Death due to Arrhythmogenic Right Ventricular Dysplasia: A case report

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SUMMARY
Arrhythmogenic right ventricular dysplasia (ARVD) is both a myocardial disease that predominantly affects the right ventricle (RV) and one of the major causes of sudden death in the young and athletes. A 28-year-old man with no signicant medical history, applied to an emergency department with feeling very ill. After his initial examinations, electrocardiography (ECG) showed ventricular extra systoles and he was recommended for admission to a cardiology polyclinic. The next day, his condition worsened and he was dead on arrival at the hospital. A histological examination of heart samples, which were obtained from the RV and LV, revealed the massive replacement of myocardium by fibrous and mature adipose tissue in the RV. In this case, there were no symptoms, family and medical history and its clinical presentation was as an unexpected sudden death.

Keywords: Arrhythmogenic right ventricular dysplasia, sudden cardiac death, autopsy

Úmrtí v důsledku arytmogenní dysplasie pravé komory srdeční: Kazuistika

SOUHRN
Arytmogenní dysplasie pravé komory srdeční je jednou z hlavních příčin náhlého úmrtí mladých sportovců. V práci je popisován případ mladého muže, který zmírá ve 28 letech bez jakýchkoliv anamnestických příznaků. Při příjezdu na pohotovostní příjem se cítí velice špatně. Prvotní vyšetření EKG vykazovalo ventrikulární extrasystoly a bylo proto doporučeno přijetí na kardiologickou kliniku. Následující den se jeho stav natolik zhoršil a na tuto kliniku byl přivezen již mrtev. Histologické vyšetření vzorků srdeční svaloviny odebrané z pravé i levé komory odhalilo masivní přeměnu svaloviny pravé komory ve fibrózní a vyzrálou tukovou tkáň. V tomto případě šlo o náhlé úmrtí bez přítomnosti jakýchkoliv symptomů či rodinné nebo osobní anamnézy.

Klíčová slova: arytmogenní dysplázie pravé komory – náhlá srdeční smrt – pitva

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Arrythmogenic right ventricular dysplasia (ARVD) is one of a number of sudden death causes among the young and athletes (1,2). ARVD is a myocardial disease, affecting the right ventricle (RV), morphologically characterized by diffuse or segmental lack of myocardium in the RV free wall, which is replaced by fatty or fibro fatty tissue, and also histologically by fibro fatty degeneration of cardiomyocytes, which leads to electrical instability and contractility abnormalities (1,3–9). We described an autopsy case of a 28-year old man with sudden death due to ARVD.

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CASE REPORT

A 28-year-old man with no signicant medical history applied to the emergency department of provincial hospital with feeling very ill. An electrocardiography (ECG) performed in the emergency department the day before he died showed ventricular extra systoles as well as ventricular arrhythmia. After his initial physical examination, he was recommended for admission to a cardiology polyclinic for detailed investigation. The next day, his condition worsened and he was dead on arrival at the hospital. A medico-legal autopsy was performed to clarify the manner and cause of death as mandated by the local prosecutor. His clinical history was completely inconspicuous and his family history had no indication sudden cardiac death. An external examination showed that deceased was 182 cm in height and weighed 90 kg. White foam around the mouth and nostrils, injection marks on the inguinal and antecubital regions and the dorsal part of left hand as well as signs of defibrillation paddles on the anterior wall of the chest were detected during external examination. No significant injuries were observed on external examination. At gross macroscopic internal examination, the heart weighted 560 g, the heart chambers appeared dilated and pethechial hemorr-