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The effect of prophylactic application of mouthwashes into microbiocenosis of the oral cavity.

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Introduction: Important direction of modern dentistry is the prevention of periodontal disease. It is known that one of the main etiological factor is the microbial factor. The reason the majority of gingivitis and periodontitis is bacteria, which attach to the tooth surface both above and below the gingival margin, forming the basis for bacterial plaque.

Purpose: The aim of our study was to learn the effect of prophylactic application of mouthwashes, which contain active ingredients triclosan and chlorhexidine, into microbiocenosis of the oral cavity.

Materials and Methods: 40 students of the Faculty of Dentistry KhNMU 3 and 5 year studing were examined with intact periodontium and divided into 2 groups of 20 people. At 1 group, as a prophylactic agent was applied mouthwash with the active substance chlorhexidine, and in group 2 - with a triclosan rinse. Rinsing was carried out for 4 weeks, 2 times a day, morning and evening according to instruction. Microbiological investigation of the plaque was performed before and after application rinse, long-term results were studied after 3 and 6 months. Intake of material was made with a sterile cotton swab from buccal cervical region of the upper molars and delivered to the laboratory in a test tube with nutrient medium.

Results: After applying of mouthwashes at both groups has decreased the number of pathogenic staphylococci and hemolytic streptococciand representatives of anaerobic microorganisms. In group 1 was completely abolished the intestinal flora. In group 2 the concentration of yeast fungi decreased by an order. There were no significant differences between the rinsing effect of the microflora was found. Almost half of all cases reduced selection autoflora - *Corynebacterium*, *Lactobacillus*

After 3 months of application rinse the percentage distribution of microorganisms approximately corresponded to the picture, identified after 4 weeks of use. After 6 months of the microflora was restored, but the registration of micro-organisms stayed less than the original level.

Conclusions: Analysis of the data of microbiological studies showed that after 4 weeks application of mouthwashes in both groups microflora inhibition is one and two order of magnitude below. Along with the pathogenic microorganisms are also affected representatives of autoflora: after 4 weeks of *Corynebacterium* spr. was not allocated at any of groups. In this long-term results have shown the efficacy of long-term preservation of mouthwashes. In all cases of groups identification and registration of pathogenic microorganisms have been reduced and in this state have survived to 6 months.

Discussion: It is necessary to regulate the prophylactic use of mouthwashes, which contain antimicrobial substances, because uncontrolled their application may lead to phenomena dysbacteriosis.