

adjusted for patient demographics, comorbidities and health-service use showed that the risk of mortality after MI reduced by 3% each year ( $P < 0.0001$  for trend). Inclusion of percutaneous coronary intervention as a parameter attenuated the association between year and mortality, but the trend remained significant. By contrast, when the model was adjusted for use of secondary prevention medications the significant association between year and mortality disappeared.

On the basis of these results, the authors conclude that the improvements in long-term survival after MI in the past decade are largely attributable to the increased use of secondary prevention medications.

**Original article** Setoguchi S *et al.* (2008) Improvements in long-term mortality after myocardial infarction and increased use of cardiovascular drugs after discharge: a 10-year trend analysis. *J Am Coll Cardiol* 51: 1247–1254

## Hypertrophic cardiomyopathy is extremely rare in elite athletes

Hypertrophic cardiomyopathy (HCM) is considered to be the most common cause of exercise-related sudden death in young athletes. A number of sporting institutions in the UK have implemented programs to screen athletes for HCM; however, a study by Basavarajaiah *et al.* has shown that there is little justification for these programs because the prevalence of HCM among elite athletes is extremely low.

During the period 1996–2006, 3,500 asymptomatic British athletes (mean age 20.5 years) with no known family history of HCM underwent 12-lead electrocardiography and two-dimensional transthoracic echocardiography. A diagnosis of HCM was excluded in 3,447 (98.5%) of the athletes screened, on the basis of a left ventricular (LV) wall thickness of  $< 12$  mm, the absence of LV outflow obstruction, and normal diastolic function. An LV wall thickness of  $> 12$  mm was noted in 53 patients, 50 of whom had a dilated left ventricle and normal systolic function, indicating physiological LV hypertrophy. The remaining three athletes had nondilated left ventricles and deep T-wave inversions, possibly indicating mild HCM; however, none of these individuals had any other echocardiographic features of this condition, and further noninvasive investigations failed to

uncover any additional features suggestive of HCM. In the one athlete persuaded to abstain from training for 12 weeks, the LV hypertrophy and deep T-wave inversion resolved, excluding a diagnosis of HCM.

HCM is extremely rare among elite athletes, conclude the authors, and echocardiographic screening should be conducted in only those athletes with characteristics suggestive of an underlying cardiac condition.

**Original article** Basavarajaiah S *et al.* (2008) Prevalence of hypertrophic cardiomyopathy in highly trained athletes: relevance to pre-participation screening. *J Am Coll Cardiol* 51: 1033–1039

## Novel protocol improves survival following out-of-hospital cardiac arrest

Survival rates are very low following out-of-hospital cardiac arrest. A large observational study has now demonstrated that the use of a novel protocol—minimally interrupted cardiac resuscitation (MICR)—markedly increases survival compared with the use of traditional resuscitation methods. MICR emphasizes preshock and postshock uninterrupted chest compressions, the delay or elimination of endotracheal intubation, and administration of epinephrine as soon as possible.

Bobrow *et al.* first compared data from before and after implementation of the MICR protocol in two metropolitan fire departments in Arizona; survival to hospital discharge improved from 1.8% (4 of 218 patients) before the use of the protocol to 5.4% (36 of 668 patients) after emergency medical services staff had been trained in the procedure (adjusted odds ratio [OR] 3.0, 95% CI 1.1–8.9). When data from an additional 60 fire departments in the same state (10 of which had received MICR training) were added to the analysis, 9.1% of the 661 patients who actually received MICR survived to hospital discharge, compared with 3.8% of the 1,799 individuals who did not receive MICR (adjusted OR 2.7, 95% CI 1.9–4.1). In a subgroup of patients whose cardiac arrest was witnessed and who had a shockable rhythm—i.e. the individuals most likely to survive—survival was considerably better in those who received MICR than in those who did not (28.4% vs 11.9%; adjusted OR 3.4, 95% CI 2.0–5.8).