from an in- ternational working group. Blood. 2009 Mar 12;113(11):2386-93.
10. Cines DB, Levine LD. Thrombocytopenia in pregnancy. Blood. 2017 Nov 23;130(21):2271-2277.
11. Piatek CI, El-Hemaidi I, Feinstein DI, Liebman HA, Akhtari M. Management of immune-mediated cytopenias in pregnancy. Autoimmun Rev. 2015 Sep;14(9):806-11.
12. Federici L, Serraj K, Maloisel F, Andrès E. Thrombopénie et grossesse: du diagnostic étiologique à la prise en charge thérapeutique [Thrombocytopenia during pregnancy: from etiologic diagnosis to therapeutic management]. Presse Med. 2008 Sep;37(9):1299-307. French.
13. Nisha S, Amita D, Uma S, Tripathi AK, Pushplata S. Prevalence and characterization of thrombocytopenia in pregnancy in Indian women. Indian J Hema- tol Blood Transfus. 2012 Jun;28(2):77-81.
14. Deshmukh V, Nasrin A, Gadappa SN. Thrombocytopenia in hypertensive dis-

order of pregnancy: maternal and perinatal outcome. The New Indian Journal of OBGYN. 2022; 8(2): 233 - 39.

15. Joshi SS, Panchbudhe SA. Characterization of Thrombocytopenia in Preg- nant Women at a Tertiary Care Center: A Preliminary Study of 121 Patients. J South Asian Feder Obst Gynae 2022;14(4):486–490.
16. Singh J, Kumari K, Verma V. Study of thrombocytopenia in pregnancy: clinical presentation and outcome at tertiary care rural institute. Int J Reprod Contracept Obstet Gynecol 2020;9:1622-6
17. V. Patne, S., & N. Chintale, K. (2017). Clinical profile of patients with thrombo- cytopenia at tertiary health care centre. International Journal of Advances in Medicine, 4(6), 1551–1556. https://doi.org/10.18203/2349-3933.ijam20175082
18. Zhou, F., Xu, T., Deng, C. et al. Severe thrombocytopenia in pregnancy: a case series from west China. Clin Exp Med 19, 495–503 (2019).