



INTERNATIONAL MEDICAL SCIENTIFIC JOURNAL

ART OF MEDICINE

Founder and Publisher **North American Academic Publishing Platforms**

Internet address: <http://artofmedicineimsj.us>

E-mail: info@artofmedicineimsj.us

11931 Barlow Pl Philadelphia, PA 19116, USA +1 (929) 266-0862

CHIEF EDITOR

Dr. Pascual Izquierdo-Egea

EDITORIAL BOARD

Prof. Dr. Francesco Albano

Prof. Dr. Tamam Bakchoul

Dr. Catherine J. Andersen

Prof. Dr. Pierre-Gregoire Guinot

Prof. Dr. Sandro Ardizzone

Prof. Dr. Rainer Haak

Dr. Dmitriy Atochin

Prof. Henner Hanssen

Prof. Dr. Antonio Aversa

Available at <https://www.bookwire.com/>

ISBN: [978-0-578-26510-0](https://www.isbn-international.org/product/9780578265100)

CHANGES IN THE MICROFLORA OF THE ORAL CAVITY BEFORE AND AFTER TREATMENT IN PATIENTS WITH INFLAMMATORY PERIODONTAL DISEASES AND FUNCTIONAL DYSPEPSIA.

Shadieva Shodiya Shuxratovna

shodiya_shodieva@mail.ru

Uzbekistan. Bukhara State Medical Institute named after Abu Ali ibn Sino, Uzbekistan

Abstract. One of the urgent tasks in modern medicine is the development of innovative treatment regimens with high clinical efficacy. In recent years, a distinctive feature of modern pharmaceutical economics is the choice of methods of analysis, which allows to conduct a cross-assessment of the effectiveness of drugs, costs and identify the most clinically and economically feasible schemes of therapy. The use of proton pump inhibitors (PPI) and prokinetic drugs as a means of primary therapy of acid-dependent pathologies has a number of advantages over other schemes of treatment of pathologies in the gastroduodenal area.

Keywords. Proton pump inhibitors, esomeprazole, cytoprotector, rebamipid, preepithelial.

Functional dyspepsia includes a complex of symptoms, consisting of a feeling of pain and burning in the chest area, a feeling of fullness in the epigastric area after eating, early satiety, a feeling of discomfort, observed in the patient for the last three months (the total interval of complaints is 6 months), organic pathology is an exception. Thus, all signs of Functional dyspepsia have a strictly functional character. Complaints of dyspepsia are one of the most common complaints among patients with pathology in the gastroduodenal area, and are especially common in patients with functional diseases of the gastrointestinal tract.

Symptoms of gastric dyspepsia include belching, heaviness in the epigastric area, a feeling of rapid fullness, nausea, vomiting, while symptoms of intestinal dyspepsia include flatulence, diarrhea, constipation. Currently, the concept of "functional dyspepsia" has been introduced to classify primary functional disorders in the stomach, it is a nosological unit, it means diseases of a functional nature in OIT, reflected in the 10th revision of the International Classification of Diseases with the codes K30 - Dyspepsia or K 31 - functional disorders of the stomach. According to the results of a number of studies, the acid factor is the leader in the etiological significance of the development of clinical symptoms of FD, including the pronounced pain syndrome, because gastric hypersecretion is an important pathogenetic factor of the disease. However, success in treating patients with FD is achieved only with proton pump inhibitors.

Symptoms of FD are not exactly the degree of acid production in the manifestation of pain, but in the disturbance of the motor-evacuator function in the stomach and duodenum, especially in their high visceral responsiveness, which resolves the long-term contact of the contents of the stomach and duodenum with the mucus of the gastroduodenal region with a low pH. may also be important. In this case, the acid factor can reduce the threshold of sensitivity of the receptor apparatus of the stomach wall to natural stimuli and cause hypersensitivity, causing pain. It is

reliably known that acid-related diseases in OIT are directly related to the development of inflammatory-destructive processes in periodontal tissues.

In a number of cases, severe diseases in the gastroduodenal area are directly related to the expression of lesions in the oral cavity and the effectiveness of the treatment measures carried out in inflammatory pathologies of the periodontal and oral mucosa. Leading world scientists express conflicting opinions in their attempts to describe the mechanisms of development of inflammatory diseases of the periodontium. One of the main etiological factors in the development of chronic periodontitis (SUP) is the microbial factor, which includes more than 2000 types of microorganisms. Remediation of periodontal diseases consists of the use of general and local antimicrobial drugs in combination with measures to normalize hygiene in the oral cavity (superficial and subdental separations). In this case, in any country of the world, analysis of the qualitative and quantitative composition of the upper and lower microflora of the gums by traditional microbiological methods is not used in routine diagnostics.

Modern literature emphasizes the leading role of microbial rash, which includes many microorganisms living in the oral cavity, in the development of periodontal inflammatory pathology in the justification of the rooted approach to the treatment of periodontitis.

The bacterial profile of the oral biocenosis is determined by a number of exogenous and endogenous factors. The host organism's defense mechanisms greatly affect the virulence of conditionally pathogenic and pathogenic microorganisms in each biotope. It is no secret that the violation of the ratio of normal and conditionally pathogenic flora leads to the development of dysbacteriosis, and it is characterized by a relative decrease in the amount of lactobacilli and bifidobacteria. Thus, the interaction of microflora of the oral cavity and local and general non-specialized and specialized resistance factors are the most informative indicators of the state of periodontal tissues. Therefore, we used dynamics in the periodontal microbial consortium to evaluate the efficacy of periodontal inflammatory disease remediation in patients with functional dyspepsia.

Taking into account the above, the purpose of this study was to study the role of periodontal microbiocenosis, as well as to evaluate the effect of FD on its composition.

We carried out microbiological studies on the detection of microorganisms in two groups of patients before and after treatment. Microbiological studies were carried out in 78 patients with PYaK, of which 38 (48.7%) were men and 40 (51.3%) were women.

The first group of patients - control, 38 patients, 20 of them (52.6%) men and 18 (47.4%) women, were treated by standard methods.

The second group of patients - the main group, 40 patients, 18 of them (45.0%) men and 22 (55.0%) women, received standard periodontological and antihelicobacter eradication, prokinetic, cytoprotective therapy.

Patients were examined at the base of the bacteriological laboratory of the Bukhara regional sanitary-epidemiological station.

During the treatment, the studied material was obtained in compliance with the following rules:

1. Any rinsing with medicinal products is forbidden.
2. The teeth were not cleaned before the procedure of direct extraction of the studied materials.
3. The material under study was taken 2 hours after eating.
4. The studied material was delivered to the bacteriological laboratory within 30 minutes.

Material for microbiological analysis was obtained as follows:

- saliva, 1 ml was collected by spitting into a sterile test tube;
- the content of the gingival canal was collected using a sterile cotton swab and placed in a sterile test tube containing 1 ml of physiological solution.

Isolation of microorganisms was carried out by planting the obtained materials in artificial nutrient media.

We used the method of cultural analysis. We took 0.1 ml of saliva from a physiological solution tube, as well as the contents of the gingival canal, and placed all this in the nutrient medium. The material was seeded on agar in a Petri dish. We took the studied material in a pipette and applied it to the entire surface of the agar. To determine the entire microflora in the oral cavity, they were cultured on blood agar. We used the following technology to obtain blood agar: pH 7.5 supply agar was heated and cooled to 50°C, then animal (sheep, rat) blood was added. Blood agar was thoroughly rinsed without foaming and poured into Petri dishes 3-4 mm. Cultivation was carried out in a thermostat at 37 °C for 20 h.

Endo medium was used to detect intestinal infection. 100 ml of pH 7.4 agar was dissolved in a water bath and cooled to 70 °C. Then 1 g of pure lactose dissolved in distilled water was added. The following were prepared in different test tubes: 2-3 ml of a solution of basic fuchsin saturated with alcohol, 10 ml of a 10% aqueous solution of sodium sulfite (Na₂SO₃). 1 ml of fuchsin solution was poured into a sterile test tube and sodium sulfite solution was added, after which fuchsin turned pink. The resulting mixture was poured into melted agar, mixed thoroughly without foaming and placed in cups with a layer of 3-4 mm. Hot pink agar turns colorless after cooling. Incubation was carried out in a thermostat at 37 °C for 20 hours.

Culture and study material were obtained before and after standard treatment and treatment using a combination of antihelicobacter eradication, prokinetic and cytoprotective therapy. Colony forming units (COU) counts were used to quantify the number of microorganisms grown in the dense medium. The prevalence of microorganisms and the amount of KOE/ml were studied in the studied groups. The KOE of microorganisms in one PK was calculated as the arithmetic mean of the total number of microbes in the group and compared with the ecological indicators of the germination of the furnace according to the information provided in the literature sources (A.V. Eremenko, 2007; V.N. Tsarev, 2009).

In the first (38) and second (40) groups of patients under study, before treatment, as well as in the periodontal pocket (PCh), the microbial landscape was studied.

In terms of prevalence and quantity, parodontopathogens - *Staphylococcus aureus* colonies dominate, 22.34% in the first group and 21.24% in the second group.

In the first and second groups of periodontopathogenic microorganisms, gram-negative anaerobic conditionally pathogenic fusobacteria, *Fusobacterium nucleatum* and *Fusobacterium sp. fusobacteria*, *Staphylococcus aureus*, *Staphylococcus epidermidis*, *Streptococcus mutans*, *Neisseria spp.* pathogenic aerobes were identified.

As a result of combined therapy using eradication, prokinetic, cytoprotective therapy, the total number of microflora colonies decreased from 476 to 62 in group 2 (86.97% decrease), in group 1 - from 212 to 75 (64.62%). Therefore, the percentages were changed, so that if the total number of colonies was taken as 100%, it was equal to 62 in the first group and 75 in the second group. In the second group, the bactericidal effect expressed in PCh was determined. The number of "bruising" streptococci and corynebacteria decreased. The amount and prevalence of the main periodontopathogen *Staphylococcus aureus* decreased from $5.6 \cdot 10^7$ CFU/ml to $7.7 \cdot 10^3$ CFU/ml, which was 0.02%. Positive changes were also noted for other periodontopathogens. Anaerobic gram-negative microorganisms completely disappeared.

The prevalence of the main periodontopathogenic *Staphylococcus aureus* decreased from $5.5 \cdot 10^7$ CFU/ml to $7.7 \cdot 10^3$ CFU/ml, which was 0.02% in the second main group receiving complex treatment.

After analyzing the obtained data, it was found that the greatest treatment effect was achieved in the second group, in which the treatment was carried out with the standard treatment along with eradication, prokinetic and cytoprotective therapy.

After analyzing the obtained data, it was found that the greatest anti-inflammatory effect was achieved in the second main group, in which the treatment of PYaK was carried out with traditional periodontological therapy in a complex with eradication, prokinetic and cytoprotective therapy, in comparison with the control group, which was carried out using standard conservative therapy.

Based on the data obtained from our research, it is possible to say that it is important and reasonable to carry out anti-inflammatory therapy immediately after the complexes of preventive measures in pyak.

References

1. Ш Шадиева, М Гязова. Сочетанная патология: заболевания пародонта и гастродуоденальной зоны// Stomatologiya, 80-83. 2021
2. Ш Ш Шадиева. Изменение стоматологического статуса и качества жизни у пациентов с helicobacter pylori-ассоциированной функциональной диспепсией// Биология и интегративная медицина, 424-426.2021.
3. Ш Шадиева, М Гязова. Коморбидность болезней пародонта и желудочно-кишечного тракта// Общество и инновации 2 (4/S), 424-428. 2021.
4. Ш Ш Шадиева. Характеристика системы иммунитета у больных с хроническим генерализованным пародонтитом// Современные инновации, 38-39. 2019.
5. Ш Ш Шадиева. Роль иммунных механизмов у больных с воспалительной патологией пародонта // Новый день в медицине, 707-709. 2020.
6. SS Shukhratovna, AA Sadikovich. The role of protective factors of blood and oral fluid in inflammatory periodontal diseases // European science review, 220-224. 2018
7. Sharipova Gulnihol Idiyevna. The effectiveness of the use of magnetic-infrared-laser therapy in traumatic injuries of oral tissues in preschool children//Academic leadership. ISSN 1533-7812 Vol: 21Issue 1
8. Sharipova Gulnihol Idiyevna. Discussion of results of personal studies in the use of mil therapy in the treatment of trauma to the oral mucosa// European Journal of Molecular medicine Volume 2, No.2, March 2022 published by ejournals PVT LTD DOI prefix: 10.52325 Issued Bimonthly Requirements for the authors.
9. ШШ Шадиева, АС Алимов, АА Хаджиметов. Установление характера изменений белка острой фазы-лактоферрина в слюне при пародонтите различной степени тяжести // Российская стоматология 9 (1), 129-129. 2016.
10. SS Shadieva, AS Alimov. The role of protective factors of blood and oral fluid in inflammatory periodontal diseases// European Science Review, 220-224. 2018.