Sudden unexpected death in a young athlete

Competitive athletes are those who participate in an organized team or individual sports that require regular competition against others. Athletic activities substantially increase the sympathetic drive resulting in a surge in catecholamine level that increases blood pressure, heart rate, myocardial contractility, and oxygen demand. This can cause myocardial ischemia and arrhythmia that may lead to sudden death in athletes with known and unrecognized heart conditions during athletic activities. It is estimated that 1-2/100,000 SCD/year happens worldwide. According to the International Olympic Committee, the SCD rate in athletes is ~ three times higher than in the normal population. There are many structural and acquired heart conditions that are not clinically manifested. Many physicians are involved in medical clearance of children for participation in school sports activities. Physicians have to recognize them to protect athletes from catastrophic events. In order to prevent sudden cardiac death physicians should be aware of cardiac conditions that may cause a problem. Also, physicians should be familiar with general guidelines for evaluation of an athlete and clearance for participation in athletic activities. Guidelines vary in different parts of the world. In this presentation, I will discuss guidelines for European, Italian and in the USA outlined by the American Heart Association. In this presentation, the causes of congenital and acquired heart conditions and arrhythmias that can cause sudden cardiac death will be discussed with authors experience and literature review.

Biography

Brojendra Agarwala has completed his MBBS at the age of 23 years from University of Kolkata, India and completed Pediatric cardiology fellowship from New York University medical center in New York, NY, USA. He is a pediatric cardiologist and professor of Pediatrics at the University of Chicago. He has received the best teacher award by the pediatric residents and the medical students. He has published 68 papers in reputed journals. He is named as one of the Top Doctors and Best pediatricians in Chicago magazine for many years.

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