

Diabetes is not a risk factor for myocardial infarction in patients without coronary artery disease

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Funding Acknowledgement: Type of funding source: Public hospital(s). Main funding source(s): The Department of Cardiology, Aarhus University Hospital, Aarhus, Denmark.

Background: Diabetes is considered a risk factor for myocardial infarction (MI). However, we have previously found that diabetes was not a short-term risk factor for MI in the absence of obstructive coronary artery disease (CAD).

Purpose: As long-term data are not available, we aimed to assess adverse cardiac events in patients with and without diabetes stratified by CAD up to 11 years after coronary angiography.

Methods: We conducted a cohort study of patients undergoing coronary angiography from 2003 to 2012 and followed them by cross-linking Danish health registries. Patients were stratified according to the presence/absence of CAD and diabetes. Outcomes included MI, cardiac death, all-cause death, and coronary revascularization.

Results: A total of 86,202 patients were included (diabetes: n=12,652).

Median follow-up was 8.8 years. Using patients with neither CAD nor diabetes as reference (cumulative MI incidence 2.6%), the risk of MI was similar for patients with diabetes alone (3.2%; hazard ratio 1.202, 95% CI: 0.996–1.451), was increased for patients with CAD alone (9.3%; hazard ratio 2.75, 95% CI: 2.52–3.01), and was highest for patients with both CAD and diabetes (12.3%; hazard ratio 3.79, 95% CI: 3.43–4.20), see Figure. Similar associations were observed for cardiac death and coronary revascularization.

Conclusions: Diabetes patients without CAD by coronary angiography have a similar risk of MI compared to patients with neither CAD nor diabetes. In the presence of CAD, however, diabetes increases the risk of MI.

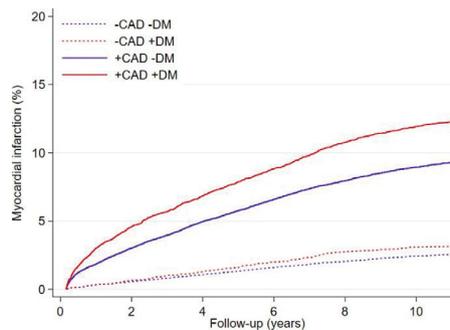


Figure 1