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

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Abstract	Background Insulin-treated type 2 diabetes mellitus (ITDM) is associated with heigher 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.
Keywords	Author Keywords: Insulin-treated diabetes mellitus; Major adverse cardiovascular outcomes; Non-insulin-treated diabetes mellitus; Percutaneous Coronary Intervention; Type 2 Diabetes Mellitus Keywords Plus: HEALTH LITERACY; OUTCOMES; MELLITUS; MORTALITY; DISEASE; IMPACT
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Data availability statement

The data sets used and/or analyzed during the current study are available from the corresponding author upon reasonable request.

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The authors declare no conflicts of interest.

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- 1 **Impact of Gender on Type II Diabetes Glycemic and Cardiovascular Markers Control and Treatment. (From: MEDLINE®)**

A Alswat, Khaled
2020-jan
| Pakistan journal of biological sciences : PJBS
23(12), pp.1643-1649

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6 Citations
20 References
- 2 **The Role of Educational Level in Glycemic Control among Patients with Type II Diabetes Mellitus**

Al-Rasheedi, AAS
Apr-jun 2014
| INTERNATIONAL JOURNAL OF HEALTH SCIENCES-
IJHS
8(2), pp.177-187

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- 3 **[Not available]**

2018
| Definition and Diagnosis of Diabetes Mellitus and
Intermediate Hyperglycemia
WHO Press

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