**INSIGHT INTO POLYVASCULAR DISEASE**

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**Objective:** Cerebral artery disease has been shown to be associated with coronary artery disease(CAD) or peripheral artery disease(PAD), however, associations between each disease has not been clearly elucidate. On the other hand, presence of aortic plaque (AP) may be associated with generalized arteriosclerosis.

**Method:** We evaluated 74 patients with aortic plaque (P patients),110 patients with aortic calcification (C patients), and 98 patients without plaque (N patients).

**Results:** In P patients, 46 patients (62.2 %) had CAD, and 17 had CI. In NP patients, only 9 (9.2%) had CAD and 3 had CI (P<0.01 vs P patients). In C patients,24 patients had CAD(21.8 %) and 10 had CI. Mean PS was significantly greater in P patients than that in C or N(P<0.0001). Mean number of risk factor was significantly greater in P patients than in NP patients. Carotid plaque was more frequently observe in P patients than in NP patients or C patients (P<0.05). In 28 patients with severe carotid stenosis, 9 patients had CAD and 7 had CI. CI was observed in 17 in 79 patients with CAD. In C patients grading of calcification was significantly associated with incidence of CAD. In 171 patients with carotid plaque, calcification of thoracic artery was observed in 128(74.9%), in which, 44 patients had CAD. In 52 patients with aortic plaque, thoracic aorta calcification and carotid plaque, CAD was observed in 38 patients (73.1%). In 63 younger patients(less than 50 years old), aortic plaque was very rare (2 patient) and aortic calcification was observed in 16 patients ( P<0.05 vs each in the 122 aged patients)

**Conclusion:** Only carotid sclerosis was not associated with presence of CAD, but combination of aortic plaque, thoracic aorta calcification and high PS was predictive for diagnosis of CAD. Aortic plaque is more closely associated with CAD than aortic calcification or carotid plaque score, however, in younger patients, aortic calcification or carotid plaque may not be associated with CAD or PAD.