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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.

Objectives: to investigate methods of obtaining undifferentiated neural cells and methods of their using to treat neurodegenerative diseases, such as Alzheimer disease, various dementias.

Materials and Methods: The study and analysis if modern literature and electronic informative resources, articles of foreign and Russian authors, analysis of scientific literature.

Results: the research showed the that NSCs in particular autologous stem and progenitor cells of olfactory epithelium are used for transplantation and cell therapy of brain and spinal cord diseases in the treatment of neurodegenerative diseases. Some researchers found that neurons can be obtained by differentiating embryonic stem cells (1998, Thomson), and by therapeutic cloning. The resulting cells are intruded in the regions of the nervous system with the greatest inhibition of function and death of neurons.

Conclusion: the most promising method of obtaining and using NSCs at the moment is a biopsy of the olfactory epithelium with the subsequent introduction of the NSC in the affected areas of the nervous system, by transplanting cells directly into the affected area or electrical stimulation of cell movement.

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INSTALLATION OF VENEERS

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Research relevance: veneers were first installed at the end of 1930s and people become more interested in the procedure nowadays.

Objectives: to provide the information on the process of installation and analyze the characteristics to it.

Materials and Methods: 25 patients of the clinic «Petrodent» have been subjected to analysis. All patients were supplied with porcelain veneers within six months. The analysis includes questions of the indications and contraindications to the installation and some risks of veneers` damage.

Results: the analysis of the statistics has shown that restorations are made three times more often than installations of porcelain veneers, because the largest part of the population thinks that orthopedic constructions are more harmful because of significant processing of the hard tooth tissues. Clinical studies have shown that fractures and inflammatory processes in the gum margin occur more often because of metal-ceramic crowns as compared to using technique of porcelain veneers. There are no scales in the patients of our clinic, but dentists provide restorations to the patients from other dentistries. It is explained by the dentist`s qualification: if there are extensive fillings or bite features, veneers are not installed and ceramic crowns are used instead. The most common causes of scales are peculiarity of the bite, bruxism, contact with the antagonist in the sature area, a large area of contact with the filling material, injuries, neglect to the dentist's recommendations.

Conclusions: veneers are a good decision to improve smile. The veneers are usually installed for aesthetic reasons: unsatisfactory staining of the tooth crown, injury of the tooth, orthodontic reasons (corrections of trims and diastems, irregularities of the size and shape of adjacent teeth). Statistics shows: if all indications and contraindications are taken into consideration, the dentist is a well-qualified specialist and the procedure is done according to the instructions, veneers will serve for a long time.

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