Prošireni sažetak / Extended abstract

Channelopathies and comma — case report

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Introduction: Cardiac arrhythmias usually occur in the presence of abnormal substrate that is responsible for creating and disturbed conduction of impulses. Ischemic heart disease is the primary cause of the development of ventricular fibrillation, and also the other, as hypertrophic and dilated cardiomyopathy make up the most of the cases. In a post-mortem series of victims of cardiac arrest, structural abnormalities were absent in 5-8 % and they have been, for many years, called idiopathic ventricular fibrillation (IVF). Now, with the help of molecular biologists, substrate IVF is practically defined. In less than a decade, the essential facts suggest that genetically determined abnormalities in the proteins that control the electrical activity can cause cardiac arrest in a structurally intact heart. Finally, at least nine genes are associated with inherited arrhythmogenic diseases and the number of genes is expected to be even higher. The advances in molecular biology reveal the causes of sudden cardiac death (SCD) in patients with morphologically normal myocardium. The term channelopathies is introduced for the diseases such as long QT syndrome, Brugada syndrome, etc.

Recived: 24th Apr 2014

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Case presentation: We report a 65-year-old male, a case of the patient with syndrome sudden cardiac death understood as a stroke with comma, which was initially treated at the Department of Neurology, and then relocated to the Department of Internal Medicine. Having excluded stroke as the cause of coma, heart attack and pulmonary embolism, and on the basis of ECG recorded earlier, the incident that was recorded such as ventricular fibrillation is suspected of channelopathies. The diagnostic evaluation and clinical testing based on proper findings of coronary angiography indicated structural heart disease. The patient was relocated to the Clinic for Cardiovascular Surgery for implantation of implantable cardioverter defibrillator.

Conclusion: On the basis of the exclusion of cerebrovascular accident, myocardial infarction and coronary artery disease, pulmonary embolism, as well as metabolic causes of coma, and bearing in mind the positive family history of sudden cardiac death, the diagnosis of channelopathies as a cause of malignant cardiac arrhythmias was made and the transfer of the patient to the Clinic for Cardiovascular Surgery for the implantation of permanent cardioverter defibrillator was performed.

KEYWORDS: channelopathies, sudden, cardiac, death, implantable cardioverter defibrillator.

CITATION: Cardiol Croat. 2014;9(5-6):215.