



Scopus



[Back](#)

Diabetes Mellitus Duration and Major Adverse Cardiovascular Events Following Percutaneous Coronary Intervention: A Prospective Cohort Study

[International Journal of Vascular Medicine](#) • Article • *Open Access* • 2026 • DOI: 10.1155/ijvm/8260099

[Tariq, Ayesha](#)^a ; [Bhatti, Zohra](#)^b ; [Khan, Amer. H.](#)^c ; [Laghari, Madeeha](#)^d ; [Talpur, Bandeh Ali](#)^e ; [+2 authors](#)

^a Department of Pharmacy, University of Lahore, Lahore, Pakistan

[Show all information](#)

0

Citations

[Full text](#) [Export](#) [Save to list](#)

[Document](#) [Impact](#) [Cited by \(0\)](#) [References \(48\)](#) [Similar documents](#)

Abstract

Objective: This study is aimed at evaluating the impact of Type 2 diabetes mellitus (T2DM) duration on major adverse cardiovascular events (MACEs) after percutaneous coronary intervention (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 three groups based on duration of DM: < 5 years, 5–10 years, and > 10 years. The primary endpoint was MACE, a composite of nonfatal myocardial infarction (MI), stroke, coronary artery bypass grafting (CABG), repeat PCI, and mortality. **Results:** The incidence of MACE increased progressively with longer diabetes duration: 3.7% (< 5 years), 8.1% (5–10 years), and 13.9% (> 10 years), with particularly higher rates of stroke (0.6%–3.0%) and repeat PCI (1.8%–6.0%) among T2DM patients after PCI. The Kaplan–Meier analysis demonstrated a clear stepwise rise in cumulative MACE incidence over 12 months, with the highest event rates observed in patients with diabetes for more than 10 years (log-rank $p < 0.004$). Consistently, Cox proportional hazards models showed significantly elevated risk compared with the < 5-year group, with adjusted hazard ratios of 3.16 (95% CI: 1.06–9.47, $p = 0.039$) for 5–10 years and 4.37 (95% CI: 1.59–12.01, $p = 0.004$) for > 10 years. **Conclusion:** Patients with longer duration (> 10 years) of T2DM had the highest incidence and hazard of adverse cardiovascular events compared to shorter duration (< 5 years and 5–10 years). These results suggest that targeted preventive strategies and closer post-PCI monitoring are essential for patients with prolonged diabetes duration. Copyright © 2026 Ayesha Tariq et al. International Journal of Vascular Medicine published by John Wiley & Sons Ltd.

Author keywords

duration of diabetes mellitus; major adverse cardiovascular events; percutaneous coronary intervention; Type 2 diabetes mellitus

Indexed keywords

EMTREE drug terms

acetylsalicylic acid calcium; antihypertensive agent; atorvastatin; beta 1 adrenergic receptor blocking agent; beta adrenergic receptor blocking agent; biguanide; biguanide derivative; clopidogrel; dipeptidyl peptidase IV inhibitor; furosemide; insulin; nitrate; nitric acid derivative; ranolazine; rosuvastatin; sodium glucose cotransporter 2 inhibitor; spironolactone; sulfonylurea; ticagrelor; trimetazidine

EMTREE medical terms

adult; Article; cardiogenic shock; cerebrovascular accident; cohort analysis; coronary artery bypass graft; disease duration; dyslipidemia; female; follow up; hazard ratio; heart infarction; human; hypertension; incidence; Kaplan Meier method; major adverse

cardiac event; major clinical study; male; mortality; non insulin dependent diabetes mellitus; non ST segment elevation myocardial infarction; Pakistani; patient counseling; percutaneous coronary intervention; proportional hazards model; prospective study; questionnaire; risk factor; secondary prevention; ST segment elevation myocardial infarction; Takotsubo cardiomyopathy; unstable angina pectoris; valvular heart disease

Chemicals and CAS Registry Numbers

Unique identifiers assigned by the Chemical Abstracts Service (CAS) to ensure accurate identification and tracking of chemicals across scientific literature.

acetylsalicylic acid calcium	69-46-5
atorvastatin	134523-00-5, 134523-03-8, 110862-48-1
biguanide	56-03-1
clopidogrel	113665-84-2, 120202-66-6, 90055-48-4, 94188-84-8, 120202-65-5, 120202-67-7, 894353-16-3, 744256-69-7

[Show more](#)

Corresponding authors

Corresponding author	Z. Bhatti
----------------------	-----------

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

Email address zohrabhatti@iium.edu.my

Corresponding author B.A. Talpur

Affiliation School of Computer Science and Statistics, Trinity College Dublin, Dublin, Ireland

Email address talpurba@tcd.ie

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

Abstract

Author keywords

Indexed keywords

Chemicals and CAS Registry Numbers

Corresponding authors

About Scopus

[What is Scopus](#)