

THE USE OF OZONE THERAPY IN THE COMPLEX TREATMENT OF FLAT-SHAPED LEUKOPLAKIA OF THE ORAL MUCOSA

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Abstract:

Relevance. Leukoplakia is an orogenesis of the oral mucosa and red karma of the lips, accompanied by inflammation, which occurs, as a rule, in response mainly to chronic exogenous irritation, without denying the influence of endogenous factors. Clinically, there are flat, verrucose, erosive-ulcerative, smokers' leukoplakia (Toppeiner), simple and mild forms of leukoplakia. Leukoplakia of the oral mucosa belongs to facultative precancers, the degree of probability and frequency of malignancy of which are not clearly defined and according to cancer studies vary from 12 to 25%.

Therefore, the identification of early stages of pathogenetic features of the development of oral leukoplakia and timely adequate treatment is of great importance for the prevention of oncological degeneration of this disease.

Meanwhile, in recent years, non-drug therapies, one of which is ozone therapy, have attracted great attention of scientists and practitioners.

To date, studies related to the use of general and local ozone therapy in the complex treatment of flat-shaped leukoplakia of the oral mucosa have not been conducted.

The aim of the ongoing study is to increase the effectiveness of treatment of patients with flat form of leukoplakia of the oral mucosa through the use of general and local ozone therapy [1.3.5.7.9.11.13.15].

Material and methods. 20 patients with a flat form of leukoplakia aged 30 to 60 years of both sexes were examined. The survey began with the collection of analytical data. The patients found out their age, profession, presence of bad habits, existing chronic disease, hereditary burden, lifestyle, hygienic status (whether the tooth cleanses, regularity, parts used and how it cleanses), anamnesis of the disease (when and at what age the first signs of the disease appeared, what is the reason for their occurrence, the first signs of the disease were treated, what is the reason for their occurrence, whether

to consult a doctor, if so, with the help of what methods the treatment was carried out and how effective it was).

When examining the oral cavity, attention was drawn to the state of the oral mucosa. its color, consistency, the presence of swelling, hypertrophy, atrophy, ulceration, the condition of the soft tissues of the vestibule and the bottom of the oral cavity, the nature and amount of dental deposits. The dental formula was recorded, teeth were detected with scarious cavities, pulpitis or periodontitis, the presence of fillings, inlays, crowns and prostheses, the presence of defects in the dentition, including with preserved roots, will be determined. The nature of occlusion, the type of bite, the presence of traumatic nodes were noted.

When studying the clinical and functional parameters of the oral cavity, we drew attention to the fact that leukoplakia in the oral cavity develops gradually. Inflamed areas with swelling appear on the mucosa, more often on the tongue or on the inner buccal surface, the lesions were the same and multiple, while there is a strong burning or itching, a grated area that is determined by the tongue. Often the disease does not manifest itself for a long time and remains without attention. Over time, the affected areas rise above the mucosa, becoming covered with a dense whitish coating. It is not difficult to remove it, but after a few days the plaque forms again. As a rule, painful manifestations are not observed.

Next, it determines the hygienic inuzh of the oral cavity according to Federovo – Volotskina, the state of non-specific factors of oral protection (titer of saliva lysozyme, phagocytic activity of neutrophils in saliva, the level of secretory immunoglobulin A in saliva) in patients.

Depending on the type of treatment, the patients were divided into 2 groups. The first group (the main one) included 10 patients who received general (intravenous) and local ozonated rosehip oil after oral sanitation. Rosehip oil was previously ozonized by prolonged (20-60 min) bubbling with an ozone-oxygen mixture in the Ozonator-1m apparatus with an ozone concentration.5 mg / l. Mixing with oil, ozone enters into oxidative reactions, the resulting peroxides give a therapeutic effect.

Ozone-ion oil does not lose its activity when stored in a glass container at 20 C, and when stored in a refrigerator at 5 C in a dark glass container, it retains its activity for a year [2.4.6.8.10.12.14.16].

General ozone therapy included intravenous drip administration

100 ml. 0.9% ozonated saline sodium chloride. Ozone was also obtained using the Ozonator-1m apparatus. The concentration of ozone in 100 ml. of saline solution during barbating for 5 minutes according to the scheme of preparation of the ozonated solution in the clinic was 1300- 1800 mg / l, the transfusion rate was 120-150 drops in 1 minute, the procedures were carried out every other day, for a total of 8-10 sessions.

Local ozone therapy included the application of ozonated rosehip oil to the affected areas of the oral mucosa with leukoplakia under a protective and firming wound. The course of treatment was 12-15 procedures daily.

The second group (control) included 10 patients with a rare form of leukoplakia, who underwent traditional therapy, including oral sanitation, removal of dental deposits, treatment of potological lesions of the oral mucosa with 0.2% chlorhexidine solution, selective grinding of teeth, plaque dental corms and applications of the affected areas with rosehip oil, a protective and fixing bandage.

All clinical and functional and mmunological methods of research were carried out before treatment (initial data), 15 days later, 30 days and in the long term – 6 months after treatment.

Statistical processing of the research results was carried out in the traditional way on a computer with the calculation of the Student–Fiter t- test.

It has been established that the application of photodynamic therapy using photoditazine photosensitizer in patients with severe forms (verrucous and erosive - ulcerative) leukoplakia allows to achieve optimal epithelization of lesions on average from 2 to 3 weeks. This is a good indicator for patients of this group, as well as to minimize side effects on surrounding tissues with this choice of treatment (16,26,30). Cases when the treatment failed to achieve 100% epithelization were most likely associated with the presence of pathological foci in the area of the keratinizing epithelium (or alveolar process), and also with the violation of the diet by patients and non-compliance with the recommendations for quitting smoking.

Treatment of oral leukoplakia with the use of laser destruction in combination with photodynamic therapy leads to a significant reduction in pain syndrome, the severity of swelling in the area of the postoperative wound, promotes acceleration of the processes of granulation and epithelization of the wound on the oral mucosa, which is confirmed by the indicators of the total total score characterizing the dynamics of clinical manifestations. The best results of treatment were achieved after combination treatment, however, studies in this direction, apparently, should be continued on a large number of patients and with examination in a timely manner.

To evaluate the effectiveness of local ozone therapy after the destruction of foci of verrucous leukoplakia of the oral mucosa, it was shown that with the same exposure, the cryorana regeneration after application of ozonated olive oil occurred earlier by 2-3 days compared with the control group. This can be explained by the long-term disinfecting and stimulating effect of ozone, which, with a small release during the application of ozonated olive oil, helps to preserve the timing of cryorans epithelization and increase the effectiveness of treatment of pathological processes of the oral mucosa [17.19.21.23].

If we talk about the prognosis of leukoplakia of the mucous membrane of the oral cavity and lips, then with timely diagnosis and competent treatment of the disease, the diagnosis is favorable. As vaccinated, the elimination of the irritating factor leads to a complete cure of the oral mucosa. Degeneration into a cancerous form occurs on average 10% of all cases of the disease.

Research results and their discussion. When analyzing clinical observations, the following results were obtained. After the treatment, in the main group of examined uzh, 2-3 days after ozone therapy with rosehip oil, more than half of the patients noted the disappearance of puffiness and burning. At the same time, in the control group of patients who received traditional treatment, swelling and burning in the oral mucosa still persisted. For 15-30 days of observation, grayish plaques disappeared, and after 6 months of exposure, the retraction, discomfort and tartar areas that were determined by the tongue in the oral mucosa disappeared. This indicates a more favorable effect of the use of ozonated rosehip oil than traditional treatment in patients with a mild form of leukoplakia of the oral mucosa.

As can be seen from the data in Tables 1, immunodeficiency is noted in the oral cavity of patients with leukoplakia. Thus, the titer of lysozyme is composed of the phocytosis index - 45.80 ± 1.11 mg%, with a norm of 57.20 ± 1.23 mg%, the level of s Zg A is 1.51 ± 0.03 , which is actually 1.2-2 times lower than normal.

On the 15th day after treatment with ozone therapy, the protective factors of the oral cavity tend to activate. Thus, the titer of saliva lysozyme is 20.32 ± 0.49 mg% (with a norm of 19.11 ± 0.60 mg%), compared to before treatment (12.31 ± 0.32 mg%).

The phagocytic activity of saliva neutrophils was $55.02 \pm 1.25\%$ (at a rate of $57.20 \pm 1.23\%$) when compared before treatment (45.80 ± 1.11), and the level of s Zg A was (at a rate of $3.01 \pm 0.11\%$), compared before treatment - 1.51 ± 0.03 .

This indicates a 1.2-2.1 fold activation of local protection of the oral cavity on the 15th day after the start of treatment of patients with ozone therapy.

It is interesting to note that the achieved positive achievements in the system of local immunity persisted on the 30th day of the study. However, the level of the studied indicators of the oral cavity in patients of the main group is at a high level and after 6 months, but less pronounced degrees.

In patients of the control group who received traditional treatment with rosehip oil and vitamin A, positive symptoms were also observed, but 6 months after traditional treatment, all the studied indicators of local oral protection again tended to decrease [18.20.22].

Thus, the inclusion of a complex of traditional treatment of flat form of leukoplakia and ozone therapy (intravenous and local) leads to an improvement in the clinical condition of the oral mucosa and activation of nonspecific factors of local oral protection, which persist 6 months after the start of treatment.

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