PREVALENCE AND CLINICAL FEATURES OF EXERCISE INDUCED ST ELEVATION IN NON-Q LEADS: A SINGLE CENTER EXPERIENCE FOR 5.5 YEAR IN JAPAN

ACC Moderated Poster Contributions
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Background: Exercise induced ST elevation (ESTE) in non-Q leads (i.e., without prior infarction) has been shown to be predictive of severe coronary artery stenosis by recent reports from Western countries. Since coronary vasospasm causing ESTE much more commonly occurs in Japanese than in Caucasians, the clinical significance of ESTE may be different among races.

Methods and Results: From a consecutive 4705 series of treadmill ECG performed in our institute for evaluating coronary artery disease, we examined the occurrence of ESTE ≥ 1.0mm (0.1mV). ESTE was found 19 patients (0.4%), and it transiently resolved in all. Twelve (63%) had significant (>50%) coronary organic stenosis (COS, 6 single, 4 double, 2 triple vessel disease), while seven (37%) had normal coronary artery (NCA). Although clinical, demographic, and exercise variables were similar between the 2 groups, the maximal magnitude of ESTE was significantly greater in NCA (3.2 ± 2.0mm) than in COS (1.5 ± 0.4mm, p<0.05), potentially being useful for the differentiation (Figure). After appropriate medication (typically calcium blockers) and revascularization therapy, no cardiac event was observed during a follow-up period of 507 ± 437 days.

Conclusions: ESTE in non-Q leads was also rare in our Japanese population, however, nearly 40% had normal coronary artery (probably having vasospasm), clearly contrasting with the results of Western studies. The magnitude of ST elevation may be a clue for predicting patients with or without COS.