

DOI: <https://dx.doi.org/10.18203/2320-1770.ijrcog20263979>

Original Research Article

Comparative study of platelet profile in GDM and non-diabetic pregnancy in a tertiary care centre

Sandhiya Kirubanandan^{1*}, Hiremath P. B.¹, Balaji S.²

¹Department of Obstetrics and Gynecology, Sri Venkateswaraa Medical College Hospital and Research Centre, Puducherry, India

²Department of Pathology, Sri Venkateswaraa Medical College hospital and research centre, Ariyur, Puducherry, India

Received: 01 July 2026

Revised: 27 September 2026

Accepted: 12 October 2026

*Correspondence:

Dr. Sandhiya Kirubanandan,

E-mail: vijayalakshmiruba123@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: Gestational diabetes mellitus (GDM) is a common metabolic complication of pregnancy associated with significant maternal and neonatal morbidity. Increasing evidence suggests that platelet activation and altered platelet indices reflect underlying inflammation and insulin resistance in GDM. Objectives were to compare platelet profile parameters between gestational diabetes mellitus and non-diabetic pregnancies and to evaluate their predictive value for GDM.

Methods: This hospital-based comparative cross-sectional study was conducted at a tertiary care centre in Puducherry among 60 pregnant women, including 30 women with GDM and 30 age-matched non-diabetic controls. Platelet parameters were analyzed using an automated hematology analyzer. Statistical analysis included independent sample t-test and ROC curve analysis.

Results: The mean platelet count was significantly lower in the GDM group ($2.41 \pm 0.46 \times 10^5/\mu\text{l}$) compared to controls ($2.78 \pm 0.52 \times 10^5/\mu\text{l}$; $p=0.006$). MPV (11.2 ± 1.1 versus 9.6 ± 0.9 fl; $p<0.001$), PDW (15.8 ± 2.1 versus $13.6 \pm 1.7\%$; $p<0.001$), PCT (0.21 ± 0.05 versus $0.24 \pm 0.04\%$; $p=0.014$), and P-LCR (32.4 ± 5.6 versus $26.8 \pm 4.9\%$; $p<0.001$) were significantly higher in the GDM group. ROC curve analysis showed that MPV had the highest diagnostic accuracy (AUC 0.82; sensitivity 76.7%; specificity 80.0% at ≥ 10.5 fl).

Conclusions: Platelet indices are significantly altered in gestational diabetes mellitus and demonstrate good predictive value. These inexpensive hematological markers may aid in early identification and risk stratification of GDM in routine antenatal care.

Keywords: Gestational diabetes mellitus, Insulin resistance, MPV, PDW, Platelet indices, P-LCR, ROC analysis

INTRODUCTION

Pregnancy is considered a diabetogenic state due to progressive insulin resistance mediated by placental hormones such as human placental lactogen, progesterone, estrogen, cortisol, and prolactin.¹ These hormones antagonize insulin action, leading to decreased peripheral glucose utilization and increased hepatic glucose production.² Hematological changes are prominent during pregnancy and involve alterations in blood cell

parameters.³ Pregnancy is recognized as a prothrombotic condition characterized by increased levels of clotting factors, reduced fibrinolytic activity, and enhanced platelet reactivity.⁴ Mean platelet volume and other platelet indices are increasingly being recognized as indicators of platelet activation and turnover. Studies have shown that MPV tends to increase during normal pregnancy, reflecting enhanced platelet production and reactivity.⁵ These parameters are routinely available as part of complete blood count testing and provide valuable insights into

platelet physiology in both normal and pathological conditions.⁶ Chronic hyperglycemia promotes platelet activation, increases platelet adhesiveness, and enhances aggregation, thereby contributing to a prothrombotic state leading to microvascular and macrovascular complications.⁷

Platelet parameters are simple, cost-effective, and easily accessible markers that can complement existing screening methods. Several studies have reported altered platelet profiles in women with gestational diabetes mellitus; however, the findings have been inconsistent.⁸ Early identification of women at risk of vascular and thrombotic complications through simple laboratory markers may help in timely intervention and closer monitoring. If platelet indices are found to be consistently altered in GDM, they may serve as useful adjuncts to routine screening and follow-up.⁹

METHODS

Study type and place

This was a hospital-based, cross-sectional study conducted among antenatal women attending the department of obstetrics and gynecology at Sri Venkateshwaraa Medical College Hospital and Research Centre, Puducherry.

Duration of study

The study conducted over a period of 18 months from the date of approval by the scientific research committee.

Study population

Antenatal women in their second and third trimesters of pregnancy, from 20 weeks of gestation till term, attending the antenatal clinic of the tertiary care centre was included in the study. A total of 60 participants was enrolled, comprising 30 women diagnosed with gestational diabetes mellitus (GDM) and 30 non-diabetic pregnant women (controls).

Inclusion criteria

Antenatal women beyond 20 weeks of gestation were included in the study. Participants in the GDM group were required to have a positive oral glucose challenge test (OGCT) followed by a confirmatory oral glucose tolerance test (OGTT). Women were enrolled irrespective of parity, and only those aged between 18 and 40 years were considered eligible. All participants provided written informed consent prior to enrolment.

Exclusion criteria

Antenatal women with systemic diseases such as hypertension, cardiac disease, renal disease, or liver disease and with a previous history of intrauterine growth retardation, intrauterine death, or infectious illness were

also excluded, and those were on medications interrupting coagulation profile. Women with a poor obstetric history including recurrent pregnancy loss, pre-eclampsia, or preterm labour, were excluded. Women who were diagnosed with gestational diabetes mellitus during the course of the study and those who did not provide informed consent were excluded from the analysis. Women with a history of alcohol, cigarette, or drug use were excluded, as were those with any other medical or obstetric disorder in the current pregnancy, or with a twin pregnancy.

Sample size

Based on previous published literature by Amitkumar et al titled "assessment of predictive value of platelet parameters in gestational diabetes mellitus: a comparative institutional study" conducted. The platelet parameters in group 1 (gestational diabetes mellitus)- mean 11.04 ± 0.84 and group 2 (non-diabetic pregnancy)- mean 10.4 ± 0.78 . 80% statistical power and 95% confidence interval with 5% allowable error, the calculated minimum sample size was 26 subjects in each group (101). In the present study, a total sample size of 60 pregnant women with >20 weeks of gestation i.e. 30 GDM and 30 non-diabetic pregnant individuals) in present study.

Methodology

This prospective cross-sectional study conducted after obtaining approval from the scientific research committee. Written informed consent was obtained from all participants. A total of 60 antenatal women enrolled and divided into study group- 30 women with GDM and control group- 30 non-diabetic pregnant women.

Data collection

Basic demographic details including age, socioeconomic status, residence, and educational status collected using a structured questionnaire.

Obstetric and clinical details such as weight, height, BMI, gravidity, parity, previous abortion history, and comorbidities recorded.

Personal habits, treatment history, and significant past illnesses documented using a pre-tested questionnaire.

Women with coagulation disorders, diabetes, hypertension, pre-eclampsia, hypothyroidism, peripheral vascular disease, hyperlipidaemia, chronic renal disease, liver disease, infections, or those on drugs influencing coagulation were excluded from the study.

Screening for GDM

All subjects underwent a 75 gm, 2-hour oral glucose challenge test (OGCT) after 20 weeks of gestation.

According to American Diabetes Association guidelines, women with plasma glucose ≥ 140 mg/dl after OGCT subjected to a 75-gm oral glucose tolerance test (OGTT).

Women with abnormal values in both OGCT and OGTT were diagnosed as having GDM. Subjects with OGCT < 140 mg/dl included as controls.

Laboratory analysis

Venous blood samples collected in EDTA tubes for complete blood count (CBC) analysis.

Platelet parameters including: platelet count, mean platelet volume (MPV), platelet distribution width (PDW), plateletcrit (PCT), platelet large cell ratio (P-LCR) were measured using an automated hematology analyzer.

To avoid EDTA-induced platelet swelling, samples were analyzed within 30 minutes of collection.

Urine routine examination including sugar and albumin was also performed.

Participants diagnosed with GDM advised regarding diet, physical activity, and further investigations as per institutional protocol.

Data collection method

Data collected by the principal investigator using a pre-designed proforma containing demographic details, clinical history, examination findings, and laboratory investigations.

Statistical analysis

Data entered and analyzed using Statistical Package for Social Sciences (SPSS) version 23.0.

Continuous variables expressed as mean $\pm$ standard deviation and categorical variables expressed as frequency and percentage.

Comparison between groups was done using independent samples t-test for continuous variables and Chi-square test for categorical variables (where applicable).

Correlation analysis was performed between blood glucose levels and platelet parameters.

A p value of < 0.05 considered statistically significant.

RESULTS

Table 1 presents the comparison of 2-hour oral glucose tolerance test (OGTT) values between the GDM and control groups. The difference between the two groups was found to be highly statistically significant ($p < 0.001$).

This finding indicates that women diagnosed with gestational diabetes mellitus exhibited significantly elevated 2-hour post-glucose levels compared to normoglycemic pregnant women, reflecting impaired glucose tolerance characteristic of GDM.

Table 1: Comparison of OGTT values between GDM and control groups.

Parameter	GDM (n=30)	Control (n=30)	P value
OGTT 2-hour (mg/dl)	154.8 $\pm$ 17.2	108.4 $\pm$ 12.1	$< 0.001^*$

*Statistically significant ($p < 0.05$).

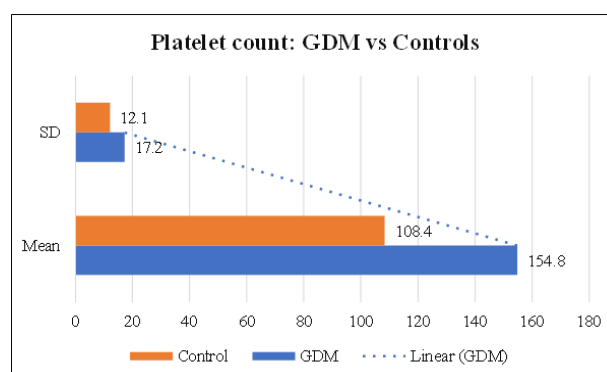


Figure 1: Clustered bars showing platelet count between GDM and control groups.

The mean platelet count was compared between the GDM and control groups, as shown in Figure 1. Women diagnosed with GDM had a mean platelet count of $2.41 \pm 0.46 \times 10^5/\mu\text{l}$, while the control group exhibited a comparatively higher mean value of $2.78 \pm 0.52 \times 10^5/\mu\text{l}$. The difference observed between the two groups was found to be statistically significant ($p = 0.01$). This finding demonstrates that platelet counts were significantly reduced among pregnant women with gestational diabetes mellitus when compared to non-diabetic pregnant women in the present study.

Table 2: Comparison of mean platelet volume (MPV) between GDM and control groups.

Parameter	GDM (n=30)	Control (n=30)	P value
MPV (fl)	11.2 $\pm$ 1.1	9.6 $\pm$ 0.9	$< 0.001^*$

*Statistical significant

The GDM group showed a mean MPV value of 11.2 ± 1.1 fl, whereas the control group had a lower mean MPV of 9.6 ± 0.9 fl. statistical analysis demonstrated that this difference was highly statistically significant ($p < 0.001$), indicating a meaningful variation between the two groups. The significantly elevated MPV observed in women with gestational diabetes mellitus suggests increased platelet activation and turnover in this group compared to normoglycemic pregnant women.

Table 3 shows the comparison of platelet distribution width (PDW) between the GDM and control groups. The mean PDW in the GDM group (n=30) was $15.8 \pm 2.1\%$, whereas in the control group (n=30) it was $13.6 \pm 1.7\%$. The difference in mean PDW values between the two groups was found to be highly statistically significant ($p < 0.001$).

Table 3: Comparison of platelet distribution width (PDW) between GDM and control groups.

Parameter	GDM (n=30)	Control (n=30)	P value
PDW (%)	15.8 ± 2.1	13.6 ± 1.7	$<0.001^*$

*Statistical significant

This indicates that PDW levels were significantly elevated among women with gestational diabetes mellitus compared to healthy pregnant controls, suggesting increased platelet activation and variability in platelet size in the GDM group.

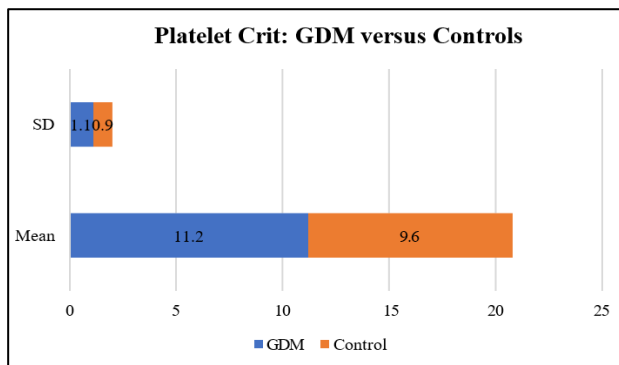


Figure 2: Scatter plot showing platelet crit between GDM and control groups.

Figure 2 illustrates the comparison of platelet crit (PCT) values between the GDM and control groups. The mean PCT among women diagnosed with gestational diabetes mellitus (n=30) was $0.21 \pm 0.05\%$, whereas the control group (n=30) demonstrated a comparatively higher mean value of $0.24 \pm 0.04\%$. The observed difference in PCT

between the two groups was found to be statistically significant ($p=0.02$). This finding indicates a modest but meaningful reduction in platelet crit levels among patients with GDM in comparison to normoglycemic pregnant women.

Table 4: Comparison of platelet large cell ratio (P-LCR) between GDM and control groups.

Parameter	GDM (n=30)	Control (n=30)	P value
P-LCR (%)	32.4 ± 5.6	26.8 ± 4.9	$<0.001^*$

*Statistical significant

Table 4 presents the comparison of platelet large cell ratio (P-LCR) between the GDM and control groups. The mean P-LCR value in the GDM group (n=30) was $32.4 \pm 5.6\%$, while the control group (n=30) demonstrated a lower mean value of $26.8 \pm 4.9\%$. The difference between the two groups was found to be highly statistically significant ($p < 0.001$). This indicates that women with gestational diabetes mellitus had a significantly higher proportion of large-sized platelets compared to healthy pregnant controls.

Table 5: Correlation between blood glucose levels and platelet parameters in the GDM group.

Parameters	FBS (r)	PPBS (r)	OGTT (r)	P value
Platelet count	-0.42	-0.38	-0.45	0.01
MPV	0.56	0.61	0.58	$<0.001^*$
PDW	0.49	0.52	0.54	0.002^*
PCT	-0.31	-0.28	-0.33	0.04^*
P-LCR	0.53	0.57	0.59	$<0.001^*$

r = Pearson correlation coefficient, *Statistically significant

Table 5 summarizes the correlation between glycemic parameters and platelet indices in the GDM group. Platelet count showed a significant moderate negative correlation with FBS ($r=-0.42$), PPBS ($r=-0.38$), and OGTT ($r=-0.45$) ($p=0.01$), indicating a decline in platelet count with rising glucose levels.

Table 6: Comparison of platelet parameters between GDM and control groups using independent samples t-test.

Parameters	GDM (n=30) mean $\pm$ SD	Control (n=30) mean $\pm$ SD	t-value	P value	Significance
Platelet count ($\times 10^5/\mu\text{l}$)	2.41 ± 0.46	2.78 ± 0.52	-2.85	0.006^*	Significant
MPV (fl)	11.2 ± 1.1	9.6 ± 0.9	6.12	$<0.001^*$	Significant
PDW (%)	15.8 ± 2.1	13.6 ± 1.7	4.45	$<0.001^*$	Significant
PCT (%)	0.21 ± 0.05	0.24 ± 0.04	-2.52	0.014^*	Significant
P-LCR (%)	32.4 ± 5.6	26.8 ± 4.9	4.07	$<0.001^*$	Significant

* $p < 0.05$ - Statistically significant.

In contrast, MPV (r range: 0.56-0.61, $p < 0.001$), PDW (r range: 0.49-0.54, $p=0.002$), and P-LCR (r range: 0.53-0.59, $p < 0.001$) demonstrated significant positive correlations with glycemic measures, reflecting increased

platelet size and activation with higher blood glucose levels. PCT showed a weak negative correlation with glucose values (r range: -0.28 to -0.33, $p=0.04$). Overall, worsening glycemic status in GDM was associated with

enhanced platelet activation and reduced platelet mass, suggesting a potential prothrombotic tendency.

Table 6 summarizes the comparison of platelet indices between women with GDM and healthy controls using the independent samples t-test. The average platelet count was lower in the GDM group ($2.41 \pm 0.46 \times 10^5/\mu\text{l}$) when compared to the control group ($2.78 \pm 0.52 \times 10^5/\mu\text{l}$). This reduction was statistically significant ($t=-2.85$, $p=0.006$). In contrast, MPV was markedly higher among women with GDM (11.2 ± 1.1 fl) than in controls (9.6 ± 0.9 fl), and the difference was highly significant ($t=6.12$, $p<0.001$). Similarly, PDW values were greater in the GDM group ($15.8 \pm 2.1\%$) than in the control group ($13.6 \pm 1.7\%$), showing a significant variation ($t=4.45$, $p<0.001$). Plateletcrit (PCT) was comparatively lower in women with GDM ($0.21 \pm 0.05\%$) than in controls ($0.24 \pm 0.04\%$), and this difference was statistically meaningful ($t=-2.52$, $p=0.014$).

The proportion of large platelets (P-LCR) was also significantly elevated in the GDM group ($32.4 \pm 5.6\%$) compared to the control group ($26.8 \pm 4.9\%$), with strong statistical significance ($t=4.07$, $p<0.001$). Overall, all evaluated platelet parameters differed significantly between the two groups ($p<0.05$), highlighting notable hematological changes associated with gestational diabetes.

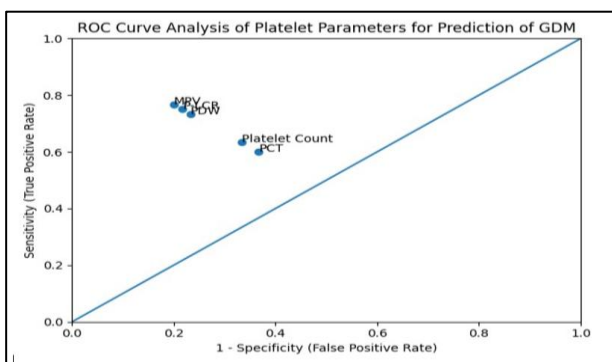


Figure 3: ROC curve analysis of platelet parameters for prediction of GDM.

Interpretation of ROC analysis

In the present study, ROC curve analysis demonstrated that MPV had the highest area under the curve ($\text{AUC}=0.82$), indicating good discriminatory ability in differentiating gestational diabetes mellitus from non-diabetic pregnancy. At a cut-off value of ≥ 10.5 fl, MPV showed a sensitivity of 76.7% and specificity of 80.0%, suggesting that it is a reliable marker for predicting gestational diabetes mellitus.

DISCUSSION

In the present study, platelet parameters were compared between pregnant women with gestational diabetes

mellitus and non-diabetic pregnant women. Significant alterations were observed in platelet indices among women with GDM, suggesting increased platelet activation and altered platelet turnover. The present study demonstrated a significantly lower platelet count in the GDM group compared to controls. Similar findings have been reported in previous studies, which observed mild thrombocytopenia in diabetic patients due to increased platelet consumption and accelerated turnover.^{10,11} The present study also revealed significantly higher P-LCR values in the GDM group. Similar findings have been reported in studies evaluating platelet indices in diabetes and cardiovascular disorders.¹² Enhanced platelet aggregation can lead to impaired uteroplacental circulation, thereby affecting fetal growth and development.¹³ Elevated MPV, PDW, and P-LCR, along with reduced platelet count and PCT, indicate increased platelet activation and turnover. These findings highlight the potential role of platelet indices as simple and cost-effective markers for identifying pregnant women at risk of vascular and thrombotic complications.¹⁴ A significant positive correlation was also observed between blood glucose levels and PDW in the present study.¹⁵ Similarly, P-LCR showed a strong positive association with glycemic parameters.¹⁶ In contrast, platelet count and plateletcrit demonstrated a negative correlation with blood glucose levels.¹⁷ These findings support the hypothesis that poor glycemic control contributes to increased platelet activation and altered platelet kinetics, thereby predisposing affected women to thrombotic and vascular complications.¹⁸

Limitations of the study are: Small sample size- small sample limits the statistical power and precision of subgroup analysis. Study was conducted in single tertiary health centre which affects the generalisation to wider population. No direct measurement of platelet activation. Discusses potential association of altered platelet indices with vascular and thrombotic complications. The observed platelet abnormalities in prediction of specific maternal or neonatal outcomes not established. Platelet indices can vary with gestational age and laboratory methodology, and standardized pregnancy-specific reference ranges are not universally established. Larger multicentric validation required.

CONCLUSION

The present study was conducted to evaluate and compare the platelet profile in pregnant women with gestational diabetes mellitus and non-diabetic pregnant women. Women with gestational diabetes mellitus showed significantly lower platelet counts and plateletcrit values, along with higher mean platelet volume, platelet distribution width, and platelet large cell ratio when compared to non-diabetic pregnant women. These changes indicate increased platelet activation and enhanced platelet turnover in gestational diabetes mellitus. The study also revealed a significant positive correlation between blood glucose levels and platelet activation markers, suggesting

that poor glycemic control is associated with increased platelet reactivity. The observed alterations in platelet indices may reflect underlying endothelial dysfunction, oxidative stress, and low-grade inflammation associated with gestational diabetes mellitus. These pathophysiological changes may contribute to an increased risk of vascular and thrombotic complications in affected women. Since platelet indices are routinely available as part of complete blood count testing, they represent simple, cost-effective, and easily accessible markers for monitoring and incorporating platelet parameters into routine antenatal evaluation may aid in early identification of high-risk pregnancies and facilitate timely intervention. In conclusion, the present study establishes that gestational diabetes mellitus is associated with significant changes in platelet profile. Regular monitoring of platelet indices, along with standard glycemic assessment, may improve risk stratification and contribute to better maternal and fetal outcome.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

- Cunningham FG, Leveno KJ, Bloom SL, Dashe JS, Hoffman BL, Casey BM, et al. Williams Obstetrics. 25th ed. New York: McGraw-Hill; 2018.
- Metzger BE, Buchanan TA, Coustan DR, de Leiva A, Dunger DB, Hadden DR, et al. Summary and recommendations of the Fifth International Workshop-Conference on Gestational Diabetes Mellitus. *Diabetes Care.* 2007;30(Suppl 2):S251-60.
- Conrad KP, Davison JM. The renal circulation in normal pregnancy and preeclampsia. Is it altered? *Am J Physiol Renal Physiol.* 2014;306(10):F1121-35.
- Lurie S. Changes in leukocyte count during pregnancy and labor. *Isr Med Assoc J.* 2000;2(4):243-6.
- Bath PM, Butterworth RJ. Platelet size and vascular disease. *Blood Coagul Fibrinolysis.* 1996;7(2):157-61.
- Leader A, Pereg D, Lishner M. Are platelet volume indices of clinical use? *Ann Med.* 2012;44(8):805-16.
- Davi G, Falco A, Patrono C. Platelet activation in diabetes mellitus. *Thromb Haemost.* 2005;93(4):707-16.
- Sak ME, Soydinç HE, Özler A, Evsen MS, Turgut A, Sak S, Gül T. Platelet profile in patients with gestational diabetes: a retrospective study. *J Turk Ger Gynecol Assoc.* 2012;13(4):259-63.
- Zhou Z, Chen H, Sun M, Ju H. Mean platelet volume and gestational diabetes mellitus: a systematic review and meta-analysis. *J Diabetes Res.* 2018;2018(1):1985026.
- Seshiah V, Balaji V, Balaji MS, Sanjeevi CB, Green A. Gestational diabetes mellitus in India. *J Assoc Phys India.* 2004;52:707-11.
- Metzger BE, Gabbe SG, Persson B, Buchanan TA, Catalano PA, Damm P, et al. IADPSG recommendations. *Diabetes Care.* 2010;33(3):676-82.
- Yogev Y, Langer O. Pregnancy outcome in gestational diabetes. *Obstet Gynecol Clin North Am.* 2004;31(4):639-50.
- Brownlee M. The pathobiology of diabetic complications: a unifying mechanism. *Diabetes.* 2005;54(6):1615-25.
- Kodiatte TA, Manikyam UK, Rao SB, Jagadish TM, Reddy M, Lingaiah HK. Mean platelet volume in type 2 diabetes mellitus. *J Lab Phys.* 2012;4(1):5-9.
- Naylor CD, Sermer M, Chen E, Sykora K. Selective screening for GDM. *N Engl J Med.* 1997;337(22):1591-6.
- Santilli F, Simeone P, Liani R, Davi G. Platelets and diabetes mellitus. *Prostaglandins Other Lipid Mediat.* 2015;120:28-39.
- Brownlee M. The pathobiology of diabetic complications: a unifying mechanism. *Diabetes.* 2005;54(6):1615-25.
- Ferreira IA, Mocking AI, Feijge MA, Gorter G, van Haften TW, Heemskerk JW. Platelet inhibition by insulin is absent in type 2 diabetes mellitus. *Arterioscler Thromb Vasc Biol.* 2006;26(2):417-22.
- Catalano PM, Tyzbit ED, Roman NM, Amini SB, Sims EA. Longitudinal changes in insulin release. *Am J Obstet Gynecol.* 1991;165(6 Pt 1):1667-72.
- Kim C, Newton KM, Knopp RH. Gestational diabetes and future diabetes. *Diabetes Care.* 2002;25(10):1862-8.
- Buchanan TA, Xiang AH. Gestational diabetes mellitus. *J Clin Invest.* 2005;115:485-91.
- Catalano PM, Shankar K. Obesity and pregnancy. *BMJ.* 2017;356:j1.
- Damm P. Gestational diabetes mellitus and later development of type 2 diabetes. *Diabetes Care.* 1998;21(2):B25-9.
- Kwak SH, Kim HS, Choi SH, Lim S, Cho YM, Park KS, et al. Genetic variants and risk of GDM. *Diabetes.* 2012;61(6):1434-40.
- Kirwan JP, Hauguel-De Mouzon S, Lepercq J, Challier JC, Huston-Presley L, Friedman JE, et al. TNF-alpha and insulin resistance in pregnancy. *Diabetes.* 2002;51(7):2207-13.
- Plows JF, Stanley JL, Baker PN, Reynolds CM, Vickers MH. Placental dysfunction and GDM. *J Physiol.* 2018;596(8):1515-30.
- Fasshauer M, Blüher M, Stumvoll M. Adipokines in pregnancy. *Exp Clin Endocrinol Diabetes.* 2014;122(7):362-8.
- Coughlan MT, Vervaart PP, Permezel M, Georgiou HM, Rice GE. Placental oxidative stress in GDM. *Placenta.* 2004;25(1):78-84.
- HAPO Study Cooperative Research Group. Hyperglycemia and adverse pregnancy outcomes. *N Engl J Med.* 2008;358(19):1991-2002.

30. Yogeve Y, Langer O. Pregnancy outcome in gestational diabetes. *Obstet Gynecol Clin North Am.* 2004;31(4):639-50.
31. Casey BM, Lucas MJ, McIntire DD, Leveno KJ. Pregnancy outcomes in women with GDM. *Am J Obstet Gynecol.* 1997;176(4):790-7.
32. Boehlen F, Hohlfeld P, Extermann P, Perneger TV, de Moerloose P. Platelet count at term pregnancy. *Obstet Gynecol.* 2000;95(1):29-33.
33. Bremme KA. Hemostatic changes in pregnancy. *Best Pract Res Clin Hematol.* 2003;16(2):153-68.
34. Burrows RF, Kelton JG. Thrombocytopenia at delivery. *Am J Obstet Gynecol.* 1990;162(3):731-4.
35. Hellgren M. Hemostasis during normal pregnancy and puerperium. *Semin Thromb Hemost.* 2003;29(2):125-30.
36. Redman CW, Sargent IL. Inflammation in pregnancy. *Am J Reprod Immunol.* 2003;49(3):155-62.
37. Pritchard JA, Cunningham FG, Mason RA. Coagulation changes in preeclampsia. *Am J Obstet Gynecol.* 1976;126(7):851-7.
38. Leader A, Pereg D, Lishner M. Are platelet volume indices of clinical use? *Ann Med.* 2012;44(8):805-16.
39. Davi G, Falco A, Patrono C. Platelet activation in diabetes mellitus. *Thromb Haemost.* 2005;93(4):707-16.
40. Vagdatli E, Gounari E, Lazaridou E, Katsibourlia E, Tsikopoulou F, Labrianou I. Platelet distribution width. *Hippokratia.* 2010;14(1):28-32.

Cite this article as: Kirubanandan S, Hiremath PB, Balaji S. Comparative study of platelet profile in GDM and non-diabetic pregnancy in a tertiary care centre. *Int J Reprod Contracept Obstet Gynecol* 2026;15:4367-73.