Open Access

Original Article

Comparison of Efficacy of Colchicine Plus Dual Antiplatelet Therapy vs. Dual Antiplatelet Therapy Alone in Patients with Acute Myocardial Infarction Undergoing Primary PCI

Muhammad Ameen, Ali Nawaz, Hafiz Waleed Khan, Sobia Mehreen, Muhammad Adil, Muhammad Asad

Department of Adult Cardiology, Armed Forces Institute of Cardiology/National Institute of Heart Diseases/National University of Medical Sciences (NUMS) Rawalpindi, Pakistan

ABSTRACT

Objective: To evaluate the impact of colchicine on inflammatory markers, left ventricular function, and major adverse cardiovascular events (MACE) over 3 months.

Study Design: Quasi experimental study.

Place and Duration of Study: Cardiology Department of Armed Forces Institute of Cardiology, National Institute of Heart Diseases, Rawalpindi Pakistan, from Jun 2025 to Oct 2025.

Methodology: Two hundred fifty-nine Acute Myocardial Infarction (AMI) patients undergoing primary percutaneous coronary intervention (PPCI) were enrolled through nonprobability consecutive sampling with non-random allocation into two groups: Experimental-Group 127 received colchicine + Dual Antiplatelet Therapy (DAPT), and Control-Group 132 received DAPT alone. The endpoints were changes in C-reactive protein (CRP) and left ventricular ejection fraction (LVEF) and MACE.

Results: Out of 259, mean age was 63.11±10.63 years in the Colchicine-Group and 60.43±11.01 years in the non-Colchicine-Group, with males comprising 90.6% and 84.1% of participants, respectively. Baseline characteristics were similar between groups. No statistically significant differences were found in CRP levels or LVEF at 1 and 3 months. At 3 months, MACE rates—including mortality (0% vs 1.5%), recurrent MI (0% vs 0.8%), heart failure (0.8% vs 0.7%), and stent thrombosis (0.8% vs 0.7%)—showed no significant difference between colchicine and control groups.

Conclusion: In AMI patients undergoing primary PCI, adding colchicine to DAPT did not significantly reduce inflammatory markers, improve left ventricular function, or decrease MACE over 3 months. Larger randomized controlled trials with longer follow-up are recommended.

Keywords: Colchicine, Dual antiplatelet therapy, Major Adverse Cardiovascular Events, Primary Percutaneous Coronary Intervention.

How to Cite This Article: *Ameen M, Nawaz A, Khan HW, Mehreen S, Adil M, Asad M. Comparison of Efficacy of Colchicine Plus Dual Antiplatelet Therapy vs. Dual Antiplatelet Therapy Alone in Patients with Acute Myocardial Infarction Undergoing Primary PCI. Pak Armed Forces Med J 2026; 76(Suppl-4): S652-S657. DOI: https://doi.org/10.51253/pafmj.v76iSUPPL-4.14166*

INTRODUCTION

Acute myocardial infarction is defined as per "Fourth Universal Definition of Myocardial Infarction".[1] Acute myocardial infarction is defined by a dynamic change in cardiac troponin, with at least one value exceeding the 99th percentile upper reference limit. Diagnosis additionally requires clinical, electrocardiographic, imaging, or angiographic evidence consistent with acute myocardial ischemia.[1,2] Acute myocardial infarction (AMI) affects approximately 254 million people worldwide and causes nearly 9 million deaths annually. STEMI alone accounts for over 3 million cases each year, contributing substantially to global cardiovascular mortality.[2] Inflammatory activation after AMI is linked to adverse remodeling with about 17% developing left ventricular remodeling at 4 months, and elevated inflammatory markers are associated with a 2.5- to 3-fold increased risk of long-term major adverse cardiovascular events (MACE).[3] Despite advances in reperfusion therapy and medical management, post-MI inflammation remains a therapeutic target.[4,5]

Colchicine is a microtubule polymerization inhibitor with potent anti-inflammatory effects and has demonstrated benefit in chronic coronary disease and post-MI settings, Low-dose colchicine reduces MACE by approximately 25–31% in chronic coronary and post-MI patients.[5] A landmark trial, Australian COPS randomized trial included 795 patients from December 2015 to September 2018 and did not show favorable result in colchicine group, the rates of adverse effects were not different in colchicine group (colchicine 23.0% versus placebo 24.3%).[6] Primary percutaneous coronary intervention (PCI) has

Correspondence: Dr Muhammad Ameen, Department of Adult Cardiology, AFIC/NIHD, Rawalpindi, Pakistan

emerged as the gold standard for timely reperfusion in STEMI patients, significantly improving short- and long-term survival rates. In a tertiary care center, primary PCI achieved TIMI 3 flow in 80% of STEMI patients, with 3.5% in-hospital mortality.[7] In recent years, inflammation has been increasingly recognized as a central contributor to the pathophysiology of atherosclerosis both in STEMI and NSTEMI and C-reactive protein and (CRP) remain elevated in a substantial subset of patients following MI, correlating with worse prognostic outcomes.[8]

Colchicine was traditionally used in the treatment of gout and pericarditis but has recently gained attention in the cardiovascular field due to its potential role.Clinical trials have demonstrated that low-dose colchicine can reduce the incidence of MACE in patients with stable CAD and in post-MI populations. However, most of these trials were conducted in Western populations, and data specific to acute STEMI patients undergoing primary PCI in South Asian populations and resource limited settings including Pakistan, remain limited. This study investigates whether colchicine combined with dual antiplatelet therapy (DAPT) improves clinical, inflammatory, or echocardiographic outcomes compared with DAPT alone in patients with AMI undergoing primary PCI.

METHODOLOGY

This was a quasi-experimental study to evaluate the role of colchicine along with DAPT in acute myocardial infarction patients after primary percutaneous coronary intervention. Cardiology Department of Armed Forces Institute of Cardiology, National Institute of Heart Diseases, Rawalpindi, Pakistan; from Jun 2025 to Oct 2025. The study was approved by Institutional Ethical Review Board (IERB), vide letter number 9/2/R&D/2025/354 dated 27th May 2025. All participants provided written informed consent prior to their inclusion in the study. The study was conducted in the department of Cardiology at a tertiary care cardiac hospital. All procedure including 2D echo and coronary angiography were carried out using standardized institutional protocol. The study using non-probability consecutive sampling after informed consent.

A total sample size of 246 participants (123 per group) was initially calculated based on the estimated proportion of cardiac deaths: 19.92% in the placebo group and 11.93%[9] in the colchicine group. The calculation was performed with a power of 80% and a margin of error of 10%. Accounting for a 5% dropout rate, the final sample size was adjusted. Data collected with 127 participants in the experimental (Colchicine-Group) and 132 in the comparison group.

Inclusion Criteria: Adults aged 18-80 years, irrespective of gender and diagnosed with acute STEMI (within 12 hours of symptom onset).

Exclusion Criteria: Patients with contraindications to colchicine (e.g., severe renal or hepatic failure), Prior history of chronic inflammatory diseases (e.g., rheumatoid arthritis, systemic lupus erythematosus), Use of colchicine or other anti-inflammatory drugs within the past 3 months, Pregnancy or lactation and active bleeding or coagulopathy were excluded.

Data were collected in a stepwise manner beginning with pre-procedural assessment, where informed consent was obtained and demographic information, medical history, presenting symptoms, vital signs, baseline laboratory investigations, and a 12-lead ECG were recorded. Patients' current medications, allergies, and contraindications to colchicine were reviewed prior to enrollment. During the PPCI procedure, details of the intervention—including treated coronary artery, type and number of stents, door-to-balloon time, ischemic time, TIMI flow grade, hemodynamic status, and any procedural complications—were documented. Following PPCI, patients were assigned to either the colchicine group (0.5 mg once daily for 3 months) or the placebo group, and concomitant medications, early colchicine-related adverse effects, echocardiographic findings, and in-hospital outcomes were recorded. Follow-up assessments were conducted at 1 and 3 months via clinic visits or telephonic consultation to evaluate clinical symptoms, medication adherence, adverse cardiovascular events, repeat CRP levels, echocardiographic outcomes, and any long-term colchicine-related side effects.

Data entered and analyzed using Statistical Package for the Social Sciences (SPSS) version 23. Normality of continuous variables were assessed using the Shapiro-Wilk test. Categorical variables were summarized as frequencies and percentages (gender and comorbid), while continuous variables presented as mean ± standard (age) deviation for normally distributed data and median with interquartile range (IQR) for non-normally distributed data (LVEF, CRP, ALT and LDL). Categorical variables were compared between groups using the chi-square test and continuous variables were compared using the Mann–

Whitney U test. A *p*-value of <0.05 will be considered statistically significant.

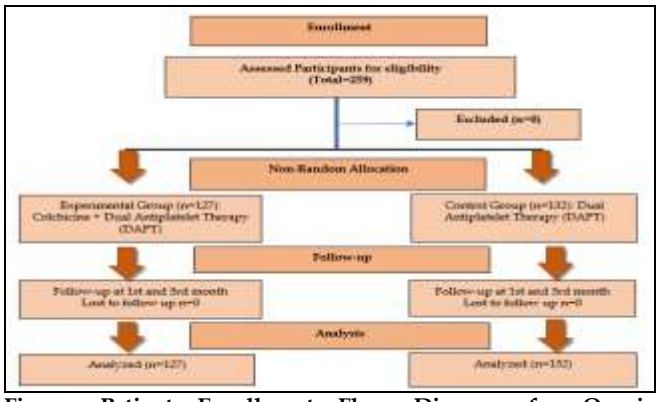

Figure: Patient Enrollment Flow Diagram for Quasi-Experimental study

RESULTS

The study included 259 study participants. The mean age was 63.11±10.63 years in the Colchicine - Group and 60.43±11.01 years in the Non Colchicine-Group, with males comprising 115(90.6%) and 111(84.1%) of participants, respectively. Comorbidities such as diabetes (46.5% vs. 46.2%), and hyperlipidemia (93.7% vs. 96.2%) were similarly distributed between the groups. Beta blocker use was reported in 102(80.3%) of the Colchicine-group and 97(73.5%) of the Non-Colchicine group, while all participants received statins. Procedural characteristics were most patients undergoing a single stent implantation (78% vs. 93.1%) via the radial artery approach (95.3% vs. 97%) and achieving TIMI III flow post-procedure (95.3% vs. 95.5%) mention in Table-I.

Table-II presents baseline echocardiographic and laboratory parameters. Median LVEF was slightly lower in the Colchicine-Group [50 (45–55)] compared with the Non-Colchicine-Group [55 (50–55)], while CRP, ALT, and LDL levels were similar between groups. Anterior MI was more frequent in the Non-Colchicine-Group (59.8% vs. 44.1%), whereas inferior MI predominated in the Colchicine-Group (49.6% vs. 33.3%).

Table-III compares CRP levels and LVEF between the colchicine and Non-Colchicine-Group. Median CRP decreased over time in both groups, from 7.0 mg/L at 1 month to 6.0 mg/L at 3 months in the Colchicine-Group and from 7.0 mg/L to 5.0 mg/L in the Non-Colchicine-Group, with no significant differences (p>0.05). LVEF improved similarly in both groups at 1 and 3 months, reaching a median of 60% at 3 months (p>0.05).

Table-I: Baseline Demographics & Clinical Characteristics of study participants (n=259)

Variables		Colchicine-Group n=127 (49%)	Non Colchicine-Group n=132 (51%)
Demographics			
Age(years) (Mean ± SD)		63.11±10.63	60.43±11.01
		Frequency (%)	
Gender	Male	115(90.6%)	111(84.1%)
	Female	12(9.4%)	21(15.9%)
Comorbids			
CHF		8(6.3%)	7(5.3%)
Stroke		-	2(1.5%)
DM		59(46.5%)	61(46.2%)
Hyperlipidemia		119(93.7%)	127(96.2%)
Hypertension		102(80.3%)	99(75%)
Atrial fibrillation		3(2.4%)	1(0.8%)
COPD		21(16.5%)	14(10.6%)
Gout		6(4.7%)	4(3%)
Peripheral artery Disease		-	1(0.8%)
Medication History			
Beta blocker		102(80.3%)	97(73.5%)
Statin		127(100%)	132(100%)
Intra-procedural Parameters			
Approach	RRA	121(95.3%)	128(97%)
	RFA	5(3.9%)	4(3%)
	LFA	1(0.8%)	-
No of stent	1	99(78%)	121(91.7%)
	2	27(21.3%)	9(6.9%)
	3	1(0.8%)	-
TIMI flow	I	-	1(0.8%)
	II	6(4.7%)	5(3.8%)
	III	121(95.3%)	126(95.5%)

**CHF = Congestive Heart Failure, DM = Diabetes Mellitus, COPD = Chronic Obstructive Pulmonary Disease, TIMI = Thrombolysis In Myocardial Infarction, RRA = Right Radial Artery, RFA = Right Femoral Artery, LFA = Left Femoral Artery*

Table-II: Baseline Echocardiographic & Laboratory Parameters of study participants

Variable	Colchicine-Group 127(49%)	Non Colchicine-Group 132(51%)
	Median (IQR)	
LVEF %	50 (45–55)	55 (50–55)
CRP (mg/L)	42 (39–45)	41 (38–45)
ALT (U/L)	43 (40.75–45)	43 (40–45)
LDL (mg/dL)	145 (143–146)	145 (143–146)
Type of MI	**Frequency (%)**	
Anterior	56(44.1%)	79(59.8%)
Inferior	63(49.6%)	44(33.3%)
Posterior	-	1(0.8%)
Lateral	8(6.3%)	8(6.1%)

**LVEF= Left Ventricular Ejection Fraction, CRP =C-Reactive Protein, ALT =Alanine Aminotransferase, LDL= Low-Density Lipoprotein, MI = Myocardial Infarction*

MACE were low between the colchicine and non-colchicine groups. In-hospital mortality was 3.9% vs. 4.5%, and 3-month mortality was 0% vs. 1.5%, with no significant differences. Rates of readmission, recurrent MI, heart failure, emergency angina, and stent

thrombosis were similarly low across both groups (p>0.05), Table-IV.

Table-III: Comparison of C-Reactive Protein and Left Ventricular Ejection Fraction between the colchicine and non-colchicine groups

Variables	Colchicine-Group n=127	Non Colchicine-Group n=132	*p*-value
	Median (IQR)/total		
CRP at 1 month (mg/L)	7(7–8)	7 (6–8)	0.08
CRP at 3 months (mg/L)	6(5–6.25)	5 (5–6)	0.13
LVEF at 1 month (%)	55 (50–55)	55 (55–55)	0.35
LVEF at 3 months (%)	60 (55–60)	60 (58.75–60)	0.29

**CRP = C-Reactive Protein, LVEF = Left Ventricular Ejection Fraction*

Table-IV: Major Adverse Cardiovascular Events between the Groups

Outcome	Colchicine-Group	Non-Colchicine-Group	*p*-value
	Frequency (%)		
	n=127	n=132	
In-hospital mortality	5(3.9%)	6(4.5%)	1.00
Recurrent MI (In-hospital)	1(0.7%)	0(0%)	0.49
Heart failure (In-hospital)	2(1.5%)	5(3.7%)	0.44
Acute stent thrombosis (In-hospital)	1(0.7%)	1(0.7%)	1.00
	n=122	n=126	
Readmission	11(9.0%)	6(4.7%)	0.21
Recurrent MI (1-month)	1(0.8%)	0(0%)	0.49
Heart failure (1-month)	0(0%)	1(0.7%)	1.00
Emergency angina (1-month)	1(0.8%)	1(0.7%)	1.00
Mortality (3-month)	0(0%)	2(1.5%)	0.49
Recurrent MI (3-month)	0(0%)	1(0.7%)	1.00
Heart failure (3-month)	1(0.8%)	1(0.7%)	1.00
Emergency angina (3-month)	0(0%)	1(0.7%)	1.00

MI – Myocardial Infarction

DISCUSSION

In our observational study, assessing colchicine as adjunct therapy in STEMI patients undergoing primary PCI, important trends were observed that favor the colchicine group despite the absence of statistically significant differences at 3 months. Baseline characteristics were well balanced, with similar prevalence of diabetes (46.5% vs 46.2%) and hyperlipidemia (93.7% vs 96.2%). The colchicine group showed slightly lower baseline LVEF (50% vs 55%), yet demonstrated recovery at 1 month (55% vs 55%; p=0.35) and 3 months (60% vs 60%; p=0.29), suggesting potential attenuation of post-infarction inflammatory remodeling.

Our study evaluated colchicine as a low-cost, anti-inflammatory adjunct in the setting of post primary PCI after STEMI. While reperfusion via primary percutaneous coronary intervention is essential, the subsequent "reperfusion injury" can exacerbate myocardial damage.[10] The inflammatory response following ST-elevation myocardial infarction (STEMI) is a critical determinant of final infarct size and long-term outcome. While our 3-month follow-up did not yield statistically significant differences in MACE. A trial of Singh S et al, assessing colchicine as adjunct therapy in STEMI patients undergoing primary PCI, trends were observed, for example CRP level result of study were the COLCHICINE-PCI randomized trial 2020 (colchicine versus placebo groups (11% versus 66%), p=0.001.[10] In our study Baseline characteristics were; prevalence of diabetes (46.5% vs 46.2%), hypertension (80.3% vs 75%), and hyperlipidemia (93.7% vs 96.2%). A study from Indonesia by Caesario F *et al.,* in 2024, found no significant differences in LVEF or LV remodeling between the colchicine and placebo groups at 1 and 3-month follow-ups, (16.5% vs. 18.25% [p=0.091]; 7.27% vs. 8.12% [p=0.134]) and third month evaluation (19.5% vs. 21.5% [p=0.124]; 11% vs 12% [p=0.221] [4] but in our study the colchicine group showed slightly lower baseline LVEF (50% vs 55%), yet demonstrated minor recovery at 1 month (55% vs 55%; p=0.358) and 3 months (60% vs 60%; p=0.299), suggesting potential attenuation of post-infarction inflammatory remodeling. Future randomized trials with longer follow-up are warranted to determine whether these favorable early signals translate into meaningful long-term cardiovascular benefit.

Clinically, the colchicine group demonstrated numerically lower total in-hospital mortality (3.9% vs 4.5%; p=1.000), reduced recurrent MI during hospitalization and 3 month follow-up (0.8% vs 0–0.7%; p=0.490–1.000), and notably lower in-hospital heart failure (1.5% vs 3.7%; p=0.448). Bytyçi I *et al.,* in 2022, Overall, colchicine was found to have no effect on all-cause mortality (relative risk, 0.94; 95% CI, 0.82–1.09) with only low to moderate quality of evidence available. The risk for myocardial infarction was reduced but with limited evidence and wide CIs (relative risk, 0.20; 95% CI, 0.07–0.57; 2 trials).[11] The divergence from large trials such as COLCOT by Bouabdallaoui N *et al.,* (2020)[12] in which 4745 patients were enrolled and MACE reduction was 5.5% in colchicine group vs 7.1% in placebo group (p=0.02). In another landmark trial, LoDoCo MI by Hennessy T *et al.,* (2019).[13] Martínez GJ *et al.,* and Ibanez B *et al.,* reported that the median absolute reduction in CRP levels was −4.3 mg/L (IQR −1.1 to −14.1) among colchicine treated patients and −3.3 mg/L (IQR −0.9 to −14.4, p=.44) in placebo treated patients while in our study the colchicine group achieved a minute decline from a median of 6 mg/L to 5 mg/L at 3

months (p=0.134 vs control), consistent with colchicine's known IL-1β and NLRP3-inflammasome inhibitory.[14,15] The relative reduction was a fall of 78% compared to a fall of 64% (p=.09) likely stems from shorter treatment duration in our study, as colchicine's maximal anti-inflammatory and plaque-stabilizing benefits typically emerge beyond 6–12 months.[16] Nevertheless, the observed early trends toward fewer ischemic events and reduced heart failure in this South Asian cohort—known to have a higher inflammatory burden—highlight colchicine's potential role as an effective, low-cost adjunctive therapy.[17] Importantly, no safety concerns were identified, with identical rates of stent thrombosis (0.8%) and absence of myopathy, reinforcing colchicine's favorable risk-benefit profile.[18,19]

LIMITATION OF STUDY

The study particularly, short duration (3 months) may be insufficient to reflect remodeling benefits, relatively small sample size, High baseline TIMI III flow and robust contemporary PCI care reduce incremental benefit window and also CRP baseline levels were similar. (Inflammation burden may not be severe enough to effect differentiation).

CONCLUSION

In AMI patients undergoing primary PCI, adding colchicine to standard DAPT may mildly reduce in-hospital mortality, heart failure and recurrent MI but did not significantly reduce CRP or improve LVEF recovery and have no major effects on overall MACE. However, colchicine was well tolerated, with no increase in adverse effects.

ACKNOWLEDGMENT

We are sincerely grateful to our supervisors and consultants for their invaluable mentorship, expert guidance, and continuous encouragement throughout this study. Their commitment to scientific inquiry and academic excellence greatly shaped the quality of this work. We also extend heartfelt thanks to the Commandant for providing essential institutional support and a conducive research environment.

Conflict of Interest: None.

Funding Source: None.

Authors' Contribution

Following authors have made substantial contributions to the manuscript:

MA & AN: Concept, study design, drafting the manuscript, approval of the final version to be published.

HWK & SM: Concept, data acquisition, critical review, approval of the final version to be published.

MA & MA: Data acquisition, data analysis, data interpretation, approval of the final version to be published.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

REFERENCES

1. Salatzki J, Giannitsis E, Hegenbarth A, Mueller-Hennessen M, André F, Frey N, et al. Absence of visible infarction on cardiac magnetic resonance imaging despite the established diagnosis of myocardial infarction by 4th Universal Definition of Myocardial Infarction. European Heart Journal: Acute Cardiovascular Care 2024; 13(1): 24-35. https://doi.org/10.1093/ehjacc/zuad128
2. Shah B, Pillinger M, Zhong H, Cronstein B, Xia Y, Lorin J, et al. Effects of acute colchicine administration prior to percutaneous coronary intervention: the COLCHICINE-PCI randomized trial. Circ Cardiovasc Interv 2020; 13(11): e008523. https://doi.org/10.1161/CIRCINTERVENTIONS.119.008717
3. Tardif JC, Kouz S, Waters DD, Bertrand OF, Diaz R, Maggioni AP, et al. Efficacy and safety of low-dose colchicine after myocardial infarction. N Engl J Med 2019; 381(26): 2497-2505. https://doi.org/10.1056/NEJMoa1912388
4. Caesario F, Prasetya I, Rohman MS, Satrijo B, Anjarwani S. Effects of the low-dose colchicine regimen on left ventricular adverse remodeling and systolic function in acute myocardial infarction patients with anterior ST-segment elevation undergoing primary percutaneous coronary intervention: a randomized controlled trial. Heart Sci J 2024; 5(2): 51–56: https://doi.org 10.21776/2024.005.02.9
5. Banco D, Mustehsan M, Shah B. Update on the Role of Colchicine in Cardiovascular Disease. Curr Cardiol Rep 2024; 26(4): 191-198. https://doi: 10.1007/s11886-024-02026-5
6. Tong DC, Quinn S, Nasis A, Hiew C, Roberts-Thomson P, Adams H, et al. Colchicine in patients with acute coronary syndrome: the Australian COPS randomized clinical trial. Circulation 2020; 142(20): 1890-1900. https://doi.org/10.1161/CIRCULATIONAHA.120.050771
7. Akhtar A, Saleemi MS, Zarlish QM, Arshad MB, Hashmi KA, Ghafoor H. Experience and Outcomes of Primary Percutaneous Coronary Intervention in a Tertiary Care Hospital in South Punjab, Pakistan. Cureus 2023; 15(12): e50024. https://doi.org/10.7759/cureus.50024
8. Domienik-Karłowicz J, Kupczyńska K, Michalski B, Kapłon-Cieślicka A, Darocha S, Dobrowolski P, et al. Fourth universal definition of myocardial infarction: selected messages from the European Society of Cardiology document and lessons learned from the new guidelines on ST-segment elevation myocardial infarction and non-ST-segment elevation acute coronary syndrome. Cardiol J 2021; 28(2): 195-201.. https://doi.org/10.5603/CJ.a2021.0036
9. Vaidya K, Arnott C, Martínez GJ, McCormack S, Sullivan D, Patel S. Colchicine therapy in acute coronary syndrome: a systematic review and meta-analysis. Heart Lung Circ 2015; 24(6): 556-562.
10. Singh S, Fong HK, Desai R, Zeng Z, Rodriguez AP, Savani C, et al. Meta-analysis of colchicine use in acute and chronic coronary disease. Am J Cardiol 2020; 125(6): 925-931.
11. Bytyçi I, Bajraktari G, Penson PE, Henein MY, Banach M; Lipid and Blood Pressure Meta-Analysis Collaboration (LBPMC) Group; International Lipid Expert Panel (ILEP). Efficacy and safety of colchicine in patients with coronary artery disease: A systematic review and meta-analysis of randomized controlled trials. Br J Clin Pharmacol 2022; 88(4): 1520-1528. https://doi.org/10.1111/bcp.15041

12. Bouabdallaoui N, Tardif JC, Waters DD, Pinto FJ, Maggioni AP, Diaz R, et al. Time-to-treatment initiation of colchicine and cardiovascular outcomes after myocardial infarction in the Colchicine Cardiovascular Outcomes Trial (COLCOT). Euro Heart J 2020; 41(42): 4092-4099. https://doi.org/10.1093/eurheartj/ehaa659
13. Hennessy T, Soh L, Bowman M, Kurup R, Schultz C, Patel S, et al. The low dose colchicine after myocardial infarction (LoDoCo-MI) study: a pilot randomized placebo controlled trial of colchicine following acute myocardial infarction. Am Heart J 2019; 215: 62-69. https://doi.org/10.1016/j.ahj.2019.06.003
14. Martínez GJ, Celermajer DS, Patel S. The NLRP3 inflammasome and the emerging role of colchicine in cardiovascular disease. Atherosclerosis 2018; 269: 262-271. https://doi.org/10.1016/j.atherosclerosis.2017.12.027
15. Ibanez B, James S, Agewall S, Antunes MJ, Bucciarelli-Ducci C, Bueno H, et al. 2017 ESC Guidelines for the management of acute myocardial infarction in patients presenting with ST-segment elevation. Eur Heart J 2018; 39(2): 119-177. https://doi.org/10.1093/eurheartj/ehx393
16. Levine GN, Bates ER, Bittl JA, Brindis RG, Fihn SD, Fleisher LA, et al. 2016 ACC/AHA Guideline focused update on duration of dual antiplatelet therapy. Circulation 2016; 134(10): e123-155. https://doi.org/10.1016/j.jacc.2016.03.513
17. Su ST, Lee YH, Wei JC. Colchicine in Cardiovascular Disease: Mechanisms of Action and Therapeutic Potential. International Journal of Rheumatic Diseases 2025; 28(1). https://doi.org/10.1111/1756-185X.70081
18. Finocchiaro S, Mazzone PM, Ammirabile N, Bordonaro C, Cusmano C, et al. Anti-inflammatory pharmacotherapy in patients with cardiovascular disease. European Heart Journal-Cardiovascular Pharmacotherapy 2025; 11(8): 712-728. https://doi.org/10.1093/ehjcvp/pvaf058
19. Ridker PM, Everett BM, Thuren T, MacFadyen JG, Chang WH, Ballantyne C, et al. Antiinflammatory therapy with canakinumab for atherosclerotic disease (CANTOS). N Engl J Med 2017; 377(12): 1119-1131.

.....