

**EVALUATION OF THE EFFECTIVENESS OF DEPO-, APEX – FOREZ AND  
FLUKTUORIZATION IN THE COMPLEX TREATMENT OF CHRONIC  
APICAL PERIODONTITIS****<sup>1</sup>X. X. Khozhiev, <sup>2</sup>N. N. Khabibova**Bukhara state medical Institute named after Abu Ali Ibn Sina<sup>1,2</sup>**INTRODUCTION**

Treatment of chronic apical periodontitis (CVP) is one of the most important and not fully solved problems of therapeutic dentistry. This is primarily due to the significant prevalence of this disease, the complexity and complexity of medical manipulations, a large percentage of failures and complications in treatment, as well as the lack of stability of the results obtained using known treatment methods. Therefore, the constant search for new and more effective means and methods of treatment of CVP is one of the urgent tasks of modern dentistry.

The aim of the study is to Increase the effectiveness of treatment of chronic apical periodontitis by improving the endodontic treatment of the disease with separate and combined use of new methods of depot and apex foresis with the joint use of fluktuorization .

**Key words:** *periodontitis, patients, treatment, microflora, efficiency.*

**RESEARCH MATERIALS AND METHODS**

Streptococci and staphylococci were most frequently detected in the study material: Str. sanguis - in 52% of patients, Str. mutans-in 68%, Str. salivarius-in 52%, and St. epidermidis-in 41%. In addition, Peptostreptococcus anaerobius was detected in root canals in 38% of patients, and Clostridium spp was detected in 12% of patients. In the area of rarefaction, there is no drawing of Candida albicans bone beams.

The use of depo – and apex-Forez in the treatment of chronic apical periodontitis leads to a significant ( $P < 0.05-0.001$ ) rapid acceleration of the processes of regeneration of periapical tissues in comparison with traditional methods of treatment of the disease. At the same time, the combined use of depo -, apex-foresis and fluktuorization has a 1.3-2.2 times more effective effect on the condition of the periapical tissue of the teeth than using them separately, which is expressed in reducing the number of complications, accelerating the process of bone regeneration in the apical periodontal area and thereby reducing the number of visits to the dental institution.

Treatment of chronic apical periodontitis (CVP) is one of the most important and not fully solved problems of therapeutic dentistry. This is primarily due to the significant prevalence of this disease, the complexity and complexity of medical manipulations, a large percentage of failures and complications in treatment, as well as the lack of stability of the results obtained using known treatment methods. Therefore, the constant search for new and more effective means and methods of treatment of CVP is one of the urgent tasks of modern dentistry. Meanwhile, in recent years, new methods have been used in the treatment of periodontitis of problem teeth: copper – calcium hydroxide depophoresis and apex-foresis with the joint use of the physiotherapy method of fluktuorization. Depophoresis of copper-calcium hydroxide and apex-foresis has a transcanal effect on the apical part of the tooth root by direct current using a silver-copper conductor, and fluktuorization simultaneously has an analgesic (analgesic) anti-inflammatory; local myostimulating (increases the functional state of muscle tissues); trophic-regenerative (increases the supply of tissues with nutrients, which contributes to their accelerated recovery) effect.

Despite conflicting opinions about these methods, a number of studies and clinical observations indicate their effectiveness as an alternative to impregnation methods. The prospect of using these methods in destructive forms of CVP is due to the fact that they allow you to completely clean additional channels and branches from pulp residues, thoroughly sterilize and obturate them, and also have a pronounced antibacterial activity on the anaerobic microflora of the root canals of teeth, as well as rapid post-pain termination, which cannot be achieved using well-known traditional methods.

All patients were examined the microflora of the root canals of the teeth, x – ray examination and electroodontodiagnostics (EDI) from the mouths of the root canals before traditional treatment and treatment with depot, apex-forez together with the physiotherapy method of fluktuorization. X-ray images were used to record the absence or presence of destructive changes in the periodontium, and EDI was used to determine the state of the root pulp. If the remains of infected pulp were found in the root canals of the teeth (electrical excitability is below 100 mkA), it was devitalized with a devit. The procedures were prescribed after complete devitalization of pulp residues with EDI readings above 100 mkA.

To amplify the DNA of pathogenic bacteria *Actinobacillus actinomycetemcomitans*, *Prevotella intermedia*, *Bacteroides forsythus*, *Treponema denticola*, and *Porphyromonas gingivalis*, a multiplex PCR method was used to simultaneously identify several pathogens. PCR was performed in a Tertsik MS-2 amplifier (manufacturer-DNA technology, Moscow). The reaction took place in the Matrix temperature control mode according to the following program: denaturation at 95 ° C for 120 s (1 cycle); denaturation at 95 ° C for 30 s; annealing at 60 ° C for 30 s; synthesis at 72 oC for 40 s (33 cycles); final stage synthesis at 72 oC for 240 s (1 cycle). The incubation mixture with a final volume of 25 µl contained 19 µl of SUPERMIX, 1 u / µl of polymerase, and 5 µl of DNA isolated from the root canals of teeth. To prevent evaporation of the reaction sample, 25 µl of mineral oil was layered on top of the mixture. The resulting DNA products were determined by electrophoresis in 1.6% agarose gel.

## RESULTS

As shown by the results of microbiological studies, the material taken before the start of various types of treatment from the root canals of teeth revealed a variety of microbial landscape in the form of obligate and facultative anaerobic bacteria. Streptococci and staphylococci were most frequently detected in the study material: *Str. sanguis* - in 52% of patients, *Str. mutans*-in 68%, *Str. salivarius*-in 52%, and *St. epidermidis*-in 41%. In addition, *Peptostreptococcus anaerobius* was detected in the root canals in 38% of patients, *Clostridium spp* was detected in 12%, and *Candida albicans* bone beams were missing in 14% of the fungi in the rarefaction area.

The study of anaerobic bacterial strains obtained from the root canals of teeth before treatment had (table.1), that in traditional therapy of chronic apical periodontitis in all strains of facultative anaerobic bacteria, the growth retardation zones were less than 5.1 (3.7-5.0 mm), and in depophoresis with copper-calcium hydroxide at a current strength of 1.5 mA x min – 4.9 (3.5-4.8 mm). In accordance with the existing criteria for evaluating antibacterial activity, such values of inhibition of growth of test cultures can be regarded as a weak antibacterial effect of traditional treatment and depoforesis at a dose of 1.5 mA x min.

## CONCLUSIONS

1. the use of copper-calcium hydroxide depophoresis and apex-foresis of the silver-copper conductor of the root canal of teeth in the complex endodontic treatment of chronic apical periodontitis leads to a 2.0-3.3 one-

time better reduction of facultative anaerobic bacteria than traditional treatment. At the same time, the most pronounced (1.5-2.5 times more) antibacterial effect is the combined use of depot -, apex – Forez and physiotherapy method of fluktuorization, than the use of them separately.

2. the use of depo - and apex-Forez in the treatment of chronic apical periodontitis leads to a significant ( $P < 0.05-0.001$ ) rapid acceleration of the processes of regeneration of periapical tissues in comparison with traditional methods of treatment of the disease. At the same time, the combined use of depo-, apex-foresis and physiotherapy method of fluktuorization has a 1.3-2.2 times more effective effect on the condition of the periapical tissue of the teeth than using them separately, which is expressed in reducing the number of complications, accelerating the process of bone regeneration in the apical periodontal area and thereby reducing the number of visits to the dental institution.

3. it was Found that the immediate and long-term results of endodontic treatment of chronic apical periodontitis using depot-, apex-foresis and physiotherapy method of fluktuorization in our modification can be evaluated as positive and recommend their use in clinical dentistry.

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