IMAGE CHARACTERISTICS OF CORONARY ARTERIES BY 320-SLICE CT IN SUBJECTS WITH SPASTIC ANGINA PECTORIS CONFIRMED BY ACETYLCHOLINE LOADED TEST ON CONVENTIONAL CORONARY ANGIOGRAPHY

ACC Moderated Poster Contributions
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Background: Image characteristics of coronary arteries in subjects with spastic angina pectoris on CT have not been reported. To evaluate characteristics of coronary arteries by 320 slice CT in subjects with spastic angina pectoris, we determined Agatston calcium scores (ACS) and absolute vessel diameters of coronary arteries.

Methods: 23 consecutive subjects (16 male, 65.1±10.6 yrs) who were suspected clinically to have spastic angina pectoris underwent both 320 slice CT (Aquilion one) and acetylcholine loaded test (ALT) on conventional coronary angiography (CAG). Patients were administered 2-doses of isosorbide dinitrate sublingually just prior to CT scanning but not before ALT.

Results: 15 subjects had ALT+ results (9 right coronary arteries (RCA) and 14 left coronary arteries). Total ACSs were 245±366 (ALT+) and 987±1921 (ALT-), and there were no differences between both groups (P=0.121). Absolute vessel diameters of proximal segments of the left anterior descending branch (LAD), mid segments of LAD and left circumflex branch (LCx) were significantly smaller in ALT+ subjects (3.5 ± 0.4, 3.1 ± 0.6 and 2.6 ± 0.5mm, respectively) than in ALT- subjects (4.1 ± 0.8, 3.8 ± 0.8 and 3.2 ± 0.4mm, respectively, all p<0.05)

Conclusions: Even with pre administration of isosorbide dinitrate, absolute vessel diameters of proximal and mid segments of LAD and mid segments of LCx on 320-slice CT tended to be smaller in ALT+ subjects. This phenomenon may be useful to detect spastic coronary arteries on CT noninvasively.