

Comparative Analysis Of The Effectiveness Of The Treatment Of Parodontitis In Patients With Obesity

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Abstract – Periodontal pathology, being very common, progresses with age, and by the age of 40 almost 100% of the population suffers from it. Often, periodontal diseases are asymptomatic, therefore, for their early diagnosis and prevention, a comprehensive examination and characteristics of the protective factors of the oral cavity in patients is necessary.

Keywords – Periodontal pathology, periodontal diseases, pathogenetic mechanisms, Generalized periodontitis of moderate degree.

I. THE RELEVANCE OF THE RESEARCH

Periodontal pathology, being very common, progresses with age, and by the age of 40, it affects almost 100% of the population. Often periodontal diseases are asymptomatic, so for their early diagnosis and prevention, a comprehensive examination and characteristics of the state of protective factors of the oral cavity in patients are necessary.

II. THE PURPOSE OF THE STUDY

To increase the effectiveness of treatment of generalized periodontitis in obese patients by developing a pathogenetically sound method of complex therapy.

III. MATERIALS AND METHODS OF RESEARCH

The study included mainly patients with chronic generalized periodontitis of moderate severity (78 patients) and 20 people with intact periodontitis.

Scientific research was carried out in two directions:

1. Study of pathogenetic mechanisms that determine the development of the pathological process in periodontal disease in obese patients.

2. Justification of the method of complex therapy of periodontitis in obese patients.

Table 1. Distribution of patients with generalized periodontitis of moderate degree in groups in studies in 1 direction

Group	Total			Age	Duration of the disease	A number of contacts pathologies
		Male	Female			
Generalized periodontitis of moderate degree	32	11	21	31-50	6-15 year	2-3
Generalized periodontitis of moderate degree burdened with obesity	46	16	30	35-50	7-10 year	more than 5
The control group	20	6	14	19-50	-	-

Studies in the 1st direction were carried out on two groups of patients: group

1-patients with chronic generalized periodontitis of moderate severity, occurring without somatic pathology (32 patients); group 2 – patients with chronic generalized periodontitis of moderate severity, burdened with obesity of I-II degree (46 patients).

When carrying out therapeutic measures in patients with generalized periodontitis of moderate degree, local and General methods of complex treatment were used. Before treatment was carried out sanitation of the oral cavity. Local treatment included professional oral hygiene (anaesthesia, antiseptic treatment, removal of supra-and subgingival dental deposits), anti-inflammatory therapy, and temporary splinting of teeth.

The General treatment included a complex of vitamin therapy and rational nutrition.

Treatment of patients in the control group was continued with the use of standard antimicrobial therapy with metronidazole.

The complex treatment of patients of the main group included drugs that reduce cholesterol levels simvachol; to improve the rheological properties of blood, recovery, hemocoagulation and microcirculation-curantil 1 tablet 3 times a day and locally solcoseryl-ointment in the form of periodontal dressings.

IV. THE RESULTS OF THE RESEARCH

Complex treatment of patients of the main group, in addition to all measures of local and General treatment, included the use of Simvachol (statin) both Curantil and topically Solcoseryl, which were prescribed taking into account the degree of hyperlipidemia and hypercoagulation for 1, 3 and 6 months.

As a result of the treatment, a positive clinical effect was obtained in both groups of patients compared. Pain sensations subsided or disappeared completely, bleeding decreased, periodontal pockets were reduced, indicators of the hygienic status of the oral cavity improved, inflammation and destructive processes in the periodontium decreased.

It should be noted that after treatment, statistically significant positive results were found in both groups ($P < 0.01$), compared with the indicators before treatment (table.4.1.1). All studied parameters decreased in comparison with the value before treatment in the control group by 30.6% ($P < 0.01$) - 74.03% ($P < 0.001$); the corresponding dynamics in the main group was 51.05% ($P < 0.01$) – 90.36% ($P < 0.01$) (table 1.)

It should be noted that in all the studied periods after treatment, a higher clinical effect was registered in the main group. So, immediately after treatment, the intensity of pain in the gums was lower than the corresponding control value by 68.0% ($p < 0.01$); bleeding from the gums – by 41.86% ($P < 0.01$); bad breath – by 31.66% ($P < 0.01$); PC depth – by 40.0% ($P < 0.01$); reduction of tooth mobility – by 34.78%; the presence of discharge from the PC – by 62.5% ($P < 0.01$); improvement of oral hygiene – by 45.0%; reduction of gingival inflammation – 50.70% ($p < 0.01$); reduction of periodontal destruction – by 30.0% ($p < 0.01$) and the overall effectiveness of treatment in the main group (in IOT points) exceeded the control values by 34.08% ($P < 0.01$) (Fig. 4. 1. 1)

Table 1. Dynamics of clinical symptoms and index indicators of GPT with obesity on the background of complex therapy in IOT scores ($M \pm m$)

Symptoms	Before starting treatment		After treatment		After 1 month		After 3 months	
	Control n=23	The main n=23	Control n=23	The main n=23	Control n=23	The main n=23	Control n=23	The main n=23
1. Pain	2,60±0,08	2,56±0,06	1,00±0,04 _o	0,32±0,03 ^{o,^}	1,20±0,06 ^o	0,40±0,06 ^{o,^}	1,42±0,03 ^o	0,44±0,06 ^{o,^}
2. Bleeding from the gums	2,50±0,06	2,54±0,13	1,72±0,07 _o	1,0±0,04 ^{o,^}	2,10±0,10 ^o	1,10±0,07 ^{o,^}	2,30±0,05 ^o	1,20±0,05 ^{o,^}
3. Bad breath	2,80±0,06	2,76±0,03	1,20±0,08 _o	0,82±0,03 ^{o,^}	1,80±0,04 ^o	0,90±0,08 ^{o,^}	2,08±0,11 ^o	1,00±0,05 ^{o,^}
4. PC depth	3,40±0,12	3,48±0,13	2,20±0,10 _o	1,32±0,05 ^{o,^}	2,40±0,11 ^o	1,30±0,07 ^{o,^}	2,60±0,13 ^o	1,32±0,04 ^{o,^}
5. Tooth mobility	3,60±0,72	3,64±0,12	2,30±0,11 _o	1,50±0,04 ^{o,^}	2,70±0,09 ^o	1,52±0,06 ^{o,^}	3,00±0,13 ^o	1,60±0,05 ^{o,^}
6. Discharge from the PC	3,08±0,13	3,12±0,13	0,80±0,03 _o	0,30±0,09 ^{o,^}	1,20±0,06 ^o	0,40±0,05 ^{o,^}	1,40±0,07 ^o	0,45±0,03 ^{o,^}

7.	OHI-S index	2,84±0,14	2,86±0,13	1,20±0,04 _o	0,66±0,03 _{o,^}	1,40±0,05 ^o	0,70±0,06 ^{o,^}	1,44±0,06 ^o	0,74±0,04 ^{o,^}
8.	PMA index	2,88±0,13	2,92±0,14	1,42±0,06 _o	0,70±0,09 _{o,^}	1,80±0,06 ^o	0,80±0,07 ^{o,^}	1,92±0,05 ^o	0,82±0,05 ^{o,^}
9.	PI index	2,88±0,12	2,86±0,13	2,00±0,07 _o	1,40±0,07 _{o,^}	2,30±0,11 ^o	1,44±0,08 ^{o,^}	2,40±0,11 ^o	1,50±0,06 ^{o,^}
10.	IOT	2,92±0,09	2,90±0,03	1,62±0,08 _o	0,89±0,05 _{o,^}	2,00±0,08 ^o	0,92±0,04 ^{o,^}	2,20±0,10 ^o	1,0±0,06 ^{o,^}

Note: ^o - $P < 0.05$ relative to the value before treatment;
[^] - $P < 0.05$ in relation to the control.

Studies of the clinical state of periodontal disease conducted in the immediate (1 month) and long-term (3 months) periods after the treatment also confirmed the higher clinical effectiveness of the developed treatment regimen.

In the immediate and long-term period after treatment, both groups of patients showed an increase in the clinical symptoms of periodontitis, however, in patients of the main group, these changes did not have significant ($P > 0.05$) differences with the indicators after treatment and always remained statistically significantly lower ($P < 0.01$) than the corresponding values of the control group (table 1).

Comparative evaluation of clinical efficacy of the treatment in points the instruction on labour safety showed that immediately after treatment the clinical efficacy, evaluated as "effective", was recorded at of 43.48±10,34% of patients of the control group and 73,9±9,56% patients of the main group ($P < 0.05$); correlation of clinical periodontal status assessed as "improvement" amounted to 26.08±9,56% in the study group vs of 43.48±10,34% ($P > 0.05$) in the control; during this period of studies, 3 (13.04±7.42%) patients of the control group had a treatment result estimated as "moderate improvement", in the main group such patients were absent.

In the immediate post-treatment period (after 1 month) and in the long-term period (after 3 months), the main group also lacked a higher frequency of treatment results, evaluated as "effective" and "improvement"; during these follow-up periods, the main group did not have treatment results, evaluated as "moderate improvement" and "no improvement".

So, 1 month after treatment in the main group, the frequency of "effective" results was 69.57±9.60% vs. 39.13±0.18% in the control ($P < 0.05$); "improvement" - 30.43±9.60% vs. 52.17±10.32% ($P > 0.05$); in the control, the results of treatment in 4 (17.40±7.4%) patients were evaluated as "moderate improvement".

Even more pronounced negative dynamics was registered in the control group 3 months after treatment, during this period the results of treatment of one (4.35±4.25%) patient were evaluated "without improvement"; 5 (21,74±8,60%) – "moderate improvement", in the absence of such patients in the main group. During this period of studies, the ratio of patients with the rating "effective" and "improvement" was 65.22±9.33% vs. 26.09±9.15% ($P < 0.05$) and 34.78±9.33% vs. 47.83±10.42%, respectively, in the main and control groups (table 2).

A necessary condition for evaluating the treatment of generalized periodontitis is its duration. The average duration of treatment in the main group was 12.7±0.32 day and was significantly below the corresponding duration of the control group to 16.4±0.44 day ($P < 0.01$).

Thus, the obtained results showed that the greatest efficiency from the point of view of the result after treatment and duration of remission noted in the main group where treatment was based on the presence of background pathology of obesity.

Clinical results of treatment obtained in dynamics in patients with GP, burdened with obesity, indicated a positive therapeutic effect of the chosen treatment regimen, which was manifested by an improvement in the General well-being of patients, there were no complaints. The patients underwent treatment well, no side effects were observed.

Thus, the optimal treatment regimen for generalized periodontitis of moderate severity in obese patients was selected, providing the highest therapeutic effect. It should be noted that, despite the effectiveness of treatment of this group of patients, they require further dispensary observation. In order to achieve a stable result of the therapy, it is necessary to regularly diagnose and prevent hyperlipidemia.

V. CONCLUSIONS

A comparative evaluation of the effectiveness of treatment in points of occupational safety instructions showed that immediately after treatment, the clinical effectiveness assessed as "effective" was recorded in 43.48±10.34% of patients in the control group and 73.91±9.56% of the main group ($P < 0.05$); the corresponding ratio of the General periodontal condition with the assessment of "CLCC" was 26.09±9.54% against 43.48±10.34% ($P < 0.05$) in the control; during this period of studies, 13.04±7.42% of patients registered the result of treatment, evaluated by as a "moderate improvement" in the absence of such patients in the main group.

In the immediate period after treatment (1 month) and long-term (more than 3 months), a significantly higher frequency of treatment results with an assessment of "effective" and "improvement" in the main group was also established.

Thus, the optimal treatment regimen for GP burdened with obesity was selected, providing the highest therapeutic effect. It should be noted that, despite the effectiveness of treatment of this group of patients, they require further dispensary observation, regular diagnosis and prevention of hyperlipidemia in order to achieve a stable result of the treatment.

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