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Diseases of the Aorta, Peripheral Vascular Disease, Stroke – Peripheral Vascular and Cerebrovascular Disease, Clinical, Peripheral Artery Disease

Three-year outcome after coronary stenting in all-comer patients: Impact of diabetes and peripheral arterial disease

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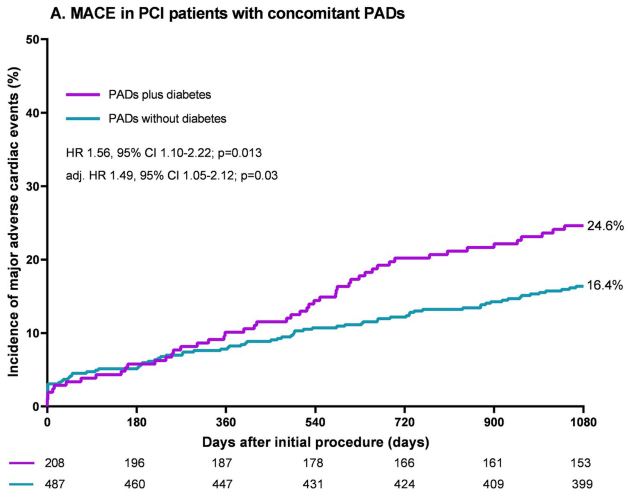
Background: Diabetes is a well-established risk factor for atherosclerosis and associated with an increased risk of adverse events after percutaneous coronary intervention (PCI) with drug-eluting stents. Similarly, patients with obstructive coronary artery disease are more likely to have atherosclerosis in additional vascular beds. These patients with concomitant peripheral arterial disease (PADs) also have an elevated risk of adverse events following PCI. Yet, it is unclear whether PCI patients with diabetes, PADs, or both characteristics differ in risk of adverse clinical events.

Purpose: To evaluate the impact of diabetes in PCI patients with or without concomitant PADs at 3-year follow-up.

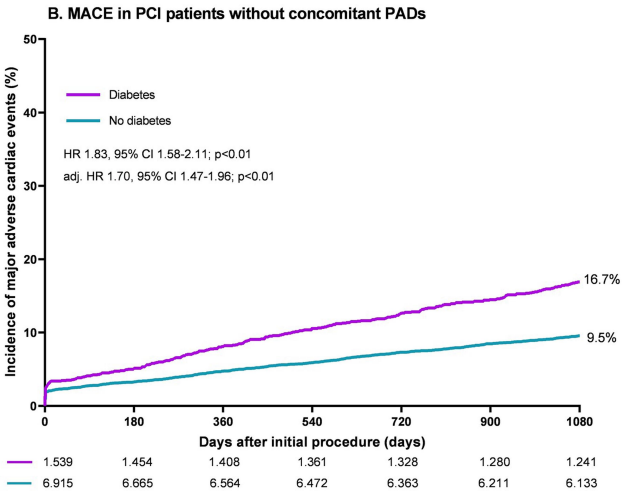
Methods: Data were pooled from a patient-level database of 4 randomized clinical trials that enrolled all-comer PCI patients treated with new-generation drug-eluting coronary stents. The study population was divided in patients with or without concomitant PADs. In these two groups, we identified patients with or without medically-treated diabetes. The main composite endpoint was major adverse cardiac event (MACE: any myocardial infarction, emergent coronary bypass surgery, clinically indicated target lesion revascularization, or all-cause mortality).

Results: Of 9,204 all-comer PCI patients, 695 were known with PADs, of whom 208 (29.9%) had diabetes. Of the 8,454 patients without PADs, 1,539 (18.2%) had diabetes. 55 patients were excluded due to an unknown PADs status. Regardless of the presence of PADs, patients with diabetes at baseline were older, had a higher BMI, and a higher prevalence of hypertension than those without diabetes. At 3-year follow-up, the incidence of MACE was significantly higher in PADs patients with diabetes than in those without diabetes (24.6% vs. 16.4%, HR: 1.56, 95%CI: 1.10-2.22, p=0.01). In patients without PAD's, there was a similar increase in MACE associated with diabetes (16.7% vs. 9.5%, HR: 1.83, 95% CI: 1.58-2.11, p<0.01). The absolute increase in MACE rate associated with the presence of diabetes was +8.2% in patients with PADs and +7.2% in those without PADs.

Conclusions: In the high-risk population of PCI patients with and without PADs, the presence of diabetes represents a profoundly relevant additional cardiovascular risk factor, associated with a similar increase in adverse clinical events at long-term follow-up after coronary stenting.



MACE in PCI patients with PADs



MACE in PCI patients without PADs