LETTER TO THE EDITOR

Left ventricular Tei index in athletes

I read with great interest the recently published study by Stoylen et al.1 in the December, 2003, issue of European Journal of Echocardiography. The investigators reported that all intervals of the heart cycle and myocardial performance index (Tei) of left ventricle (LV) were shortened during incremental exercise.

We also found that Tei index in athletes was significantly lower than that in the controls and an inverse correlation between Tei index and maximal oxygen consumption (VO2max) in all subjects.2 It is known that cardiac performance is the most important factor for exercise capacity.3 Libonati et al.4 also reported that peak treadmill time is inversely related to the index, which is measured by seismocardiography in healthy subjects. They explained that the relation of exercise capacity and the index was affected by the changes of isovolumetric relaxation interval of LV. The training-induced augmentation of early diastolic filling at rest and during exercise may be an important adaptation to allow an increase in stroke volume at rest and an increase in stroke volume, cardiac output, and VO2max during exercise. Exercise training augments early diastolic filling at rest and during exercise. This augmentation of diastolic filling during exercise may contribute to the increased maximal stroke volume, cardiac output, and VO2max after exercise training.3,5

In conclusion, Tei index may provide information about changes in exercise capacity as a sign of increasing cardiac function due to habitual exercise in healthy subjects.

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References