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THE EFFECT OF MUCOSAL-ADHESIVE PHYTOGELS "KVERTULIN" AND "LEKVIN" ON THE STATE OF THE ORAL CAVITY IN PATIENTS WITH HELICOBACTER PYLORI-ASSOCIATED PATHOLOGY OF GASTRODUODENAL AREA BY THE DATA OF DENTAL INDICES

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Abstract

The article presents information about the state of the oral cavity according to dental indices in patients with chronic gastritis and gastroduodenitis, associated with Helicobacter pylori, before and after eradication therapy. It was shown that dysbiosis and inflammatory changes in periodontal tissues of varying severity develop in patients with chronic gastritis and gastroduodenitis on the background of eradication therapy. The use of antidysbiotic mucous-adhesive phytogels "Kvertulin" and "Lekvin" (which include the prebiotic inulin, the bioflavonoid quercetin, calcium citrate, and the lecithin hepatoprotector as part of "Lekvin") in the form of applications on the oral mucosa leads to a health condition. PMA index and Mühlemann bleeding index, and "Lekvin" was more effective due to hepatoprotector lecithin introduced in its composition.

Keywords: helicobacter-associated chronic gastritis, gastroduodenitis, oral dysbiosis, periodontal indices, "Lekvin"

INTRODUCTION

Chronic helikobacterial gastritis (type B gastritis, helicobacter-associated gastritis) (HG) is an independent nosological form based on morphological changes of the gastric mucosa (GM), namely, inflammatory infiltration and structural reconstruction with the development of dysregenerative, dystrophic and atrophic processes leading to functional failure, manifested by hypo- and achillis and gastric achilles. Thus, on the one hand, the HG morphological diagnosis, which is established only in the histological verification, on the other hand - HG are affected only GM, with changes (neutrophil infiltration, severity of atrophy and metaplasia, presence of HP bacteria, activity of the process) and histologically determined. These morphological changes may be accompanied by various functional manifestations [1-3].

Talking about the true epidemiological situation associated with HG is quite complicated. Firstly, this is due to the need for its morphological diagnosis, and secondly, with the often hidden course, when patients do not have any complaints from the gastrointestinal tract and do not go to doctors [2]. The prevalence of HG among diseases of the gastrointestinal tract is 35%, while among the diseases of the stomach is 85% (Grigoriev P.Ya., Yakovenko A.V, 2001); in turn, helikobacter-associated gastritis prevails over other types and occupies up to 85% in the structure of chronic gastritis, which is associated with the epidemiology of helicobacteric infection [1, 3-6].

Quite often, changes in the duodenal mucosa (DUP) and chronic gastroduodenitis (HGD) associated with HP associated with the development of gastric metaplasia foci in the mucous membrane of the duodenum occur in the background of HG type B. The reason for the development of the latter is considered a cast of sour gastric content in the duodenum, which is often occurs with antral helicobacter gastritis in conjunction with hypersecretion of HCl [7].

As we see, from the above data, HG and HGD are one of the most common pathogens of the gastroduodenal zone, and in most cases these diseases are associated with the HP bacterium.

On the background of the pathology of the mucous membrane of the stomach and duodenum there are changes in the oral cavity, which is explained by anatomical-physiological proximity, embryonic, morphological community, as well as the common neurohumoral regulation, resulting in conditions for attracting tissues of the oral cavity in the pathological process in diseases of the digestive system, and a frequent combination of gingivitis and periodontitis with diseases of the stomach and duodenum shows the regularities

of such a connection and the universality of the mechanisms of development of the inflammatory process [8, 9].

Previous studies [10, 11] show that in patients with helicobacter-associated chronic gastritis and gastroduodenitis in the oral cavity there is a decrease in the activity of lysozyme - a factor of non-specific immunity and an increase in the activity of the enzyme urease - an enzyme that is produced only by microorganisms, mainly HP, for its The quantity can be estimated by the degree of microbial contamination of the oral cavity.

By the relative activities of lysozyme and urease, the degree of oral dysbiosis is determined by A.P Levytsky, which is significantly increased in patients with HG and HGD, as noted in [10, 11]. Levitsky A.P. and softed. [12] in the experiment it was shown that against the background of anti-helicobacter therapy (AHT) there is a significant decrease in the concentration of lysozyme, the development of immunodeficiency, increased activity of urease and as a consequence of the development of dysbiosis, against which develop inflammatory diseases of the oral cavity - gingivitis, periodontitis, stomatitis.

In order to prevent periodontal complications and dysbiosis in patients of the second and third groups with HG and HGD who received AHT according to the protocol, the local mucosal-adhesive phytogel «Kvertulin» (gel comparison) were added locally in the cavity, which includes probiotic inulin, bioflavonoid quercetin and citrate calcium [13] and "Lekvin" (the main gel), which includes inulin, quercetin, calcium citrate and additionally hepatoprotector lecithin [14]. One of the criteria for assessing the effectiveness of the gels was given dental indexes. Mucosal gels were used twice a day in the form of applications on the oral mucosa after eating for two weeks [15].

The purpose of this work: to evaluate the effectiveness of local application of mucosal-adhesive phytogels "Kvertulin" and "Lekvin" according to the dental indexes.

MATERIALS AND RESEARCH METHODS

88 patients aged 18 to 71 years were examined, including 25 (28.4%) men and 63 women (71.6%) with pathogenesis of the gastroduodenal zone (43 patients with HG and 45 patients with HGD) who were divided into three groups depending on the treatment regimen, and 20 relatively healthy people, without pathology of the gastrointestinal tract, hepatobiliary system and oral cavity.

According to the proposed regimens, all patients were divided into three groups:

- the first group (43 patients: 16 with HG and 27 with HGD) received only AHT, prescribed by a gastroenterologist;

- The second group (21 patients: 14 from HG and 7 from HGD) received AHT according to the scheme prescribed by the doctor-gastroenterologist, and also they were given local therapy in the oral cavity with the use of mucosal phytogel "Kvertulin" (a preparation of comparison) to eliminate the complications that arise during AHT;
- The third group (24 patients: 13 from the HG and 11 from the HGD) (the main group) received AHT according to the scheme prescribed by the gastroenterologist and also received local therapy in the oral cavity using the mucosal phytogel "Lekvin" (the main drug).

The dental status of all patients was determined before and after treatment.

All patients underwent basic dental treatment: professional oral hygiene, sealing of seals and crowns, as needed, removing the hanging edge of seals and crowns, as well as oral care at home.

To determine the state of periodontal tissues, the following dental indices were used: the Silness-Loe index (1964), K.Stallard (1969), the PMA index (Parma, 1960), the Schiller-Pisarev sample, and the determination of bleeding in modifications by Muhlemann (1971) [16].

RESULTS AND DISCUSSION

The first group of patients included 43 patients: 16 with HG and 27 with HGD, 21-71 years old, mean age 35.84 ± 12.85 years; the average age of patients with HG was 38.3 ± 14.7 g, and with HGD 34.37 ± 11.35 g; Among them there were 15 men and 28 women, which was 34.9% and 65.1% respectively.

The average values of the hygiene and periodontal indices of patients in the first group are presented in Table 1.

Table 1. Average values of hygiene and periodontal indices in patients of the first group

Concomitant pathology	Indices				
	Silness-Loe Index	Stallard Index	Index PMA,%	Schiller-Pisarev sample	Bleeding
HG	1,68±0,4	1,67±0,28	37,54±9,64	1,91±0,32	1,725±0,64
HGD	1,56±0,38	1,62±0,39	38,23±0,13	1,685±0,493	1,55±0,5

The results presented in Table 1 indicate that patients with HG and HGD have almost identical index values: the significance of the PMA index indicates the presence of inflammation in periodontal tissues of moderate severity; the evidence of the process is shown by the Schiller-Pisarev sample, the value of which in patients with HG was higher by 1.13 times than patients with HGD, as well as the Mulemann's index in patients with HG was

higher by 1.13 times compared with those of patients with HGD. The hygiene indices in patients with HGD are slightly lower than in patients with HG and indicate a satisfactory level of hygiene in patients with HGD.

Further, the evaluation of the state of periodontal tissues in patients of the first group with periodontal indices was carried out, namely the PMA index.

Evaluation of the state of periodontal tissues in patients with the first group of HG and HGD of different ages is presented in Fig. 1.

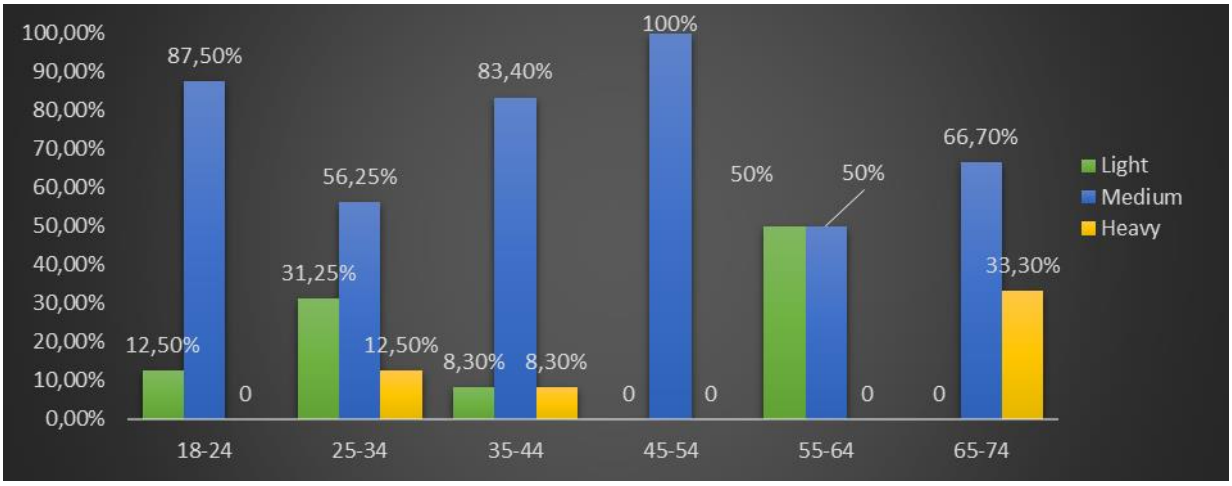

Fig. 1.PMA index of the first group of patients of different age

The data is shown in the diagram in Fig. 1. suggest that a mild degree of gingivitis was found in 12.5% of patients aged 18-24 years, in 31.25% of patients 25-34 years of age, in 8.3% of patients aged 35-44 years and in 50% of patients aged 55- 64 years, whereas in patients of the age group 65-74 there are more severe lesions of periodontal tissues. In patients of all age groups, changes in average severity periodontal tissues with a maximum in the age group of 45-54 years and a minimum in patients age group 55-64 and 25-34 years prevail. At the same time, the severe degree of injury of periodontal tissues according to the PMA index was observed in 12.5% of patients aged 25-34 years, in 8.3% of patients 35-44 years old and in 33.35 patients 65-74 years.

An assessment of the condition of periodontal tissues in patients of this group of different gender is presented in Fig. 2.

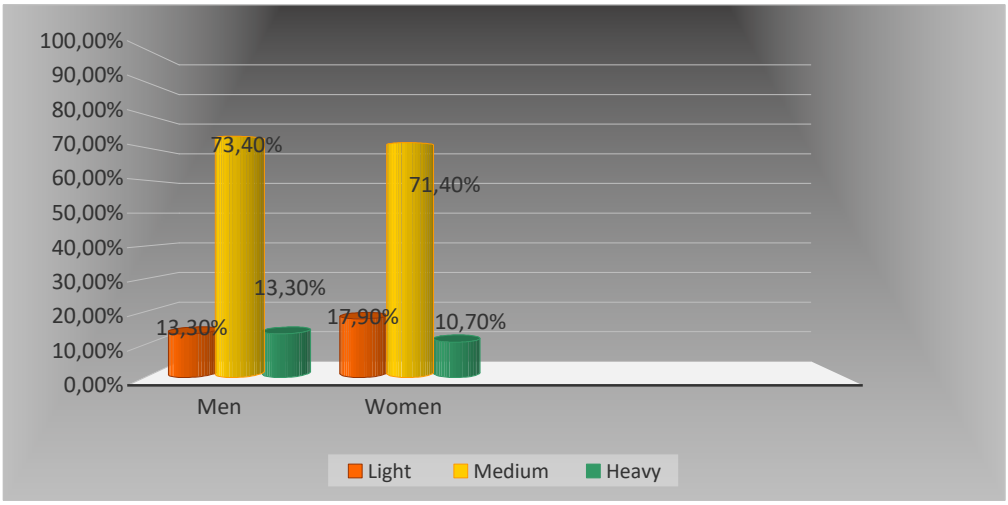

Fig. 2. Index PMA of the first group of patients of different gender

The results of the index evaluation of patients in the first group of different gender show that both in men and in women, the average degree of severity of lesions of periodontal tissues is prevalent - 73.4% and 71.4% respectively. Among women, a mild degree of gingivitis was found in 17.9% of patients, and in men - 13.3%. A severe degree of gingivitis was found in 13.3% of men and 10.7% of women.

We can say that in patients of younger age groups signs of inflammation of periodontal tissues against the background of HG and HGD associated with HP are less pronounced than in older age groups. Among men and women, the significance of periodontal indices is almost unchanged.

The next stage of our work included the definition of hygiene and periodontal indices for patients in the second and third groups.

The second group of patients comprised 21 patients: 14 from HG and 7 with HGD, aged 22-66, the average age of patients was 39.8 ± 13.5 years; the average age of patients with HG was 37.43 ± 14.41 years, and with HGD - 44.6 ± 10.03 years; among them there were 4 men and 17 women, which was 19.05% and 80.95% respectively.

The average values of the hygienic and periodontal indices of patients in the second group are presented in Table 2.

Table 2. Average values of indicators of hygienic and periodontal indices in patients of the second group

Concomitant pathology	Indices				
	Silness-Loe Index	Stallard Index	Index PMA,%	Schiller-Pisarev sample	Bleeding
HG	1,66±0,28	1,65±0,2	37,46±8,93	1,71±0,41	1,75±0,7
HGD	1,83±0,29	1,76±0,23	42,20±12,41	1,86±0,23	1,93±0,78

The results presented in Table 2 indicate that patients with HGD have a slightly higher mean of both hygiene and periodontal indices compared to those of patients with HG: the hygienic indices of Silness-Loe and Stallard in patients with chronic HG are lower than 9,3% and 6.25% respectively, compared with similar data from patients with HGD. Among patients with HGD, the PMA index is higher by 12.6% than in patients with HG; the value of the Schiller-Pisarev sample in patients with HGD is an average of 1.86 ± 0.23, which is 8.77% higher than those of patients with HG, the Mülemann index in patients with HGD was 10.3% higher than in patients from HG. Such data from periodontal indices indicate the presence of inflammatory changes in periodontal tissues in patients with chronic helicobacter vaginal gastritis, and in patients with HGD associated with HP, and in the latter they are more pronounced, but in both subgroups, the changes are consistent with chronic inflammation of periodontal tissues moderate severity.

Then, the evaluation of the state of periodontal tissues in patients of the second group with periodontal indices was carried out, namely the PMA index.

Evaluation of the state of periodontal tissues in patients with the second group of HG and HGD of different age is presented in Fig. 3

Thus, in patients of all age groups, changes in the state of periodontitis of varying degrees of severity were detected. In patients of all groups, the greatest number of people was found with an average degree of severity of gingivitis. At the same time, somewhat better condition of periodontal tissues was found in patients aged 18-24 years and 25-34 years old. Patients aged 45-54 and 65-74 years found the highest number of patients with severe degrees of gingivitis.

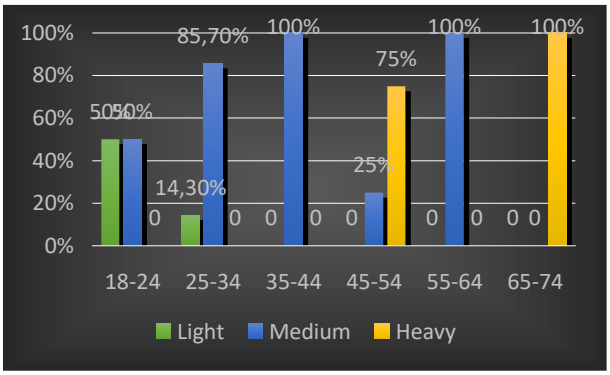

Fig. 3. Index PMA of the second group of patients of different age

The results of the index evaluation of periodontal tissues of patients in the second group of different gender are presented in Fig. 4, show that both in men and women, the average degree of severity of lesions of periodontal tissues prevails - 50% and 76.4% respectively. Among women, a mild degree of gingivitis was found in 11.7% of patients, and among men there were no such patients. A severe degree of gingivitis was found in 50% of men and 11.7% of women. It can be concluded that among men, inflammatory changes in periodontal tissues are more pronounced and more severe in comparison with women.

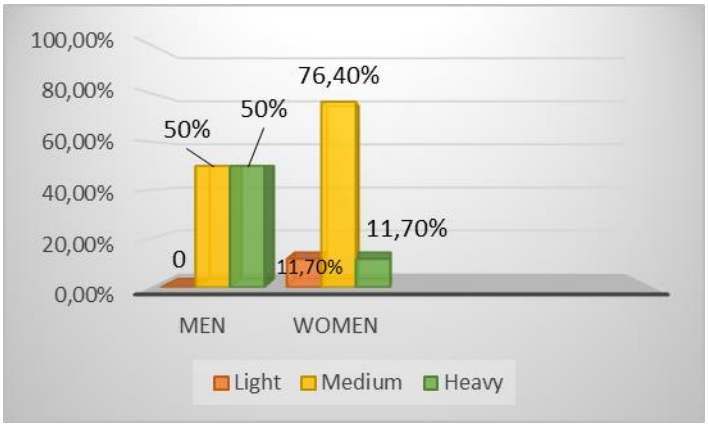

Fig. 4.Index PMA of the second group of patients of different gender

The third group consisted of 24 patients: 13 with HG and 11 with HGD, aged 20-68 years, average age of patients was 39.25 ± 14.6 years, mean age of patients with HG was 41.92 ± 14.64 years , and from HGD - 36.09 ± 13.87 years; among them there were 6 men and 18 women, which was 25% and 75% respectively.

The average values of the hygiene and periodontal indices of patients in the second group are presented in Table 3.

Table 3. Average values of indices of hygienic and periodontal indices in patients of the third group

Concomitant pathology	Indices				
	Silness-Loe index	Stallard index	Index PMA,%	Schiller-Pisarev sample	Bleeding
HG	1,725±0,31	1,66±0,14	39,88±7,86	1,73±0,32	1,73±0,42
HGD	1,66±0,26	1,78±0,28	38,60±9,5	1,77±0,54	1,68±0,57

According to Table 3 it can be concluded that patients in the third group with chronic gastritis and gastroduodenitis associated with HP have practically identical results of the index evaluation of periodontal tissues. The values of hygiene indices in patients with HG and HGD practically do not differ and correspond to an unsatisfactory level of hygiene of the oral cavity. The average value of the PMA index is somewhat lower in patients with HGD, as well as the results of the Bleeding Index by Mülemann - in patients with HGD, it is lower by 3% compared to the same index in patients with HG. On the other hand, the mean value of the Schiller- Pisarev sample, on the contrary, is higher in patients with HGD. Such periodontal index data suggest the presence of inflammatory changes in periodontal tissues in patients with chronic helicobacter vaginal gastritis, and in patients with HGD associated with HP, with the first group of patients more pronounced, but in both subgroups, the changes are consistent with chronic inflammation of tissues periodontal medium severity.

Further, the evaluation of the state of periodontal tissues in patients of the third group with periodontal indices, namely the PMA index, was performed.

Evaluation of the state of periodontal tissues in patients with the third group of HG and HGD of different ages is presented in Fig. 5.

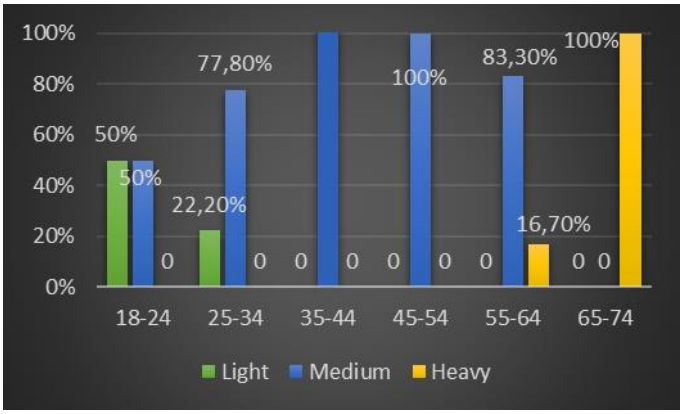

Fig. 5. Index PMA of the third group of patients of different age

As we see from Fig. 5, in patients of all age groups changes in the state of the periodontal complex were detected. At the same time, somewhat better condition of periodontal tissues was found in patients aged 18-24 and 25-34 years old. In the age group of 65-74, severe hepatitis was detected in 100% of patients, whereas in patients aged 55-64 severe cases of gingivitis occurred in 16.7% of cases. In the group of patients in the age group of 35-44 and 45-54 years, in 100% of cases, gingivitis of moderate severity was detected.

Evaluation of the state of periodontal tissues in patients of the third group of different sex is presented in Fig. 6 from which it is evident that in women, in comparison with men, the prevalence of mild to moderate degree of gingivitis was observed, in particular, a slight degree of gingivitis was observed in 16.7% of women, while among men a slight degree of gingivitis was not detected, and an average degree of gingivitis was detected in 77.7% of women and 83.3% of men, a severe degree of gingivitis was detected in equally in 16.7% of the examined women and men.

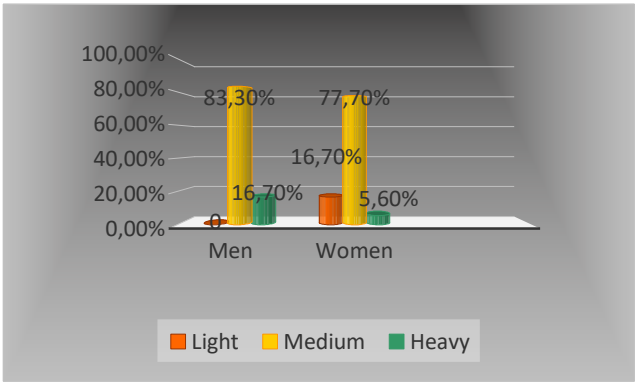

Fig.6. Index PMA of the third group of patients of different gender

The value of the dental indexes after the treatment

The effectiveness of the proposed antidysbiotic oral drug in patients with HG and HGD associated with HP were evaluated after treatment according to the dental indexes (hygiene and periodontal).

Patients in the first group who received only AHT drugs and received basic dental treatment and received no antidysbiotic therapy in the oral cavity, the dental indexes are presented in Table 4.

Table 4. Average values of hygiene and periodontal indices among patients of the first group

Concomitant pathology	Indices				
	Silness-Loe index	Stallard index	index PMA,%	Schiller-Pisarev sample	Bleeding
HG	1,57±0,3	1,54±0,21	35,3±8,5	1,69±0,39	1,44±0,46
HGD	1,47±0,28	1,53±0,29	35,76±10,71	1,48±0,46	1,31±0,39

The results presented in Table 4 indicate that in patients with HG and HGD, almost identical values of the indexes: the significance of the PMA index indicates the presence of inflammation in periodontal tissues of moderate severity, the data of the Schiller-Pisarev sample whose evidence of the Patients with HG were higher in 1.14 times compared to patients with HGD, as well as the Mulemann's index in patients with HG was higher 1.1 times compared to those of patients with HGD.

Comparing the data on the oral cavity obtained after the spent AHT, with similar data before treatment (Table 1), there are no distinct differences and no positive dynamics.

Further, the evaluation of the state of periodontal tissues in patients of the first group with periodontal indices was carried out, namely the PMA index.

Evaluation of the state of periodontal tissues in patients with the first group of HG and HGD of different ages is presented in Fig. 7.

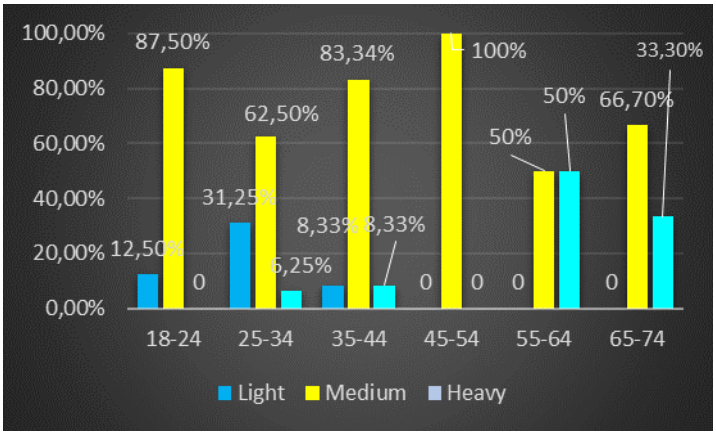

Fig.7. Index PMA of the first group of patients of different age

The data shown in the diagram in Fig. 7 indicate that mild gingivitis was detected in 12.5% of patients aged 18-24 years, in 31.25% of patients 25-34 years old, in 8.33% of patients aged 35-44 and in 50% of patients aged 55-64 years, whereas in patients of the age group 65-74 there are more severe lesions of periodontal tissues. In patients of all age groups,

changes in the average severity periodontal tissues with a maximum in the age group of 45-54 years and a minimum in patients age group of 55-64 years prevail.

In patients aged 25-34 years, compared with the initial data (Figure 1), there is a decrease in the number of patients with severe gingivitis. In general, comparing the data before and after treatment in patients with this group, there are no significant changes in the oral cavity, minor changes in the indexes of the dental indexes and some improvements in the oral cavity of the patients are associated with professional oral hygiene and home-grown oral care.

Evaluation of the state of periodontal tissues in patients of this group of different gender is presented in Fig. 8. The results of the index evaluation of patients in the first group of different gender show that both in men and in women the average degree of severity of lesions of periodontal tissues is prevalent - 80% and 71.4% respectively. Compared with the indicators before treatment (Fig. 2), the state of periodontal tissue condition improved among men - the number of patients with severe gingivitis decreased from 13.3% to 6.67%. Other significant changes in the state of the tissues of the oral cavity were not detected.

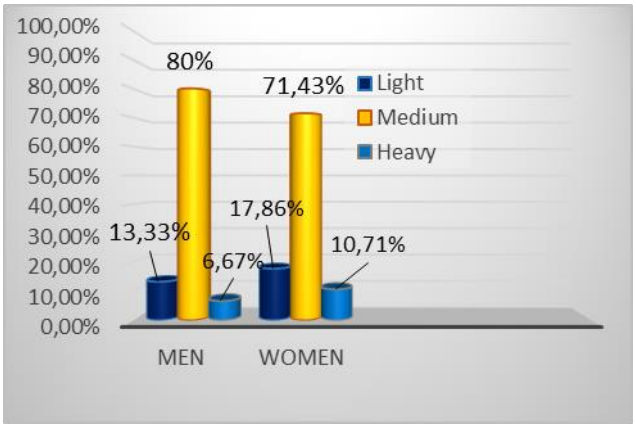

Fig.8. Index PMA of the first group of patients of different gender

It can be said that in patients with chronic helicobacter gastritis and gastroduodenitis, on the background of AHT, there are no significant positive changes in the state of oral tissues, and the reduction of some indicators of dental indices may, in our opinion, be attributed to the initiation of the early gastroenterological treatment of oral hygiene cavity and training of oral care patients at home.

The next stage of our work included the definition of dental indexes in patients of the second and third groups, which, in addition to anti-helicobacter therapy and basic therapy in

the oral cavity, were applied locally as applications of mucosal phytogel "Kvertulin" (comparison group) and "Lekvin" (main group) respectively.

The results of dental indexes (mean values of hygiene and periodontal indices) after treatment in patients of the second group are presented in Table 5.

Table 5. Average values of hygienic and periodontal indices of patients in the second group after treatment

Concomitant pathology	Indices				
	Silness-Loe index	Stallard index	Index PMA,%	Schiller-Pisarev sample	Bleeding
HG	1,44±0,17	1,48±0,168	31,86±7,1	1,25±0,25	0,96±0,58
HGD	1,45±0,195	1,5±0,22	35,40±9,53	1,36±0,23	1,07±0,68

As we can see from Table 5, hygiene and periodontal indices in patients with chronic HG and HGD are almost identical, although among patients with HGD they are slightly higher compared to similar data from patients with HG. Comparing with the data presented in Table 2 (before treatment), we see a decrease in the values of all dental indexes. Thus, in patients with HG after local therapy, the average values of the Silness-Loe index decreased by 1.15 times, the Stallard index - decreased by 10.3%, the PMA index by 15%, the value of the Schiller-Pisarev sample - by 26.9 %, and the index of bleeding decreased by 45%.

Patients with HGD also improved dental indexes: the Silness-Loe index decreased by 20.8%, while the Stallard index was 1.17 times, the PMA index decreased by 16.1%, the value of the Schiller-Pisarev sample was 26.9% %, while the index of bleeding index decreased almost twice - by 44.5%. The obtained results testify to the improvement of the condition and the level of hygiene that corresponds to the satisfactory level of oral hygiene, as well as the improvement of the state of periodontal tissues and the reduction of inflammation in them. Consequently, the proposed phytogel "Kvertulin" has a positive therapeutic effect and contributes to the improvement of the condition of the tissues of the oral cavity.

Then, the evaluation of the state of periodontal tissues in patients of the second group with periodontal indices was carried out, namely the PMA index.

Evaluation of the state of periodontal tissues in patients with the second group of HG and HGD of different age is presented in Fig. 9.

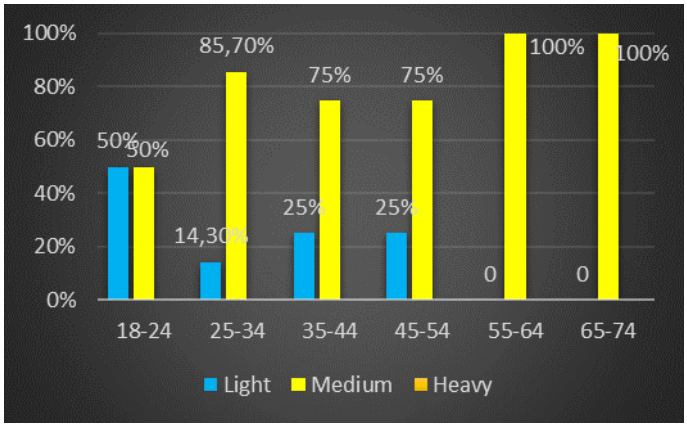

Fig.9. Index PMA of the second group of patients of different age

According to the diagram, located in Fig. 9, we see that in all age groups the most widespread was middle-level gingivitis, which was found in 50% among patients 18-24 years old, in 85.7% among patients 25-34 years, in 75% of patients 35-44 and 45-54 years and in 100% of the representatives of the age groups of 55-64 and 65-74 years. Light-weight periodontal changes were observed in 50% of patients aged 18-24 years and in 14.3% of patients aged 25-34 years. A severe degree of gingivitis was not observed in any of the age groups, which confirms the positive effect of phytogel "Kvertulin" on the state of periodontal tissues. Indicators in each age group have improved, the importance of the PMA index has become smaller.

The index assessment of the state of periodontal tissues in patients of the second group after treatment of different sex is presented in Fig. 10. As can be seen from Fig. 10, neither among women nor among men after treatment showed a defeat of periodontal tissues of severe severity. Compared with the values of the PMA index in men, those who had severe gingivitis after treatment turned into a group with a moderate degree of periodontal tissue damage. 23.5% of women found mild gingivitis, and in 76.5%, moderate periodontal tissue was moderate in severity.

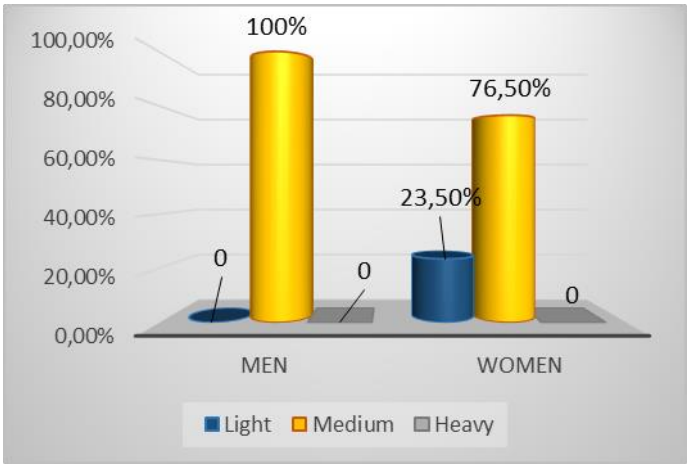

Fig.10. Index PMA of the second group of patients of different gender

The obtained results prove periodontioprotective, membrane-stabilizing action of phytogel "Kvertulin", and there is a correlation between the effectiveness of its action and the degree of inflammatory processes in periodontal tissues, that is, the more pronounced changes in periodontal tissues, the more pronounced is the result of its application.

Then they determined the condition of the oral cavity after treatment in patients in the third group. Patients of the third group during the entire gastroenterological treatment for the prevention of dysbiosis in the oral cavity and the elimination of inflammatory events from the periodontal tissues were used in the oral cavity mucosal-adhesive phytogel "Lekvin".

The results of dental indexes (mean values of hygiene and periodontal indices) after treatment in patients of the third group are presented in Table 6.

Table 6. Average values of hygienic and periodontal indices of patients in the third group after treatment

Concomitant pathology	Indices				
	Silness-Loe index	Stallard index	index PMA,%	Schiller-Pisarev sample	Bleeding
HG	1,48±0,19	1,49±0,16	32,83±7,09	1,25±0,27	1,131±0,26
HGD	1,45±0,19	1,5±0,2	30,69±7,15	1,27±0,33	0,95±0,45

As we can see from Table 6, the indicators of hygiene and periodontal indices in patients with HG and HGD are almost identical. Comparing with the data presented in Table 3 (before treatment), we see a decrease in the indexes of all dental indexes. Thus, in patients with HG after local therapy, the average values of the Silness-Loe index decreased by 1.17 times, the Stallard index - decreased by 10.2%, the PMA index - by 17.7%, the value of the

Schiller-Pisarev sample - by 27,7%, and the index of bleeding decreased by 34.6%. Patients with HGD also improved their dental indexes: the Silness-Loe index decreased by 12.7%, while the Stallard index by 15.7%, the PMA index decreased by 20.5%, the value of the Schiller-Pisarev sample was 28.2% %, while the index of bleeding index decreased almost twice - by 43.5%. The obtained results testify to the improvement of the condition and the level of hygiene that corresponds to the satisfactory level of oral hygiene, as well as the improvement of the state of periodontal tissues and the reduction of inflammation in them. Thus, the proposed phytogel "Lekvin" has a positive therapeutic effect and contributes to the improvement of the condition of the tissues of the oral cavity.

Further, the evaluation of the state of periodontal tissues in patients of the third group with periodontal indices, namely the PMA index, was performed.

Evaluation of the state of periodontal tissues in patients with the third group of HG and HGD of different ages is presented in Fig. 11.

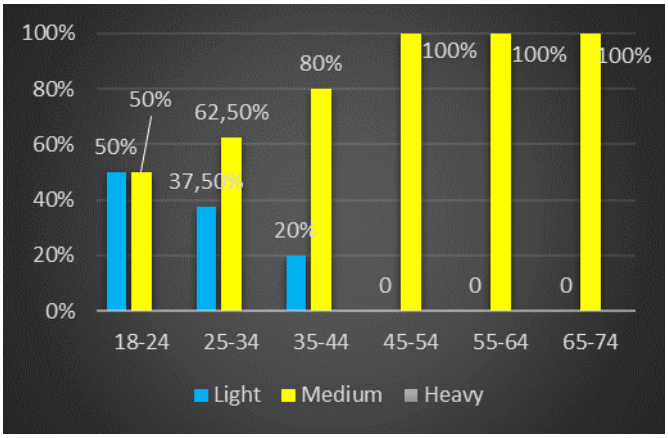

Fig.11. Index PMA of the third group of patients of different age

According to the diagram, located in Fig. 11, we see that in all age groups the most common type of gingivitis was middle-grade gingivitis, which was found in 50% among patients 18-24 years old, in 62.5% among patients 25-34 years old, in 80% of patients aged 35-44 years and in 100% of the representatives of the age groups of 45-54, 55-64 and 65-74 years, although 16.7% of patients aged 55-64 years and in the 100% of patients aged 65-74 years treated to the treatment of western variations of periodontal tissues of severe degree .

Light-weight periodontal changes were observed in 50% of patients aged 18-24 years and in 37.5% of patients aged 25-34 years. A severe degree of gingivitis was not observed in any of the age groups, which confirms the positive effect of phytogel "Lekvin" on the state of

periodontal tissues. Indicators in each age group have improved compared to similar data before treatment, the significance of the PMA index has become smaller.

The index assessment of the condition of periodontal tissues after treatment in patients of the third group of different gender is presented in Fig. 12., which indicate that neither women nor men have been diagnosed with severe periodontal tissue damage after treatment. Compared with the values of the PMA index in men, those who had severely gingivitis after treatment turned into a group with an average degree of lesions of periodontal tissue, that was observed among women. 22.2% of women found mild gingivitis, and in 77.8% - changes in periodontal tissue of moderate severity.

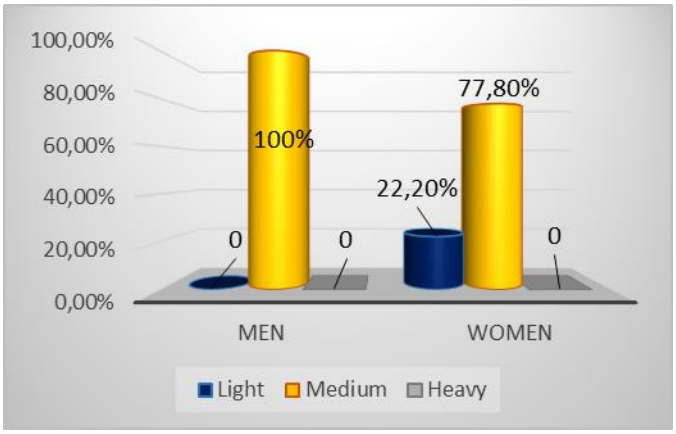

Fig.12. Index PMA of the third group of patients of different gender

The obtained results prove periodontioprotective, membranoprotective, anti-inflammatory action of phytogel "Lekvin", and there is a direct relationship between the effectiveness of its action and the degree of inflammatory processes in periodontal tissues, that is, the more pronounced changes in periodontal tissues, the more significant is the result after its application.

Comparing the effect of mucosal phytogels "Kvertulin" and "Lekvin", we see that both gels exhibit periodontium protection effect, but "Kvertulin" is slightly inferior to the latter, as shown by the results of indices after treatment in patients with both groups with HG and HGD, and the percentage for which dental indices declined This result can be explained by the addition of a hepatoprotector lecithin to the "Lekvin" component, which increases the action of the components of the gel, and the summation effect of its components is greater than if they were used alone.

CONCLUSIONS

1. The following tendency has been observed in all patients in all groups: in younger age groups and in women, signs of inflammation of periodontal tissues on the background of HG and HGD associated with HP are less pronounced than in the older age groups and in men.

2. Patients in the first group who received only AHT drugs without additional local antidiabetic agents had no significant changes in dental indexes to improve, on the contrary, cases of periodontal tissue deterioration in the elderly group were noted. In our opinion, minor changes in the dental indexes indicating the improvement of the condition of periodontal tissues are related to the procedure for removing dental deposits at the beginning of gastroenterological treatment and oral care at home.

3. The obtained results prove parodontoprotective, membrane-stabilizing, anti-inflammatory, angioprotective action of mucosal phytogels "Kvertulin" and "Lekvin", and there is a direct relationship between the effectiveness of their action and the degree of inflammatory processes in periodontal tissues, that is, the more pronounced changes in periodontal tissues, the more pronounced the result of their application.

4. Comparing "Kvertulin" and "Lekvin", we see that "Lekvin" more effectively reduces dental indices and improves the condition of periodontal tissues in comparison with "Kvertulin" due to the action of hepatoprotector lecithin, which is part of the "Lekvin".

5. Additional use in the oral cavity in patients with helicobacter-associated chronic gastritis and gastroduodenitis in the form of applications for mucosal phytogel "Kvertulin" and "Lekvin" has a pronounced positive effect in patients with severe and moderate degree of lesions of periodontal tissues.

6. All patients with helicobacter-associated pathology of the gastroduodenal zone should be additionally prescribed in the oral cavity for the application of antidisbiotics, which will significantly improve the condition of periodontal tissues against the background of combined pathology of the oral cavity and GIT, and will provide better transfer of AHT and patient commitment to therapy.

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