Can prolonged exercise-induced myocardial ischaemia be innocuous? reply

We appreciate Dr Fragasso’s interest in our recent work. 1 Fragasso et al. 2 showed in patients with coronary disease a lowered left ventricular filling rate 2 days after exercise that was no longer significantly different from baseline at 7 days. Whether this is sufficient to support the notion that exercise-induced myocardial ischaemia in patients with stable coronary artery disease causes sustained clinically significant diastolic dysfunction cannot be certain. Importantly, the 15 patients in Dr Fragasso’s study had severe coronary disease as evidenced by their poor exercise capacity (70±30 W) that was less than half that of our patients (152±56 W), their development of myocardial ischaemia at 217±161 s of exercise compared with 442 ± 85 s for our patients and the lower rate-pressure product attained by their patients compared with ours (22 697 ± 5315 vs. 27 308 ± 7445 b.p.m. mmHg).

During a structured exercise training program above their myocardial ischaemic threshold, throughout serial evaluations, our patients had no troponin rises or significant arrhythmias and unchanged left ventricular systolic function. Nor did we observe any alteration of VO2max, a physiological variable closely related to cardiac function and most powerful predictor of mortality and morbidity. 3 Because of the need for brevity, we did not report the spectral tissue Doppler echocardiography E/e1 ratio that was within normal range in the experimental group (15 ± 6). This ratio, derived from the septal annulus velocity, is known to have similar

References