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## **CHANGES IN THE STATE OF THE ANTIOXIDANT-PROOXIDANT SYSTEM DURING PARODONTITIS IN EXPERIMENTAL ANIMALS**

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Periodontal diseases are among the most common dental diseases. This article highlights the results of a study of blood parameters in animals that underwent the simulation of ulcerative necrotic gingivitis and compared them with animals that under the same conditions received local treatment of this pathology with a developed complex of antioxidant drugs.

The aim of the study was to analyze the nature of changes in the state of the antioxidant-prooxidant system during the pathological process without and on the background of treatment, and investigated their impact on quantitative and functional indicators of markers of inflammatory intensity.

The study was conducted on 18 rabbits. The model of ulcerous - necrotic gingivitis was obtained in animals by chemical burns. Experimental preparations were applied to the damaged gum area 2 times a day in 2 hours after feeding the animals at an approximate dose of 200 mg. The nature of the course of experimental ulcerous - necrotic gingivitis was investigated on the 3rd, 5th, 7th and 10th days of the healing process.

The maximum increase in the concentration of MDA in the blood of animals of the experimental group was observed in the first observation period. In the next two terms in this group there was a rapid decrease in the content of MDA. By its nature, the dynamics of API in animals of the experimental group of animals, which received according to the conditions of the experiment, the appropriate local treatment with the developed complex, differed markedly from the dynamics found in the control. At the end of the experiment (the 10th day), the API data completely coincided with the data same as of intact animals.

Topical application of the developed complex reduces the content of lipoperoxidation products, in particular the concentration of MDA, which avoids overexertion and depletion of antioxidant defense systems, resulting in a shift of balance in the antioxidant direction and its normalization on the 7th day.

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## **DENTAL HEALTH OF CHILDREN ACCORDING TO THE EGOHID CRITERIA**

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Children's dental health is an important part of the general state of the body. Today there is a great prevalence of oral diseases among children and adolescents, especially dental caries. It is well known that dental caries is a multifactorial, diet-associated disease, manifested by enamel demineralization. The etiology and pathogenesis of dental caries are well-studied and known. There are more than 100 risk factors that cause dental caries in childhood. They can be of different intensity and different in nature, there are different variants of their interaction. This determines the direction of mass preventive measures, which are of particular importance for strengthening the health of the growing organism.

Therefore, the aim of our study was to assess the dental health of children aged 12 and 15 living in the Bukovina region. To achieve this aim, we examined 46 children aged 12 years and 15 years and formed 2 research groups: Group I – 12-years-old children, Group II – 15-years-old children. Dental examination was performed according to standard methods and was determined by using the prevalence, intensity of dental caries (“DMFt”), and the simplified index of oral hygiene (OHI-S). The generalized parameters of the EGOHID system were studied and an anonymous survey was conducted on the modified main indicators of this system.

The study of the condition of the hard tissues of the teeth in children of both groups revealed a high prevalence of caries of permanent teeth according to the WHO criteria. Analysis of the intensity of caries of permanent teeth showed that its average value at the age of 12 years is  $4.62 \pm$



0.19 teeth, while in 15-year-olds it is higher -  $5.89 \pm 0.24$  teeth. The structure of DMFt was dominated by the component “D” in both groups, respectively in group I -  $3,56 \pm 0,12$  teeth and  $4,48 \pm 0,19$  in group II. It was found that in 12-year-old children, the average value of the SIC index was  $6.67 \pm 0.14$  teeth, which was significantly different from that of 15-year-old children:  $8.41 \pm 0.35$  teeth. We found unsatisfactory oral hygiene in both groups, but the figures were different.

Thus, the obtained high rates of prevalence and intensity of caries determine the special importance of caries prevention measures and indicate the need to find new approaches in the fight for the dental health of children.

**Muryniuk T.I.**

## **FEATURES OF SURGICAL PREPARATION OF ORTHODONTIC PATIENTS**

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The operation to remove the third molars is a frequent stage of orthodontic treatment of patients. Today, many scientists recommend removing the germs of these teeth in children aged 10 years, i.e. before the beginning of the period of root formation, to prevent the development of dental anomalies. In addition, it was found that the postoperative period in patients of an earlier age is better and has fewer complications.

Scientific and practical research in different countries is devoted to the study and evaluation of the state of the germs of third molars, their influence on the formation of occlusion and the state of the dental system. Methods of surgical removal of third molars are constantly improved and the indications and methods of their implementation are expanded. Germectomy is one of the alternative methods, which has a number of advantages over typical and atypical methods of tooth extraction.

In particular, the follicles are located close to the thinned alveolar ridge, have no roots, which significantly facilitates and reduces surgical trauma. Last but not least is the psychological state of the child, which is usually more favorable at an earlier age than during puberty or prepuberty.

Therefore, the aim of our work was to analyze the need for surgery to remove third molars (germs) for orthodontic indications. We conducted a retrospective analysis of 200 medical records, diagnostic models, and orthopantomograms of orthodontic patients.

It was found that in 85.5% of cases orthodontic treatment was accompanied by the removal of third molars and was due to congestion of the teeth, which, in their turn, developed due to various factors. The operation to remove the third molars was performed in patients aged 9 to 25 years and at different stages of orthodontic treatment. The distribution of patients by age was as follows: in 9.94% of cases, surgery in the form of germectomy was performed at the age of 9-12 years; 60.24% - at the age of 12-16 years, and 29.82% - at the age of 16-25 years. 2/3 of patients underwent this surgery before orthodontic treatment, and a third - at the final stage of treatment.

Thus, most often the operation to remove the third molars for orthodontic indications is performed at the age of 12-16 years. Most orthodontists plan this manipulation before the start of the active period of orthodontic treatment. In cases where patients refuse the surgical stage at the beginning of treatment of dental pathology, it is usually necessary to return to it during or after the operation of orthodontic appliances.

**Mytchenok M.P.**

## **PHYSICAL AND CHEMICAL PROPERTIES OF SALIVA AMONG PATIENTS SUFFERED FROM DIABETES MELLITUS**

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One of the leading medical-social issues is diabetes mellitus. The first signs of diabetes are known to be changes in the oral cavity being of a considerable diagnostic value. Diabetic patients in comparison with individuals without somatic pathology manifest dry and pastose content of the