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VASCULAR DISEASE

INSULIN RESISTANCE IS ASSOCIATED WITH METABOLIC SYNDROME BUT NOT WITH ANGIOGRAPHICALLY DETERMINED CORONARY ARTERY DISEASE IN FEMALE PATIENTS

ACC Poster Contributions
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Session Title: Atherosclerotic Plaque
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Background: Insulin resistance (IR) is the key feature of the metabolic syndrome (MetS) and in prospective studies predicts atherothrombotic events. Its association with directly visualised coronary atherosclerosis, especially in female patients, is unclear. We hypothesised that IR is associated with both angiographically determined coronary artery disease (CAD) and with the MetS.

Methods: We enrolled 354 consecutive female patients undergoing coronary angiography for the evaluation of suspected or established stable CAD; significant CAD was diagnosed in the presence of significant coronary stenoses with lumen narrowing ≥50%. IR was determined by the HOMA index; the MetS was defined according to ATPIII criteria.

Results: HOMA-IR scores were significantly higher in MetS female patients than in female subjects without the MetS (4.9 ± 4.7 vs. 1.9 ± 1.1; p <0.001). In contrast HOMA-IR did not differ significantly between patients with significant CAD and those who did not have significant CAD 3.3 ± 3 vs. 3.1 ± 3; p = 0.823). When both, the presence of MetS and of significant CAD were considered, HOMA-IR was significantly higher in patients with the MetS both among those who had significant CAD (4.9 ± 4.8 vs. 1.9 ± 1.1; p <0.001) and among those who did not have significant CAD (5.0 ± 4.7 vs. 1.9 ± 1.1; p <0.001) whereas it did not differ significantly between patients with significant CAD and subjects without significant CAD in patients with the MetS (5.0 ± 4.7 vs. 4.9 ± 4.8; p = 0.383) nor in those without MetS (1.9 ± 1.1 vs. 1.9 ± 1.0; p = 0.860). Similar results were obtained with the IDF definition of the MetS.

Conclusion: In female patients IR is significantly associated with the MetS but not with angiographically determined coronary atherosclerosis.