

Sudden Death of Athletes – A New Fact?

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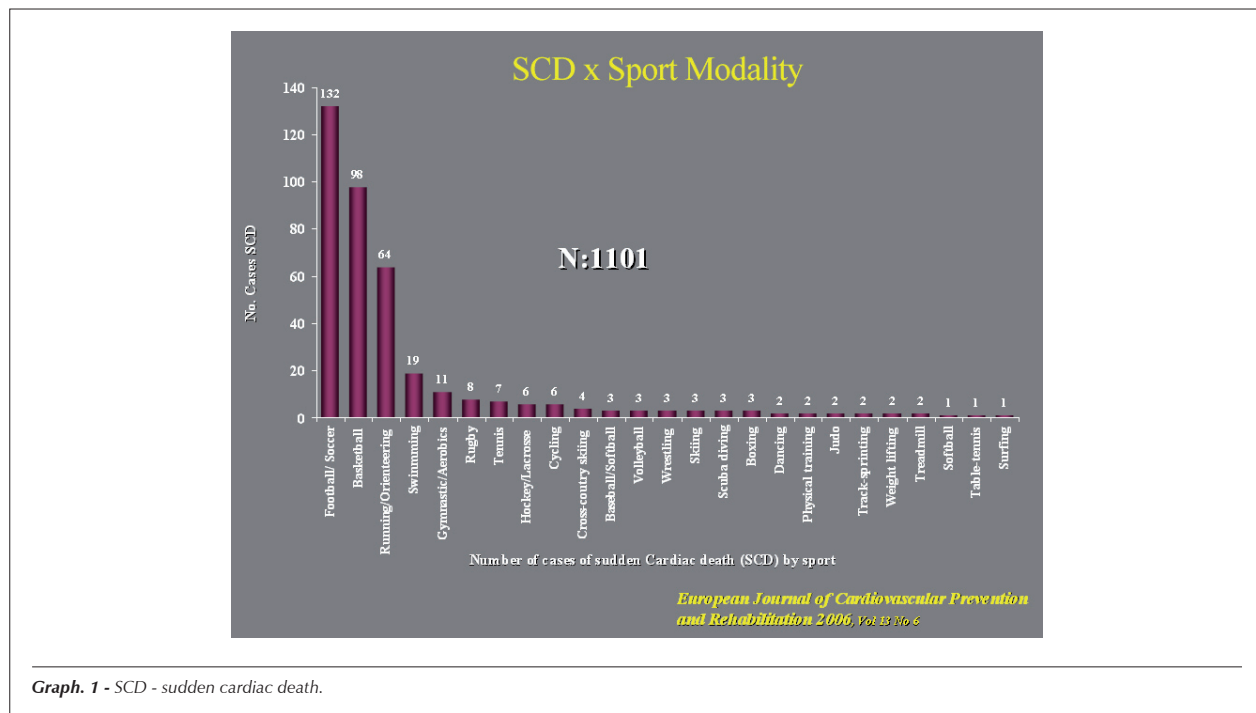
A recurring theme, a phenomenon of globalized media, *déjà vu*, no matter what terms are used to describe the sudden cardiac death of athletes, they tend to draw attention away from the main theme - the seeming paradox of the sudden death of young and apparently healthy people in the course of professional or even amateur leisure sports activities.

The layperson’s question “Why did it happen?” extends to diverse scientific events that attempt to explain such surprising episodes. Publications have been informing us about sudden death in sports^{1,2,3} for years. The International Olympic Committee with headquarters in Lausanne, Switzerland, published a detailed meta-analysis based on data from *Medline* (OVID Web, 1966-2004), *PubMed* (1966-2004), *Cochrane Database of Systematic Reviews*, *EBM Reviews – ACP Journal Club*, *Cinahl* (1982-2004), *Heracles*, *Web of Science*, and *Scopus* (1960-2004). The

data show that from 1966 to 2004, 1101 young athletes (under 35 years of age) were reported to have died suddenly – an average of 29 per year⁴.

Such deaths were more frequent in soccer and basketball (graphic 1). The occurrence of benign or potentially malignant heart diseases cataloged over more than thirty years of evaluations of athletes ranging from adolescents to elderly veterans in various sporting modalities at Instituto Dante Pazzanese de Cardiologia, of children up to 14 years of age at social clubs in São Paulo, and of boys up to 18 years of age who needed a “medical exam” to enable them to train professional soccer in São Paulo’s major league clubs, painted a picture that could explain the fatal events in sports.

Abnormalities were found in 17.7 to 21% of children and teens. The rate of abnormalities among active amateur and



Graph. 1 - SCD - sudden cardiac death.

Key words

Exercise; heart; sports; death, sudden cardiac.

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professional athletes up to 35 years of age was 8.2%. Certainly, pre-participation medical examination⁵⁻⁸ - a competent “risk marker” of possible cardiovascular problems in the practice of physical activities and sports - should be mandatory. However, pre-participation medical examination does not constitute a total safety certificate.

Decisions as to whether athletes should be spared temporarily,

or even excluded definitively, must be collegiate and must actually constitute protection for these professionals.

In addition, situations that we might call confusions or ethical-scientific exaggerations, such as the extreme physiological adaptations considered, in principle, to be heart diseases, lead to psychological and social traumas that are difficult to revert, or even to the opposite, to heart diseases being confused with adaptations.

International⁹ and Italian⁷ guidelines and Brazilian publications¹⁰ make up a reasonable base for scientific consultations in our country. The problems detected in athletes, due to characteristics peculiar to this population, are the subject of group discussions, and second opinions are very frequent. This fact leaves us with the certainty that alterations found in pre-participation examinations have a long and slow path to trail. What one sees, and what must be avoided, are hasty decisions that go so far as to disregard the ethics of patient confidentiality. As these are assuredly isolated cases of athletes with heart disease, how best to manage them continues to be based on personal experience.

Scientific literature lacks a sufficient number of patients to allow an evidence-based approach. This leaves us vulnerable to incorrect decisions, and consequently, to the risk of sudden cardiac death during the practice of physical activities/sports.

Therefore, management must be individualized and until we are absolutely sure of the diagnosis, testing cannot be spared.

Periodic follow-up (quarterly/six-monthly) on life-threatening heart diseases with repetition of tests is desirable. Discussion and controversy as to whether or not to allow the practice of professional sports will never cease to exist. Protection of the athlete-patient and respect for medical professionals are the pillars of this field of work, just like in any other field of medicine. Thus, any and all controversial decisions must be supported by an experienced panel of doctors.

Detailed and routine clinical evaluation of pre-participation medical examinations for athletes is the only way to minimize the risk of sudden death which will, undoubtedly, continue to occur, but much less frequently. As is the case in pathophysiology and epidemiology, heart disease is the main cause of sudden death in sports (90%), and its most frequent event (85%) is ventricular fibrillation. For this reason, the presence of trained basic life support teams equipped with semi-automatic defibrillators is absolutely essential at ALL sporting events. These are the minimum indispensable conditions for allowing ethical management of the risk of sudden cardiac death in athletes.

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