Abstract: 4250
Sports-related sudden cardiac arrest in Germany

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Background: Knowledge about causes of sports-related sudden cardiac arrest (SrSCA) may influence national strategies to prevent such events.

Purpose: We established a prospective registry on SrSCA to estimate the incidence and in particular describe the etiologies of SrSCA in the general population in Germany.

Methods: The registration of SrSCA based upon 4 pillars: a) a web-based platform to record SrSCA cases in competitive and recreational athletes, b) media-monitoring and c) a cooperation with the German Resuscitation Registry as well as d) 15 institutes of forensic medicine.

Results: After an observation period of 6 years, a total of 349 cases was recorded (mean age 48.0±12.7 years) of which 109 subjects survived. Most of the cases occurred during non-elite competitive or recreational sports. Bystander cardiopulmonary resuscitation (CPR) was initiated in 262 cases (75%), however rhythm analysis and defibrillation (if indicated) was mainly performed by medical service. In subjects ≤35 years, premature coronary artery disease (CAD) and sudden arrhythmic death syndrome (SADS) prevailed, followed by myocarditis. In athletes ≥35 years, CAD predominated.

Conclusion: The prevalence of cardiac pathologies in young athletes seems to vary across different countries. CAD represents the most common cause of SrSCA in the general population of Germany, highlighting the need for a targeted cardiovascular risk evaluation including young athletes. Public education on basic life support including the appropriate use of an automated external defibrillator (AED) may further decrease the burden of sudden cardiac death.