THE IMPACT OF CAROTID ARTERY ULTRASOUND FINDINGS AND THE ANKLE-BRACHIAL INDEX ON PREDICTING THE SEVERITY OF THE SYNTAX SCORE

ACC Moderated Poster Contributions
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Background: Numerous reports have shown that both carotid artery ultrasound (carotidUS) findings and ankle-brachial index (ABI) have a relationship with the presence of coronary artery disease. However, most of these studies did not assess the complexity of the lesions.

Methods: The subjects included 496 consecutive patients who underwent carotidUS, ABI analysis and an initial coronary angiography. The mean common carotid artery intima-media thickness (meanIMT) and ABI were evaluated. Coronary lesion complexity was evaluated by the SYNTAX score (SXscore).

Results: Patients with meanIMT≥ 0.9 mm showed significantly higher SXscore than patients with meanIMT< 0.9 mm (p< 0.0001). Similarly, patients with low ABI (< 0.9) presented significantly higher SXscore than patients with ABI≥ 0.9 (p< 0.0001). When the patients were divided into 4 groups on the basis of the meanIMT and the ABI (GroupA: meanIMT< 0.9 mm, ABI≥ 0.9; GroupB: meanIMT< 0.9 mm, low ABI; GroupC: meanIMT≥ 0.9 mm, ABI≥ 0.9; GroupD: meanIMT≥ 0.9 mm, low ABI), the SXscore of the groups presented significant differences (medians [25th, 75th percentiles], Group A, n = 208: 0 [0, 3]; Group B, n = 15: 0 [0, 16]; Group C, n = 225: 2 [0, 20]; Group D, n = 48: 17 [1, 35]; p < 0.0001). Among the patients in Group D, 75% had coronary artery disease.

Conclusions: CarotidUS and ABI findings are associated with the SYNTAX score. The combination of carotidUS and ABI provides useful information for predicting the complexity and presence of coronary artery disease.