

## THE EFFECT OF ANTI-HYPERTENSIVE THERAPY ON POST-EXERCISE ST SEGMENT DEPRESSION IN MIDDLE AGED HYPERTENSIVE CHINESE MEN

By Benjamin N. Chiang and Jwo-Bin Lee

One hundred and two or 17.8% of 571 middle-aged hypertensive Chinese men of grade I severity underwent a maximal graded treadmill exercise showed a positive response with segmental ST depression  $> 1$ mm. They were given a double blind treatment with antihypertensive drugs and placebos for six months, then the exercise test was repeated. Twenty patients in the treated group converted from positive to negative, while in the placebo group, only four conversions were observed. The difference was statistically significant by Chi Square test ( $p < 0.005$ ). Both the treated and placebo groups showed reduction of mean systo-

lic and diastolic blood pressures in the follow up 6 months, although the magnitude of blood pressure fall was much greater in the treated group ( $d=43.3/27.8$ mm Hg) than the placebo group ( $d=13.4/12.7$ mmHg). The difference was more striking at maximal exercise ( $d=43.1/20.7$ mmHg in the treated group, and  $d=3.7/7.1$ mmHg in the placebo group). There was no significant difference in exercise duration before and after treatment in both groups. Two cases in the placebo group developed stroke during the trial. It is postulated that ST segment depression after exercise in mild hypertensive patients may be due to increased LV workload as a result of augmented peripheral arterial resistance and increased LV tension time index. Anti-hypertensive therapy may reverse this early ECG sign of LV functional impairment.

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Department of Medicine, Veterans General Hospital Taipei, Taiwan, ROC.

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