PROGNOSTIC VALUE OF 128-CHANNEL CORONARY COMPUTED TOMOGRAPHIC ANGIOGRAPHY FOR ASYMPTOMATIC TYPE II DIABETIC PATIENTS

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Background: 128-channel coronary computed tomographic angiography (CCTA) provides high diagnostic accuracy for assessment of coronary artery disease (CAD). We evaluated the prognostic value of CCTA for asymptomatic diabetic patients.

Methods: Asymptomatic type 2 diabetes patients without known CAD (n=809) were enrolled. The patients underwent CCTA and were followed up for a median of 5 years. CAD was defined as none, nonobstructive (1-49%), or obstructive (≥50% stenosis). They were divided according to their CCTA findings; obstructive group (n=335) or nonobstructive group (n=474). The primary outcome was a composite of all-cause death, nonfatal MI, stroke, or any revascularizations.

Results: Obstructive group revealed higher Agaston calcium score (537.8 vs 86.6, p<0.001) and atheroma burden score (4.28 vs 0.81, p<0.001), as compared with nonobstructive group. During 5 years of follow-up, 19 deaths (5.7%) and 18 deaths (3.9%) occurred among obstructive and nonobstructive groups. Cumulative rates of revascularization were higher in obstructive group (4.5% vs 0.8%, p=0.01). Obstructive group showed higher primary outcome than nonobstructive group (9.9% vs 4.64%, p=0.002). Cox regression analysis found that obstructive CAD was an independent predictor (p=0.041) for primary outcome along with elderly more than 65 (p=0.001) and history of CKD (p=0.006).

Conclusions: Obstructive CAD found on CCTA was an independent predictor of adverse clinical outcome in asymptomatic diabetic patients.