

Brought to you by [INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA](#)

Scopus

[Back](#)

Major Adverse Cardiovascular Events in Insulin-Versus Non-Insulin-Treated Type 2 Diabetes Patients Following Percutaneous Coronary Intervention: A Prospective Cohort Study

[Catheterization and Cardiovascular Interventions](#) • Article • 2026 •

DOI: 10.1002/ccd.70735

[Tariq, Ayesha](#)^a; [Bhatti, Zohra](#)^b ; [Khan, Amer Hayat](#)^c; [Laghari, Madeeha](#)^d; [Talpur, Bandeh Ali](#)^e^a Department of Pharmacy, The University of Lahore, Lahore, Pakistan[Show all information](#)

0

Citations

[Full text](#) [Export](#) [Save to list](#)[Document](#)[Impact](#)[Cited by \(0\)](#)[References \(60\)](#)[Similar documents](#)

Abstract

Background: Insulin-treated type 2 diabetes mellitus (ITDM) is associated with higher cardiovascular risk profile. However its impact on major adverse cardiovascular events (MACE) following poorer percutaneous coronary intervention (PCI) remains unclear. **Aims:** This study aimed to evaluate major adverse cardiovascular events in insulin-treated diabetes mellitus (ITDM) and non-insulin-treated diabetes mellitus (Non-ITDM) type 2 diabetes mellitus (T2DM) patients' post-PCI. **Methods:** A single-center prospective cohort study was conducted in which 465 T2DM patients undergoing PCI and completing the 1-year follow-up were enrolled. Patients were divided into two groups based on their therapy for DM: ITDM and Non-ITDM. The primary endpoint was MACE, a composite of non-fatal myocardial infarction (MI), stroke, coronary artery bypass grafting (CABG), repeat PCI, and mortality. **Results:** Logistic regression confirmed higher odds of MACE among ITDM

compared to Non-ITDM patients (unadjusted OR = 1.743, 95% CI: 0.865–3.512, $p = 0.120$; adjusted OR = 1.729, 95% CI: 0.822–3.635, $p = 0.149$). Kaplan–Meier analysis illustrated increased cumulative incidence of MACE among ITDM over 12 months (Log rank $p = 0.113$). Similarly, Cox proportional hazards analysis reported higher hazard ratios in the insulin-treated group (unadjusted HR = 1.695, 95% CI: 0.874–3.284, $p = 0.118$; adjusted HR = 1.554, 95% CI: 0.793–3.045, $p = 0.199$). Yet the results were not statistically significant. Overall, a higher incidence of MACE was reported among ITDM (12.5%) compared to Non-ITDM (7.5%), particularly repeat PCI (4.8% vs. 2.5%) and stroke (3.8% vs. 1.4%) among T2DM patients after PCI. Conclusion: T2DM patients receiving insulin therapy had a higher incidence of adverse cardiovascular events compared to those not on insulin treatment, that insulin-treated patients may represent a higher-risk group for MACE following PCI. © 2026 Wiley Periodicals LLC.

Author keywords

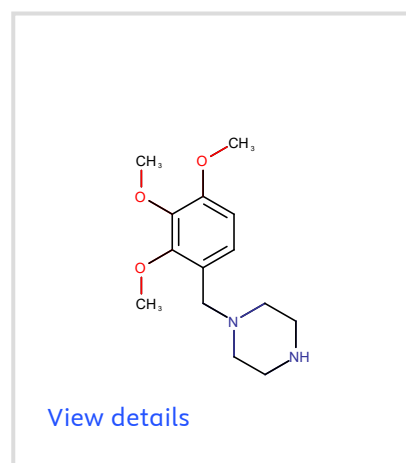
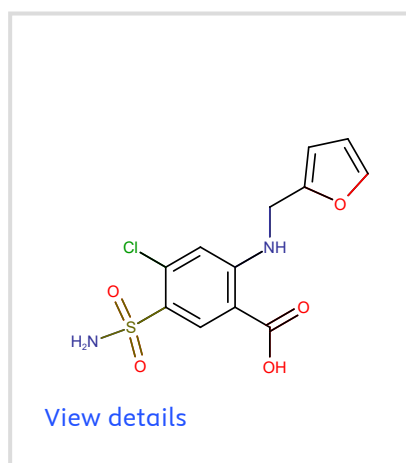
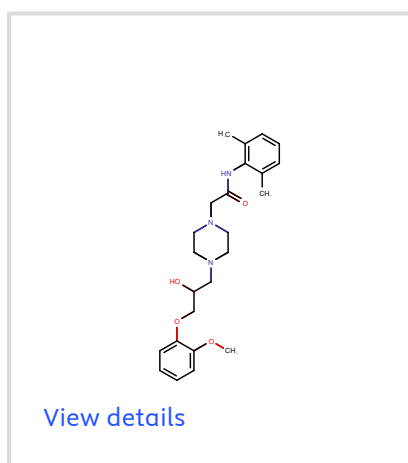
Insulin-treated diabetes mellitus; Major adverse cardiovascular outcomes; Non-insulin-treated diabetes mellitus; Percutaneous Coronary Intervention; Type 2 Diabetes Mellitus

Reaxys Chemistry database information

Reaxys is designed to support chemistry researchers at every stage with the ability to investigate chemistry related research topics in peer-reviewed literature, patents and substance databases. Reaxys retrieves substances, substance properties, reaction and synthesis data.

Substances

[View all substances \(4\)](#)



Powered by **Reaxys**

Corresponding authors

Corresponding
author

Z. Bhatti

Affiliation

Department of Pharmacy Practice, Kulliyyah of Pharmacy, International
Islamic University Malaysia, Malaysia

Email address

zohrabhatti@iium.edu.my

© Copyright 2026 Elsevier B.V., All rights reserved.

Abstract

Author keywords

Reaxys Chemistry database information

Corresponding authors

About Scopus

[What is Scopus](#)

[Content coverage](#)

[Scopus blog](#)

[Scopus API](#)

[Privacy matters](#)

Language

[日本語版を表示する](#)

[查看简体中文版本](#)

[查看繁體中文版本](#)

[Просмотр версии на русском языке](#)

Customer Service

[Help](#)

[Tutorials](#)

[Contact us](#)