Abstract: **P1380**

**Disorders of rhythm and conduction in young athletes. Prospective observation data**

**Authors:**
DYU Alekseeva¹, SV Popov¹, IA Zemskov¹, ES Vasichkina², VV Grigoryev¹, ¹St. Petersburg Center of Sports Medicine, The treatment and counseling department - Saint Petersburg - Russian Federation, ²Almazov National Medical Research Centre - Saint Petersburg - Russian Federation,

**Topic(s):**
Sports Cardiology: Arrhythmias

**Citation:**

Introduction. Sports are associated with an increased risk of sudden death. Rhythm and conduction disorders are the first cardiovascular causes of sports disqualification.

The aim of study was to analyze using noninvasive cardiac examinations young athletes discovered to have rhythm and conduction disorders.

Methods. One hundred sixty four athletes (mean age 13.8 ± 4.9 years, male/female ratio 121/43 = 2.8) were evaluated. The study protocol included electrocardiography (ECG), exercise testing, echocardiography, 24-hour Holter monitoring.

Results. From 164 patients included in the study 39.6% presented an arrhythmia and 6.7% a conduction abnormality. Moderate and asymptomatic sinus bradycardia presents in 5.4% (n=9), sinus tachycardia in 1.8% (n=3) of subjects.

Supraventricular extrasystole and ventricular arrhythmias was found in 37.1% of athletes. Only 3 of them were removed from participation sport.

Seven patients have Wolff-Parkinson-White. Two of them have Wolff-Parkinson-White syndrome, which were successfully ablated. First-degree AV block is the most common finding, followed by Mobitz type-I second-degree AV block in 3%. One patient has long QT syndrome.

Conclusions. The most frequently diagnosed arrhythmias were supraventricular extrasystole and ventricular arrhythmias, while atrioventricular blocks were the most frequent conduction disturbances. Cardiac screening with noninvasive examinations remains a fundamental tool for the identification of a possible pathologic substrate and evaluation of sudden cardiac death.