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Features of the Dynamics of Clinical Indicators in Patients With Combined Inflammatory-Destructive Lesions of the Periodont in Combined Treatment

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ANNOTATION

The cessation of pathological processes in the apical part of the periodontium sanitizes the state of the marginal periodontium, which helps to reduce inflammatory reactions in the periodontium with a high gradient with regeneration of the alveolar bone in a short time. The use of the magneto -infrared laser "Sogdiana" has a positive effect on the dynamics of the state of the gums, periodontal hard tissues and oral hygiene.

KEYWORDS: *combined inflammatory destructive lesions of the periodontium, chronic periodontitis, magnetic -infrared-laser therapy, furasol.*

In the etiology of inflammatory diseases of the dentition, great importance is attached to the pathogenicity (virulence) of the microflora and the relationship between macro- and microorganisms [5,7,9,17,24]. When the critical mass of bacteria is exceeded, their metabolic products cause direct alteration, as well as damage caused by biochemical and immune mechanisms [3,8,20,23].

The most dangerous are destructive forms of chronic apical periodontitis, which are potential foci of odontogenic infection and reduce the body's immunological defense [4,6,11]. It is known that the intensity and severity of the course of apical periodontitis depend both on the virulence of microorganisms and on the immunological status of the human body [1,10,15]. In this regard, the prevention of odontogenic inflammatory diseases should be ensured by a high level of endodontic treatment, as well as by correct diagnosis and pathogenetically substantiated treatment programs in the early stages of the process [16,19,21].

It is known that one of the most important stages in the treatment of destructive forms of chronic periodontitis is the antimicrobial treatment of the root canal system. The leading role of the microflora of the oral cavity in the etiology of chronic forms of periodontitis has been proved. According to the modern concept, microorganisms in the root, lateral dentinal canals, in the apical delta are in the form of a bacterial biofilm, which makes it difficult to eliminate them [13,14,17,20,22,24].

Given the infectious nature of apical periodontitis, it must be remembered that the success of the treatment of this disease depends on the effective elimination of microflora in the endodontic space [2,3,7,10,12,20].

A combined inflammatory-destructive lesion of the periodontium manifests itself with inflammation in the periodontium and in the periodontium, anatomically consisting of two sections: apical and marginal. The marginal periodontium is an element of the anatomical and functional complex of the periodontium of the tooth, while the apical periodontium is part of another anatomical and functional complex, the endodontium [4,6]. integrated approach to treatment. [7,8,21,24]

All of the above encourages specialists to find alternative means and methods of treatment, including non-drug ones , which allowed us to formulate the main idea of our study, which is to

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increase the effectiveness of treatment of combined inflammatory destructive periodontal lesions. For this purpose, we used magnetic -infrared-laser (MIL-) therapy exposure is one of the universal types of physiotherapy. The main therapeutic factor of MIL-therapy is pulsed infrared laser radiation of a semiconductor gallium arsenide laser diode. Laser radiation has monochromaticity (narrow band), spatial and temporal coherence and polarization , and due to these properties it has a powerful stimulating effect on blood circulation, membrane cell metabolism, activates neurohumoral factors, immunocompetent systems, harmonizes hormonal metabolic factors [12,13,16,17].

All of the above explains the relevance of the search for new diagnostic methods, drugs and treatment protocols to improve the effectiveness of therapy for combined inflammatory and destructive periodontal lesions . The issue of the optimal choice of antibacterial agents for the most successful treatment of destructive forms of apical periodontitis in SVDPP, reduction of treatment time, optimization of regeneration and restructuring of bone tissue, reduction or elimination of cases of repeated visits remains unresolved, which predetermines the purpose of this study.

The aim of our study was to study the dynamics of the state of the periodontium in the combined treatment of endodontics and periodontium. with combined inflammatory and destructive lesions of the periodontium.

Material and methods. 98 patients were examined aged 25 to 65 years and disease duration from 5 to 10 years. Patients with infectious pathology of the periodontium, which, depending on the presence or absence of periodontal infection, were randomly divided into 3 groups.

When compiling groups, gender, age, concomitant somatic pathology were taken into account. The average age of patients in group 1 corresponded to 43.28 years, in group 2 45.75, in group 3 43.89 years. In group 1, the number of women was 22 (68.75%), men - 10 (31.25%). In group 2, the number of women was 21 (61.76%), men - 13 (38.23%). In group 3, the number of women was 22 (68.75%), men - 10 (31.25%). Out of 98 patients 35.71% of patients were men and 64.28% were women. In 98 patients, 130 cases of occurrence of chronic periodontitis were noted: K04.5 - chronic apical periodontitis - 48 cases; K04.6 - periapical abscess with fistula - 38 cases; K04.7 - periapical process without fistula - 44 cases. All patients of groups 1 and 2 had chronic generalized periodontitis of varying severity. So the frequency of occurrence of periodontitis was observed in group 1 of mild severity (MS) 2 (6.25%), moderate severity (MoS) 28 (87.5%) and 2 (6.25%) severe severity (SS), in group 2 - 2 (5.88%) MS, 30 (88.23%) MoS and 2 (5.88%) patients with TTS , in group 3 - 1 (3.12%) MS, 30 (93, 75) MoS and 1 (3.12%) patients with SS . Thus, the average severity of inflammatory periodontal diseases prevailed in the three groups.

Prior to the start of treatment, all 98 patients underwent oral cavity sanitation, local anesthesia, antiseptic treatment of periodontal pockets (PP) with Furasol solution, removal of supra- and subgingival dental deposits and curettage of PP, temporary splinting and selective grinding of teeth. All patients were prescribed antimicrobial therapy with trichopol containing ointments. In patients of the 1st group, root canals were treated with an antiseptic 3% sodium hypochlorite , in patients of the 2nd group, antiseptic treatment of root canals was carried out with the solution " Furasol ", and in patients of the 3rd group, antiseptic treatment of root canals was carried out with a solution of " Furasol ", in addition to the canal was processed with the MIL-therapy apparatus "Sogdiana" (Uzbekistan) according to the developed scheme.

Results and discussions. In patients of three groups, the predominant complaints were: local toothache, aggravated by the action of irritants or eating, brushing teeth, biting food (100%, n_1 =32, n_2 =34, n_3 =32), increased bleeding of the gums n_1=31 (96,87%), n_2=32 (94,11%), n_3=31(96,87%), the presence of abundant supra- and subgingival overlays n_1=30(93,8%), n_2=32(94,11%), n_3=31 (96,87%), bad breath n_1=28(87,5%), n_2=29(85,2%), n_3= n_2=29(85,2%), itching, burning and pain in the gums n_1=28(87,5%), n_2=30(88,2%), n_3=30 (88,2%), gum

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discoloration (100%, n_1=32, n_2=34, n_3=32), mobility and displacement of teeth n_1=30(93,8%), n_2=32(94,11%), n_3=31 (96,87%), suppuration from fistulous passages in the projection of the periapical region, periodontal pockets n_1=4(12,50%), n_2=4 (11,76%), n_3=2 (6,25%).

In the studied groups of patients, no statistically significant differences in the subjective state were found: the average score in the 1st group was 6.57 ± 0.180 , in the 2nd group - 6.46 ± 0.296, in the 3rd group - 6.42 ± 0.247 (P<0.05). The average indicator of the state of the gums corresponded to the applied score scale in the studied groups of patients, fluctuated within 4.08±0.051; 4.09±0.070; 4.06±0.038 (P<0.05) points. There were no intergroup differences in the intensity of bleeding: in patients of the 1st group it was 5.82±0.191, in the 2nd group 5.67±0.367 points, in the 3rd group 5.61±0.468 points (P<0, 05) , and the average score of tooth mobility in the 1st group was 4.87±0.243, in the 2nd group - 4.69±0.205, in the 3rd group - 4.73±0.060 (P<0.05) .

In the studied groups , according to the applied score scale, it fluctuated within 4.93±0.234; 4.84±0.092; 4.92±0.068 (P< 0.05) points, which corresponded to the PP depth of 4-6 mm or more 6 mm. When studying oral hygiene, it was found that OHI-S scores in 3 groups of patients ranged from 4.61±0.038; 4.59±0.463; 4.51±0.246 (P<0.05). The total severity of the inflammatory-destructive periodontal lesion according to the O'Leary index , according to the point scale adopted by us, was at the levels of 9.18±0.116; 9.28±0.160; 9.24±0.125 (P<0.05).

Initially, the values of periodontal indices in the two groups did not differ significantly from each other and indicated pronounced manifestations of inflammatory changes in the periodontium. X-ray examination of the jaws made it possible to determine the resorption of the bone tissue of the interdental septa by more than 1/2 of the root length until it completely disappeared. There was a deformation of the image of the roots of the teeth on the radiograph due to mineralized tooth deposits. Any changes in the deep sections of the alveolar processes and jaw bodies were not detected. The dynamics of periodontal indices in 3 groups after combined treatment is presented in table 1 .

Comparing the severity of clinical manifestations of CIDPL, bleeding gums, tooth mobility, the state of hygiene and gingival inflammation and destruction of the periodontium, we can conclude that there is a significant difference in the results of treatment: in patients of groups 1 and 2, the treatment results were lower than in group 3 who received combined treatment.

After completion of the course of treatment, the number of patients with a good treatment effect (14 -16 points) was 9 people (28.12%) in 3 experimental and 4 people (11.76%) in the 2nd comparison group, and in the 1st group 3 people (9 .37%); corresponding proportion of patients with significant effect

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Quantitative values (in points) of clinical signs of combined inflammatory and destructive periodontal lesions in the tudied groups before and after treatment

Group a / Indicators	1 group n = 32 (M±m)		2 group n =3 4 (M±m)		3 group n =32 (M±m)	
	Before treatment	After treatment	Before treatment	After treatment	Before treatment	After treatment
Clinical assessment of the subjective state (CSS)	6.57 ± 0.180	2.56 ± 0.082 •	6.46±0.296	1.86 ± 0.119 •°	6.42 ±0.247	0.57 ± 0.095 •°*
Clinical assessment of the condition of the gums (KOSD)	4.08±0.051	2.88 ± 0.020 •	4.09±0.070	1.82 ± 0.194 •°	4.06±0.038	0.69 ± 0.080 •°*
Bleeding gums (SBI)	5.82±0.191	3.85 ± 0.101 •	5.67±0.367	2.79 ± 0.081 •°	5.61±0.468	1.91 ± 0.047 •°*
Pathological mobility (PM)	4.87±0.243	3.62 ± 0.128 •	4.69±0.205	3.16 ± 0.021 •°	4.73±0.060	2.39 ± 0.112 •°*
periodontal pocket (PP)	4.93 ±0.234	3.24 ± 0.071 •	4.84 ±0.092	2.58 ± 0.244 •°	4.92±0.068	1.86 ± 0.104 •°*
Green-Vermilion index (OHI-S)	4.61 ± 0.038	2.17 ± 0.066 •	4.59 ± 0.463	1.47 ± 0.090 •°	4.51±0.246	0.93 ± 0.051 •°*
O'Leary index	9 , 1 8 ±0.116	4.78 ± 0.073 •	9.28±0.160	4.28 ± 0.158 •°	9.24±0.125	3.24 ± 0.125 •°*

Note: •- P< 0.05 in relation to before treatment; °-P<0.05 in relation to 1 group; *- P<0.05 in relation to the 2nd group.

(17-30 points) was equal to 20 patients (62.5%), 16 patients (47.05%) and 14 patients (43.75%). The number of treatment results with a slight effect (31-40 points) in the comparison group was 12 (35.29%) and 11 (34.37%) patients, which is 3 times higher than in the 3rd experimental group - 3 patients (9.37% %).

In group 3, there were no patients whose treatment results were estimated at 41 points (no effectiveness), the number of such patients in group 1 was 4 (12.50%), in group 2 2 (5.88%) patients.

Conclusion. Thus, endodontic treatment is a necessary part of the complex treatment of combined inflammatory and destructive lesions of the periodontium, contributes to a faster relief of inflammatory processes in the periodontium. The rapid resolution of periodontal inflammatory changes after the initial treatment of apical periodontitis is a hallmark of combined inflammatory-destructive periodontal lesions.

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