

Evaluation of the results of using a gel with chlorhexidine bigluconate, ornidazole and essential oils at the initial stage of treatment for patients with periodontal pathology

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Introduction

The role of pathogenic microorganisms in the development and maintenance of the inflammatory process in periodontal tissues is not in doubt among researchers. One of the most important tasks of clinical periodontology is the antibacterial effect on periodontal pathogens of periodontal pockets. However, there are certain difficulties in implementing this task, associated with the diversity of the microbial composition of periodontal pathogens, and, accordingly, their sensitivity to different antimicrobial drugs.

Aim

The aim of our study was to create a medicinal composition with antimicrobial effect for a complex and universal impact on the diverse microflora of periodontal pockets at the initial stage of treatment for patients with periodontal pathology.

Materials and methods

To solve the problem, an experimental gel with ornidazole, chlorhexidine bigluconate and plant oils *Salvia officinalis* and *Mentha Piperita* was proposed. The combination of active ingredients in the studied gel allowed, without increasing the concentration of chlorhexidine, to preserve its antibacterial effect and avoid side effects associated with it. The study included 20 patients with generalized periodontitis (GP) of mild and moderate severity (10 patients were in the control group). All the patients underwent professional dental hygiene, after which a gel with metronidazole was injected into the periodontal pocket with a short cannula from a syringe - in the control group and a gel with ornidazole in the study group. Patients were given experimental gel samples for home use and given recommendations for use after brushing their teeth for 7 days.

Results

As a result of the studies, a positive trend in the PMA index indicators was noted from 2.7 to 1.8 in the study group compared to the control group from 2.8 to 2.2.

Conclusion

The proposed experimental gel showed significant advantages in clinical use compared to the gel with metronidazole. The gel composition is convenient not only for application to the gums, but also for instillation into periodontal pockets.

It is a pilot study, conducted on a small cohort of volunteers. It is not designed to have statistically significant results, but rather to identify trends and directions for future research.