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ARRHYTHMIA OF THE HEART: THE WOLF-PARKINSON-WHITE SYNDROME

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Research relevance: most often arrhythmias occur in the neonatal period. The common cause of arrhythmias is Wolf-Parkinson-White syndrome. This syndrome is one of the most famous disorders of the heart's conducting system which occurs in 54–75% of newborns and is one of the leading diseases of the newborn.

Objectives: analysis of the etiology of arrhythmia and evidence of the fact that Wolf-Parkinson-White syndrome is one of the leading causes of arrhythmia.

Materials and methods: to analyze literary sources, to study the anatomical and physiological aspects of the cardiac conduction system in the normal state and its features in newborns, as well as to determine the course of the Wolf-Parkinson-White syndrome.

Results: in newborns, CCS has distinctive anatomical and physiological features, namely: a greater number of pacemaker cells in the sinoatrial node and a smaller number of intermediate cells and collagen, slow resorption of individual elements of the embryonic conduction system, continuing after the birth of a child, the bundle of His and the Purkinje fibers.

WPW syndrome is characterized by a faster passage of PD through the pathological bundle of Kent, because of which the re-entry mechanism of the pulse occurs. The course of the disease depends on the presence, frequency and duration of tachycardia. Sudden coronary death in WPW syndrome occurs in 4% of cases, usually due to fatal arrhythmias. The syndrome may be associated with genetic condition and it may be inherited from parents but this fact is the subject of the further investigations.

Conclusion: Wolf-Parkinson-White syndrome is the second most common cause of supraventricular tachycardias in the world. And this syndrome may result in arrhythmia in neonatal period. In abnormal case Kent beams appear in conducting system of the heart. Kent beams are present at birth, but later they self-destruct. Now in some cases, WPW syndrome is associated with a mutation in the PRKAG2 gene, but the possibility of its hereditary transmission has not been proven.

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NEURONAL STEM CELLS AND PERSPECTIVE FOR THEIR USE IN TREATMENT OF NEURODEGENERATIVE DISEASES

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Research relevance: according to the WHO, neurodegenerative diseases will come out on top by the prevalence in the world by 2050. Medicine treatment which is presently used does not affect the outcome of the disease. The most perspective direction in the treatment of such diseases is using of the NSCs.