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CLINICAL JUSTIFICATION OF THE USE OF METROGIL DENTA AND LISTERINE IN THE COMPLEX TREATMENT OF PERIODONTAL DISEASES

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ABOUT ARTICLE

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Abstract: The wide prevalence of periodontal diseases among the active able-bodied part of the population of our country determines the special relevance of this problem. The emergence and progression of periodontal diseases is largely facilitated by the pathogenic microflora of the oral cavity, which encourages the search and development of new antibacterial drugs. As is known, the most important component of the therapy of inflammatory periodontal diseases, along with traditional periodontal treatment, is the use of antibacterial agents.

INTRODUCTION

The wide prevalence of periodontal diseases among the active able-bodied part of the population of our country determines the special relevance of this problem. The emergence and progression of periodontal diseases is largely facilitated by the pathogenic microflora of the oral cavity, which encourages the search and development of new antibacterial drugs. As is known, the most important component of the therapy of inflammatory periodontal diseases, along with traditional periodontal treatment, is the use of antibacterial agents.

At the same time, the widespread, and sometimes unjustified and uncontrolled use of chemotherapy drugs leads to the formation of strains with resistance to antibiotics. It has been established that their selection occurs, in particular, with sharp fluctuations in the concentration of drugs.

The solution to this problem can be implemented in the following ways:

1. The use of antiseptic drugs, which, unlike antibiotics, have a wide antibacterial spectrum and do not induce microbial resistance.
2. Creation of prolonged dosage forms based on components that are sorbed on the mucous membrane of the oral cavity or create depots in periodontal pockets.

Prevention, early diagnosis and timely treatment are of great importance for maintaining a healthy periodontal condition. Periodontitis develops as a result of a complex cascade of inflammatory and immunological processes in response to the aggression of plaque microorganisms in susceptible patients. Somatic diseases, smoking, as well as taking certain medications are important factors of predisposition to periodontitis. But it is known that improving the quality of self-hygiene before periodontal treatment contributes to its success.

Very often, patients are not informed in advance about the need for strict self-hygiene and regular visits to carry out maintenance therapy. However, with satisfactory self-hygiene of the oral cavity, it is possible to preserve natural teeth for a long time and prevent the aggravation of periodontitis.

The features of this pathology determine the special requirements for medicines used in its therapy. It is well known that they must have a multidirectional effect: antimicrobial, immunomodulatory, dehydrating. In addition, they must provide a stable concentration of drugs in the focus of inflammation, have no side effects, and be stable during storage.

The most rational local dosage form, which allows to realize a multifactorial, prolonged effect on damaged periodontal tissues, is the gel form of the drug.

The main therapeutic component of the drug metrogil denta is metronidazole, which has a wide range of antibacterial and antiprotozoal effects with a low probability of developing resistance of microorganisms to it. It is taken into account that metronidazole and its derivatives are modulators of arachidonic acid metabolism, have an immunomodulatory effect, which is so necessary for autoimmune diseases, which include generalized periodontitis. The second active component of metrogil dent is chlorhexidine, a broad–spectrum antiseptic with bactericidal action against vegetative forms of gram-negative and gram-positive microorganisms. This antiseptic is widely used in dentistry. It is characterized by a strongly pronounced positive charge, therefore it can stay with negatively charged microorganisms for a long time, which leads to rupture of their cell membrane, which is unable to maintain osmotic balance. However, chlorhexidine does not have a selective effect only on plaque pathogens.

The clinical effect of metrogil dent has been confirmed by immunological studies. To substantiate the expediency of using the drug, examinations and treatment of patients with chronic generalized periodontitis of moderate severity in the acute stage who applied to the periodontological department of the moscow state medical university.

The clinical examination at the department included the identification of complaints of soreness and swelling of the gums, bad breath, bleeding gums, baring of the necks of teeth, loosening and loss of teeth. When carefully collecting anamnesis, attention was paid to cases of intolerance or allergic reactions to medications.

Objective clinical criteria (hygiene index, periodontal-marginal-alveolar index, periodontal pocket depth, periodontal index, bleeding index, etc.) Were used to assess the patient's condition and the severity of the disease.

For radiological control of the development of the pathological process in periodontal and alveolar process tissues, panoramic images were used, which were performed before the start of the course of treatment and 2-3 months after its completion, as well as intraoral sighting images, allowing to obtain more complete information about the tops of the bone septa, their resorption and the inter-root space.

For bacteriological examination, material was taken from periodontal pockets before treatment and after the end of the course. Next, quantitative sectoral seeding was carried out on the media. Studies have shown that during the initial visit to the dentist, about 700 species of the main periodontopathogenic bacterial species were isolated. About half of all germs sown were bacteroids, peptostreptococci and actinomycetes.

A comparative study of the effect of the drug metrogil dent revealed a significantly pronounced antimicrobial effect, especially against representatives of gram-positive periodontopathogenic flora. The most pronounced suppression of bacterial growth was observed on 12-14 days of drug use.

When using the combination of metrogyl denta + listerine, a more pronounced dynamics of reducing the number of microbes contained in the periodontal pocket in patients with generalized periodontitis was noted.

Listerine belongs to phenolic essential oils. It also includes thymol, eucalyptus, menthol and methyl salicylate. Japanese researchers, after studying the properties of listerine, concluded that it has a broad-spectrum antibacterial effect: this antiseptic proved effective in suppressing 38 of the 54 bacterial strains considered, and most of them died 30 seconds after its application. The antiviral effect of the drug on the influenza a virus, as well as herpes simplex, was also observed.

Observations have shown that the local treatment with metrogyl denta + listerine contributed to the normalization of cellular and humoral immunity, which in turn can serve as a criterion for the effectiveness of the therapy.

The resulting antibacterial effect of the combination of metrogyl dent + listerine on the isolated mixed microflora of periodontal pockets can be explained by their ability to stimulate the protective mechanisms of the patient's body, inhibit the synthesis of staphylococcal toxin and enzymes, as well as prolonged action during the entire application period while ensuring stable therapeutic concentration of the drug in the lesion. Studies have allowed us to establish not only the optimal concentration of metronidazole, but also to identify a certain activity of the filler.

The research results indicate that the use of metrogyl dent + listerine in the complex treatment of periodontal diseases provides an anti-inflammatory effect, helps to eliminate destructive changes in the epithelial layer and restore intercellular contacts between epithelial cells.

The advantages of metrogil dent include the absence of irritating effects on the mucous membrane of the mouth, allergic reactions, mechanical pressure on the inflamed mucous membrane of the gums. Clinical efficacy has been proven by shortening the duration of treatment and a large number of favorable outcomes.

Metrogil denta and listerine are easy to use, if necessary, the patient can make applications at home himself.

All of the above allows us to recommend the drug metrogil denta + listerine for the complex treatment of inflammatory and inflammatory-destructive periodontal diseases.

Methods of application: listerine is prescribed 3-4 times a day in the form of mouthwashes. Metrogil denta is applied with a finger or a special applicator to the surface of the inflamed gum 3-4 times a day after rinsing with listerine. In the surgical treatment of periodontal diseases (curettage, gingivotomy, flap operations) metrogil denta and listerine should be used for the treatment of wounds and periodontal pockets. Metrogil denta can be used as a dental dressing.

The drug is effective for damage to the mucous membrane of the oral cavity of any origin. Timely use of metragil dent accelerates epithelialization of lesion elements, increases the duration of remission.

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