



Non Invasive Imaging (Echocardiography, Nuclear, PET, MR and CT)

STRICT GLYCEMIC CONTROL ATTENUATES THE PROGRESSION OF CORONARY ARTERY CALCIFICATION IN ASYMPTOMATIC SUBJECTS WITH DIABETES MELLITUS

Poster Contributions
Poster Hall, Hall A/B
Monday, March 12, 2018, 9:45 a.m.-10:30 a.m.

Session Title: Coronary Calcium: Diagnosis and Prognosis
Abstract Category: 27. Non Invasive Imaging: CT/Multimodality, Angiography, and Non-CT Angiography
Presentation Number: 1293-318

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Background: Data on the influence of strict glyceemic control on the progression of coronary artery calcification, which is an important marker for future adverse cardiovascular events, in diabetic individuals are limited.

Methods: A total of 1,637 asymptomatic diabetic adults (56 ± 8 years, 88.8% males) without previous history of coronary artery disease and stroke who underwent serial coronary artery calcium (CAC) screening were included in this study. The median inter-scan period was 3.0 (2.0-4.4) years. Subjects who achieved a hemoglobin A1C (HbA1C) with a cut off value below 7.0% at follow-up were compared with those who did not. CAC progression was defined as a difference ≥ 2.5 between the square roots ($\sqrt{\quad}$) of the baseline and follow-up CAC scores.

Results: The incidence of CAC progression was significantly lower in subjects with HbA1C below 7.0% than in those with HbA1C $\geq 7.0\%$ (45.4% vs. 51.7%; $p < 0.013$). Univariate regression analysis showed that age (odds ratio [OR]: 1.027, 95% confidence interval [CI]: 1.015-1.039; $p < 0.001$), male (OR: 1.732, 95% CI: 1.260-2.381; $p = 0.001$), and HbA1C $< 7.0\%$ (OR: 0.774, 95% CI: 0.633-0.947; $p = 0.013$) were associated with CAC progression. In multivariate regression analysis, HbA1C $< 7.0\%$ was associated with the decreased risk of CAC progression (OR: 0.743, 95% CI: 0.600-0.922; $p = 0.007$).

Conclusion: Strict glyceemic control appeared to significantly attenuate the progression of coronary artery calcification in asymptomatic diabetic individuals.

