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IMPACT OF CORONARY ATHEROSCLEROSIS IN JAPANESE WOMEN WITH CHRONIC KIDNEY DISEASE

ACC Poster Contributions

Ernest N. Morial Convention Center, Hall F

Sunday, April 03, 2011, 3:30 p.m.-4:45 p.m.

Session Title: CT Coronary Angiography - Plaque Imaging

Abstract Category: 36. CT Coronary Angiography

Session-Poster Board Number: 1061-203

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Background: Chronic kidney disease (CKD) has been shown to be an independent risk factor for cardiovascular disease, especially in women. But little is known about coronary plaque burden and characteristics for CKD women.

Methods: We studied 331 consecutive patients (women, n=128) with suspected coronary artery disease (CAD) undergoing 320-row Area Detector CT, including 89 patients (women, n=38) with CKD (eGFR <60mL/min/1.73m²). All plaques were characterized for the presence of vessel remodeling, plaque consistency and disposition of coronary calcification. Atherosclerotic lesions were classified visually as obstructive ($\geq 50\%$ luminal narrowing) or non obstructive (<50%).

Results: Of 4181 segments which could be analyzed, 1179 segments included any plaques and 37 had vulnerable plaques (low-attenuated and/or positive vessel remodeling). Women with CKD had twice as many vulnerable plaques (low-attenuated and/or positive vessel remodeling) as without CKD (0.079 \pm 0.273 vs. 0.044 \pm 0.256, p=0.6424), but had only half of men with CKD (0.079 \pm 0.273 vs. 0.157 \pm 0.418, p=0.3441). In women significant differences were observed between with and without CKD concerning the prevalence of obstructive disease (44.7% vs. 23.3%, p=0.0218) and multivessel disease (26.3% vs. 7.8%, p=0.0163), but were not observed in men (54.9% vs. 42.8%, p=0.119, 27.5% vs. 23.7%, p=0.558).

Conclusions: Coronary atherosclerosis is developing remarkably in CKD women. CKD women had more vulnerable plaques than that of normal women, but less than CKD men.