



Coronary Artery Disease and Prognosis

in relation to Cardiovascular Risk Factors, Interventional
Techniques and Systemic Atherosclerosis

av

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Akademisk avhandling

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Abstract

Fredrik Calais (2018): Coronary artery disease and prognosis in relation to cardiovascular risk factors, interventional techniques and systemic atherosclerosis. Örebro Studies in Medicine 173.

Aim: To evaluate the prognosis associated with location and severity of coronary and systemic atherosclerosis in patients with coronary artery disease (CAD) in relation to risk factors and interventional techniques.

Methods: The thesis comprised six longitudinal studies based on three patient cohorts: The Swedish Coronary Angiography and Angioplasty Registry, the Västmanland Myocardial Infarction Survey, and the Thrombus Aspiration in ST-Elevation myocardial infarction in Scandinavia study, to evaluate clinical outcome relative to coronary lesion location and severity, extracoronary artery disease (ECAD), intervention techniques, and leisure-time physical inactivity (LTPI).

Results: Stent placement in the proximal left anterior descending artery (LAD) was more often associated with restenosis than was stenting in the other coronary arteries. The use of drug-eluting stents in the LAD was associated with a lower risk of restenosis and death compared to bare-metal stents. Thrombus aspiration in the LAD during acute ST elevation myocardial infarction (MI) did not improve clinical outcome, irrespective of adjunct intervention technique. Clinical, but not subclinical, ECAD was associated with poor prognosis in patients with MI. Longitudinal extent of CAD at the time of MI was a predictor of ECAD, and coexistence of extensive CAD and ECAD was associated with particularly poor prognosis following MI. Self-reported LTPI was associated with MI and all-cause mortality independent of ECAD.

Conclusions: Drug-eluting stents, but not thrombus aspiration, improved prognosis following percutaneous coronary intervention in the proximal LAD. Self-reported LTPI, clinical ECAD, and systemic atherosclerosis defined groups with poor prognosis after MI.

Keywords: Atherosclerosis, Myocardial infarction, Coronary artery disease, Extra-cardiac artery disease, Coronary stent, Thrombus aspiration, physical inactivity, Prognosis

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