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THE INFLUENCE OF TOBACCO SMOKING ON SALIVATION AND THE STATE OF THE ORAL CAVITY

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Relevance: Saliva is a secretion of salivary glands, which in the oral cavity is the main component of oral fluid. It performs many functions: digestion of food, formation of a lump, facilitating swallowing and speech. The protective function of saliva, the chemomechanical effect on bacteria and participation in the processes of mineralization and remineralization of enamel should be highlighted as a separate item. The absence of saliva or a decrease in its secretion leads to many problems: dry mouth, the development of inflammatory processes and fungal infections, periodontal tissue diseases and halitosis. Various factors can be the cause of hyposalivation. It is worth highlighting tobacco smoking, which affects the level of salivation.
The purpose: to assess the impact of tobacco smoking on the level and quality of saliva secretion.
Materials and methods: 15 patients who applied for diagnostic examinations at the Department of Therapeutic Dentistry took part in the study. The patients were between 18 and 30 years old, did not have salivary gland diseases and did not take pharmacological drugs. All patients were divided into two groups - main (smokers) - 8 people (average age 31 years) and control (non-smokers) - 7 people (average age 38 years). The amount of unstimulated saliva was measured for 5 minutes (from 9 to 11 in the morning. After that, the amount of unstimulated saliva for each patient was calculated in ml/min and the quality of saliva (color, consistency, transparency, viscosity) was evaluated.
Results: as a result of the study, the average values of unstimulated (Qns) saliva in ml/min were determined for smokers and non-smokers. The amount of saliva in patients of the main group - 0.41 ml/min, and in smokers - 0.47 ml/min. However, the obtained data had no statistical difference. It is worth noting the quality of saliva, which was liquid and fluid in the first group, and viscous and foamy in the second group. During the examination of the patients, it was also found that the oral hygiene condition worsened and the number of dental deposits in the studied main group was higher.
Conclusions: based on the results of the study, it can be concluded that smoking tobacco disrupts the function of the salivary glands, which is manifested in the quality of saliva. This, in turn, indirectly affects the state of oral hygiene and, as a result, increases the risk of various dental diseases, reduces the service life of restorations, and accelerates the progression of periodontal tissue diseases. The quantitative determination of saliva did not show a significant difference in the groups of subjects. But we attribute this to the fact that the group of smokers was younger. In addition, it is necessary to take into account the period of smoking and the number of cigarettes smoked.

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A NEW FORMULA TO DESCRIBE CEREBELLAR SHAPE

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Actuality. Such features of the cerebellum as volume, patterns of the cerebellar cortex, linear measurements and their relations have been investigated in several studies. However, cerebellar shape and its variations have rarely been discussed.
The aim of this study is to investigate ratios of cerebellar measurements and its shape.
Materials and methods. The study was conducted on samples of cerebellum and adjacent brainstem without any pathologies. The samples were obtained from 50 human cadavers (25 males and 25 females) who died in age from 40 to 75 years. Cerebellar width (W), length (L) and height (H) were measured. To describe the shape of the cerebellum by the ratio of one measurement to the other two, three new parameters were proposed: relative width (RW), relative length (RL) and relative height (RH) of the cerebellum. Each relative parameter can be calculated by dividing its square on the multiplication of the other two measurements.
Results. The values of relative parameters were distributed by mean value and standard deviation into three groups: small (from minimum to M-S), medium (M±S) and big (from M+S to maximum) value areas. Cerebellum can be described by the values of relative parameters as: proportional, if the parameter lies in medium value areas; relatively wide, with big value of the RW (4,3 ÷ 5,2) or the opposite type – relatively narrow with small RW value (2,2 ÷ 3,1); relatively long, with big value of the RL (0,77 ÷ 0,9) or the opposite type – relatively short with small RL value (0,52 ÷ 0,6); relatively high, with big value of the RH (0,5 ÷ 0,63) or the opposite type – relatively low with small RH value (0,26 ÷ 0,32). According to the obtained data, 40% of cerebellums have medium values of each of the three parameters, 34% have medium values of two of the three parameters. Another 26% of cerebellums have only one parameter in range of medium values. Disproportionate forms were not found. Therefore, we obtained 15 different combinations of three relative parameters which describe cerebellar shape.
Conclusion. The obtained data will be used for the further morphological studies on the correlational relationships between the shape factors of the cerebellum and its other anatomical features. Our findings may also be valuable for the diagnosis of cerebellar diseases using MRI.

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VASCULAR CELL ADHESION MOLECULE-1 ROLE IN BRONCHIOLITIS IN YOUNG CHILDREN

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Topicality. Bronchiolitis of viral etiology is the most common severe respiratory infection in young children. Immune cells and molecular mediators, which are involved in the local inflammatory response in the respiratory tract under the influence of viruses or bacteria, play an important role in the pathogenesis of inflammation in bronchiolitis. In inflammation, leukocyte transport is regulated by the complex and coordinated actions of many molecular mediators, including chemokines, selectins, and cell adhesion molecules. One of these adhesion molecules is vascular cell adhesion molecule-1 (VCAM-1). The influence of an infectious factor increases the expression of this molecule on the respiratory epithelium by supporting leukocyte infiltration. Determining the level of VCAM-1 makes it possible to assess the degree of damage to the respiratory epithelium.
Purpose. Determination of the level of VCAM-1 in the blood serum in young children with bronchiolitis.