

## Features of Orthopedic Treatment of Dentition Defects of HIV -Infected Patients with Fixed Structures

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### ABSTRACT

In 100 HIV-infected men aged 20-25, who need prosthetics, with generalized forms of periodontitis and candidal glossitis / stomatitis special antifungal therapy of oral mucosa was conducted. Application of this technique has allowed increasing the effectiveness of orthopedic treatment of patients, as well as at orthopedic treatment stages, and at the control examinations after 4-6 months. With this technique inflammations, bleeding, soreness of the oral mucosa were eliminated or significantly reduced, a fungal infection was eliminated.

**Keywords:** HIV-infected patients, orthopedic treatment of dentition defects, special preparation of the oral mucosa to prosthetics.

### INTRODUCTION

The current epidemiological situation of HIV infection in the Russian Federation is characterized by the increasing number of newly diagnosed patients infected with HIV, at varying ways of transmission. In this regard, HIV infection has become a major health and social problem, since in addition to the direct social values - the illness and death of millions of people, AIDS is also an economic and political damage, which allowed the infection to be one of the most important modern sociopathies. Infection of young people with above mentioned infections viruses leads not only to a quantitative increase in the incidence of HIV infection, but also has important medical and social importance, since the HIV-infected remain long-term asymptomatic sources of infection and die from AIDS in the fertile and working age. [5,6].

*Pathogenesis of HIV infection.* When HIV infects the body, it affects a number of very important cells, including CD4 (T-lymphocytes), in which it multiplies. When a cell is infected, it ceases to function normally, and after HIV reproduces itself, it can destroy the cell. This virus infects not only CD4, but it is important for the control of cell infection. Number of CD4 - the main indicator of immune health with HIV. When most CD4 cells are infected or destroyed, the body loses its ability to resist severe and life-threatening diseases [1,3,6]. It is known that HIV-infected, against secondary immunodeficiency activated conditionally pathogenic flora,

contributing to the development of infectious diseases. Lesions in the oral cavity are the earliest and most important indicators of HIV infection (table).

It is known that the most early and compulsory sign of the manifestation of HIV - infection is a manifestation of it in the mouth [4]. So among the earliest widespread HIV indicator diseases include HIV - associated periodontal diseases, which are characterized by a rather persistent and prolonged course resistant to conventional treatment [5,6]. Clinical sign of HIV periodontitis is bystropgressirovannaya destruction of alveolar bone and periodontal tissue. With severe inflammation, pain, spontaneous gingival bleeding in Figure 1 (left), joining a fungal infection in Figure 1 (right), contributes to the development of resistance to conventional therapies.



Figure 1. Lesions in the oral cavity at HIV- infection: left - gingival bleeding, right - a fungal infection.

The orthopedic treatment of inflammation of the gums could complicate the process of preparation for a crown, especially the establishment of the ledge, removing double impression silicone masses, and then fixing bridges. These complications ultimately lead to a decline in the quality of prosthetics. In addition, significant bleeding gums can lead to viral contamination print and prosthesis in the intermediate stages , creating a risk of infection and the doctor equipment .

**The purpose** of research - to improve orthopedic treatment of dentition defects in HIV-infected , by special preparation of the oral mucosa to prosthetics.

## MATERIALS AND METHODS.

100 HIV-positive at the age of 20-25 years male were surveyed. Of the surveyed revealed that 88 people (88.0 %) need prosthetics fixed prosthesis, 12 (12.0%) men do not need prosthetics. Dental status was assessed by conventional research and classifications instrumental inspection of the oral cavity and periodontal status. To estimate the prevalence and intensity of caries, periodontal disease oral hygiene status was used : the index of the intensity of dental caries (CPU) and hygiene index, the index needs in the treatment of periodontal disease - CPITN. Dentition examination determined by classification AI Gavrilova. All the examinees performed microscopic smears for the presence of oral fungi of the genus *Candida*. Number of needy people in the prosthesis 88 (100.0 %) identified two groups: basic 45 patients (51.1 %) and a control group of 43 people (48.9 %). After a dental examination and selection of prosthetic performed oral hygiene, occupational health. Further, patients of the main group received the following training : application to the oral mucosa p- m -1ml./4raza clotrimazole 1% per day, per / os tab. Fluconazole 50mg / 2 times a day after meal number 10. The second group of patients in need of prosthetics further training was conducted by the standard technique - administered iodine rinse mouth with water ( 5-10 drops of tincture of iodine , a glass of water ), 2 times a day for 10 days. Statistical processing of the results was performed using the programs «Microsoft Excel» «Statistica 6 », «SPSS 17.0 for Windows» [2].

## RESULTS AND DISCUSSION

By examination we revealed the following: gums color of 10.0% of surveyed - pale pink, at 78.0% - gums hyperemic, swollen, bleeding gums - at 60.0 %. The presence and depth of periodontal pockets 3-4 mm. - 58.0 % 4-5 mm. - 30.0 % 6 mm. - 12.0 %. By tooth mobility: 1stepen - 48.0 % 2 degree - 35%, grade 3 - 17.0% . On microscopic examination of smears of the oral cavity revealed the presence of fungi of the genus *Candida* - in 70.0 % of cases. Observed correlation relationship in patients with the presence of periodontal pockets to a depth of 5 mm. and the presence in them of fungi *Candida*  $r = 0,501$  (  $p = 0.001$  ) . The index definition caries intensity (KPU) showed that 85.0 % of the patients the mean value of the Communist Party was  $11,1 \pm 0,74$  (high intensity level of dental caries). Oral hygiene index was  $2,2 \pm 0,05$ , which is unsatisfactory. In the analysis of the dentition and exhibiting clinical diagnosis was determined that 62.0 % had grade 3 dentition defects (defects included unilateral lateral parts of the dentition) 24.0% - Grade 4 (bilateral defects included lateral parts of the dentition), 11 0 % - 5 class ( included defects of the anterior dentition) , 3.0 % - Grade 6 (combined defects).

1 month later we revealed that the proposed method allows the preparation of the oral cavity in 25 people (55.6%) to increase the effectiveness of orthopedic treatment of secondary

partial edentulous and shorten training in oral prosthetics by reducing generalized periodontitis and Candida glossitis / stomatitis in HIV-infected patients. In the control group of HIV -infected patients with secondary partially edentulous and chronic generalized periodontitis, candidiasis glossitis / stomatitis, which for local drug treatment used the standard scheme, the timing of local treatment were stretched to 14-19 days, while after 4 months at 34 people (80.0 %) HIV-positive relapsed generalized periodontitis and candidiasis.

Analysis of the results after 6 months confirmed the resistance effect of a medical complex in 25 patients (55.6 %) patients. Thus, the proposed method for the preparation of oral prosthetics HIV-positive, purposeful action provides an infection that most often occurs in these patients. Proposed treatment improves local immunity of the oral mucosa with preserved persistent clinical effect, a reduction in terms of preparation of the oral cavity, as well as prolong the life of fixed prostheses .

### CONCLUSIONS

1. Providing treatment for HIV-infected patients in need of dental prosthetics, with generalized forms of periodontitis and candidal glossitis / stomatitis, antifungal therapy: application to the oral mucosa of klotrimazol 1% -1ml. 4 times per day , per / os tab. Fluconazole 50mg / 2 times a day after meal №10, can significantly reduce the time of preparation for prosthetics of patients with HIV and more durable clinical results.

2 . Correlation relationship in patients with generalized periodontitis (periodontal pockets to a depth of 5 mm.) and the presence in them of fungi Candida  $r = 0,501$  ( $p = 0.001$ ) is observed.

3. Medical staff working in a dental office should observe the utmost caution in all kinds of manipulations, avoid contact with skin and mucous membranes with blood and saliva of the patient. Personnel must strictly comply with the requirements for the prevention of occupational infections, strictly observe the rules of personal hygiene: when working with patients not to touch the hands of his eyes, nose, mouth, hair: do not touch and do not comb wounds, cuts, and other damage. Each case of damage associated with possible contamination of blood or other body fluids while performing their duties is to notify the department head (or chief physician) to register them in the register of accidents.

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