

Prognostic value of obstructive coronary artery disease on CTA in diabetic patients: a meta-analysis

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Topic(s):

CAD and comorbidities

Citation:

European Heart Journal (2016) 37 (Abstract Supplement), 1397

Funding Acknowledgements:

Richard A.P. Takx is supported by Van Leersum Grant of the Royal Netherlands Academy of Arts and Sciences.

Background: There is still equipoise concerning the risk of significant stenosis by coronary computed tomography angiography (CTA) in diabetic patients.

Purpose: We performed a meta-analysis to assess the prognostic value of obstructive coronary artery disease (CAD) on CTA in diabetic patients.

Methods: The meta-analysis was performed in accordance with the MOOSE guidelines. PubMed and Embase were searched up to November 2015. Study subjects characteristics and outcomes were collected by one physician and checked by a second. Study quality was ascertained in consensus using the quality in prognosis studies (QUIPS) tool. We calculated the prevalence of obstructive CAD on CTA in diabetic patients, as well as annualized event rates, and assessed adjusted hazard ratios (HR). HR for obstructive CAD on CTA were pooled using generic inverse random model.

Results: Five studies were eligible for inclusion into this meta-analysis, with 5,070 participants, (weighted age 61, 55% male) with a follow-up period ranging from 20 to 66 months. The prevalence of obstructive CAD was 36.9%. Annualized event rate was 11.2% for obstructive

CAD. Obstructive CAD was associated with an increased adjusted HR of 4.7 (95% CI 2.0–10.7).

Conclusions: Obstructive CAD on CTA is associated with increased event rates and significant higher HR in diabetic patients.