Sir,

A changing trend is being seen in schools of getting a health check up done and getting a cardiac clearance done by the physician for the children opting for competitive sports to avoid any mishap leading to sudden cardiac death (SCD). Sudden cardiac death is defined as an instant unexpected death which occurs in one hour of onset of symptoms most commonly due to tachyarrhythmias.

Sudden cardiac death is an entity which is recognised from a long time now. It was the deaths of basketball stars Hank Gathers and Reggie Lewis in early 1990 which caught the media attention and demanded a serious attention and a focused approach to SCD. Since then, in the past ten years or more, a lot of research work has been done studying the causes, pathogenesis and preparticipation athletic evaluation (PAE). The common causes of SCD are hypertrophic cardiomyopathy (HCM), arrhythmogenic right ventricular dysplasia (ARVD), congenital coronary anomalies, myocarditis, coronary artery disease, Marfan syndrome, coarctation of aorta, idiopathic left ventricular hypertrophy, hypoplastic coronary arteries, congenital heart disease, trauma to chest wall, performance enhancing drugs like anabolic steroids and erythropoietin, addictions like cocaine, methamphetamine, inhalants, aortic or pulmonary stenosis, Wolff-Parkinson-White syndrome (WPW), prolonged QT syndrome, idiopathic ventricular tachycardia, ventricular arrhythmias and rupture of aortic aneurysm. Hypertrophic cardiomyopathy by far remains the commonest aetiology of SCD in athletes due to malignant arrhythmia because of a bizarre arrangement of muscle fibres with interstitial fibrosis known as “myocardial disarray” on microscopy in these patients.

Different screening methods adopted by United states and Italy have well been compared. In Italy a preparticipation 12-lead electrocardiography has helped to detect undiagnosed HCM and hence decreased the mortality while in United states screening is limited to history and physical examination. Despite different screening methods the rate of SCD in both these countries has not differed significantly during recent years.

In conclusion, our country needs to have a proper, structured preparticipation athletic evaluation programme to prevent and decrease the incidence of SCD in athletes which should be mandatory for children who want to pursue sports, especially competitive sports.

References