Abstract: P284

**Pseudo Normalization Of Abnormal T-Waves As An Aid To Identify Reversible Perfusion Defects.**

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**Background:**
In patients with baseline ST segment depression and T wave inversion, EKG stress testing has a limited diagnostic role. In a few numbers of these patients, the baseline T wave abnormalities may return to normal during ischemia referred to as pseudonormalization of the T wave, the significance of this phenomena is unknown. The aim of this study to determine if T-wave pseudonormalization during exercise or pharmacological stress testing identified patients with myocardial ischemia as indicated by reversible perfusion defects.

**Methods:**
We retrospectively reviewed the combined exercise/pharmacological stress testing records performed in our hospital over 1 year. Depending on the pattern of change in the T wave morphology the patients were divided into 2 groups, either pseudo normalization or control group (baseline T wave inversions that persisted after the test). The results of perfusion scintigraphy were compared in patients with and without stress-induced T-wave normalization. The categorical data obtained in both the group were analyzed using chi-square test.

**Results:**
A total of 111 consecutive patients who met the inclusion criteria were evaluated in our study. In control arm, there were a total of 70 subjects with mean age of 53.1 years. Majority n= 41 (58%) were male, 31 (44%) had diabetes mellitus and 57 (81 %) had hypertension. 23 (58.9 %) patients in this group had reversible ischemia on stress test. The average EF in this group was 53.1%. Meanwhile, in pseudo-normal group, there were a total of 41 subjects. Mean age was 58.3 years, 22 (53 %) were male, 15 (36%) had DM and 31 (75 %) had hypertension The average EF in these patients was 55.27%. A total of 18 patients (85.7%) had reversible ischemia by stress test in this group. There was no statistically significant difference in baseline characteristics in 2 groups. When comparing reversible perfusion defect between 2 groups, the pseudonormalization had significantly more reversible ischemia detected on myocardial perfusion imaging as compared with the control group (p 0.033).

**Conclusion:** In presence of baseline T wave abnormalities pseudonormalization is predictive of reversible perfusion defect. Pseudonormalization can add to sensitivity and accuracy of stress test for diagnosis of ischemic heart disease.