Abstract: P3624

Prevalence and severity of coronary artery disease linked to prognosis in psoriasis patients referred for coronary computed tomography angiography: A multicentre cohort study

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Background: Psoriasis (Pso) is a disease characterized by systemic inflammation and is associated with an increased risk of cardiovascular disease. However, the degree of coronary artery calcification in Pso and its relation to prognosis is largely unknown.

Purpose: The aim of this study was 1) to estimate the prevalence and severity of coronary artery disease (CAD) in this patient group and 2) to assess the risk of major adverse cardiovascular events (MACE) including revascularization and all-cause mortality after initial diagnosis and treatment in a large-scale cohort of patients who underwent coronary computed tomography angiography (CCTA) due to angina symptoms.

Methods: This study consists of two parts using data from the Western Denmark Heart Registry; a cross-sectional study included 40,125 patients and a follow-up study included 42,861 patients. Pso patients were identified by the National Patient Registry and verified by nationwide prescription and treatment code registers. Primary outcome in the cross-sectional study was a coronary artery calcium score (CACS) >0, with a secondary outcome defined as a CACS =400. In the follow-up study, the primary outcome was a combined outcome including myocardial infarction, revascularization, ischemic or unspecified stroke and all-cause mortality. Events within the first 90 days after CCTA were attributed to initial treatment and consequently excluded. All outcomes were adjusted for common cardiovascular risk factors and comorbidities.

Results: In the cross-sectional study 1,407 (3.5%) Pso patients were identified. OR was 1.31 (95% CI; 1.15-1.49) for CACS >0 and 1.33 (95% CI; 1.10-1.62) for CACS =400 in Pso patients compared to non-Pso patients. In the follow-up study 1,591 (3.7%) Pso patients were identified. The mean duration of follow-up after CCTA was 4.0 years (min/max 0.0/10.2). Crude HR for the combined outcome was 1.52 (95% CI; 1.24-1.87), while adjusted HR was 1.16 (95% CI; 0.95-1.43).

Conclusion: In this clinically relevant cohort of patients referred to CCTA for CAD rule out, coronary artery calcification was more frequent and more severe in Pso patients even compared to the control patients with several risk factors and angina symptoms, but without inflammatory diseases. An increased risk of the combined outcome of MACE including revascularization and all-cause mortality after initial treatment in Pso patients was found in the crude analysis. The increased risk seemed predominantly carried by an increase in traditional risk factors.