POSSIBILITIES OF LOCAL ANTIBACTERIAL THERAPY OF CHRONIC GENERALIZED PARODONTITIS IN THE BACKGROUND OF GASTRIC ULCER DISEASE

Radjabova Azizaxanum Farmanovna
https://orcid.org/0009-0000-0240-3135
E-mail: azizaxanum_radjabova@bsmi.uz
Bukhara State Medical Institute named after Abu Ali ibn Sino,
Uzbekistan, Bukhara.
A.Navoi street 1. Tel: +998 (65) 223-00-50
E-mail: info@bsmi.uz

Abstract: Numerous clinical observations show that peptic ulcer disease (PUD) is accompanied by pathological changes in periodontal tissues. In 92% of patients with gastrointestinal diseases, oral pathology is diagnosed, which is mainly manifested by periodontitis. Chronic disseminated periodontitis (CDP) is one of the most common periodontal diseases. This condition is characterized by inflammation of the gums and damage to the supporting tissues surrounding the teeth, and if the disease is not treated in a timely manner, it can lead to tooth loss. In recent years, local antibacterial therapy has attracted the attention of specialists as a safe and effective method of treating CDP in patients with chronic systemic diseases. This article discusses modern approaches to local therapy of chronic periodontitis associated with gastrointestinal ulcer disease.

Key words: periodontology, microbiota, periodontitis, peptic ulcer, periodontal pocket, microorganisms, periodontal pathogens, Helicobacter pylori, metronidazole, pomegranate seed oil.

Systemic diseases, including peptic ulcer disease, have a significant impact on the course of periodontitis. Studies confirm that inflammatory processes in the gastrointestinal tract increase the overall inflammatory load on the body, which can contribute to the progression of periodontitis. In addition, Helicobacter pylori infections, often associated with peptic ulcer disease, can play a role in the pathogenesis of periodontitis, creating additional complications in treatment. Periodontal diseases against the background of peptic ulcer disease of the gastrointestinal tract are characterized by an earlier development of the generalized pathological process compared to patients without background pathology. In the early stages of the disease, the periodontium of all teeth is affected, inflammatory processes are more intense and are often accompanied by the release of pus from periodontal pockets. In patients with concomitant gastroduodenal diseases, periodontitis often has a continuously recurring nature, is resistant to standard therapy, and periods of

remission are unstable. According to modern concepts, inflammatory periodontal diseases are infectious chronic inflammatory processes, so normalization of microflora is an important condition for their effective treatment. It is known that with chronic periodontitis, there is a significant shift towards an increase in the proportion of anaerobic bacteria: according to Slots J., under conditions of inflammation in periodontal pockets, their number reaches 70-80%, while normally the level of anaerobic flora is only 20-30%. The main cause of gastric ulcer and duodenal ulcer is the bacterium Helicobacter pylori. In recent years, the infectious factor associated with the bacterium Helicobacter pylori (HP) has become of great importance in the development of peptic ulcer disease.

Studies show that these bacteria can be found in the microenvironment of dental plaque and saliva. Periodontal pockets are a natural reservoir for Helicobacter pylori, providing favorable microaerobic conditions. It has been established that Helicobacter pylori infection occurs through the oral cavity by the oral-oral or fecal-oral route, where the bacteria can persist as a permanent reservoir. Helicobacter pylori, although mainly associated with gastrointestinal diseases, can also be involved in the development of inflammatory processes in the oral cavity, including gingivitis. Some researchers believe that the presence of Helicobacter pylori in the oral cavity can serve as a source of re-infection of the gastric mucosa in patients with duodenal ulcer disease (DU). There is a hypothesis that Helicobacter pylori in the oral cavity can act as a commensal, that is, a microorganism that lives on the mucous membranes of a person without obvious harm or benefit to the body.

When infected with Helicobacter pylori, the development of diseases such as periodontitis or gastrointestinal ulcers (GIT) depends on many factors, including the route of infection, the state of the body, genetic predisposition and immune status. Thus, the most powerful factor contributing to the development and maintenance of periodontal diseases is the development of dysbiosis in the oral cavity, which develops either against the background of reduced immunity or itself leads to a change in it.

This explains the feasibility of using antibacterial drugs, but requires an integrated approach and an assessment of potential risks and benefits. Antibacterial therapy can reduce the microbial load, eliminating the key etiological factor of the disease. Chronic inflammation in the oral cavity can increase systemic inflammation, which is especially dangerous for patients with gastrointestinal ulcers. Antibacterial therapy helps reduce the level of proinflammatory cytokines, which can alleviate the course of peptic ulcer disease. The oral cavity can be a reservoir of H. pylori, which causes re-infection of the stomach. Treatment of chronic gastritis with antibacterial drugs reduces the likelihood of re-infection. In the case of a combination of chronic gastritis and gastrointestinal ulcer, antibacterial therapy can improve the general

condition of the patient, providing a favorable interaction in treatment. However, their widespread and sometimes unfounded

However, their widespread and sometimes unreasonable or uncontrolled use contributes to the development of strains with resistance to antibiotics. Studies have shown that the selection of such strains occurs, among other things, with sharp fluctuations in drug concentrations, which is typical for local use of antibacterial agents in the form of rinses, pastes and gels that are easily washed off with saliva. Also, systemic antibiotics can disrupt the balance of microflora in the gastrointestinal tract, which is especially important for patients with peptic ulcer disease.

This problem can be solved using the following approaches:

- local antibacterial drugs (gels, solutions, irrigation agents) allow you to deliver active substances directly to the site of inflammation, minimizing systemic effects and reducing the risk of exacerbation of gastrointestinal ulcer disease;

- the use of antiseptic drugs, which, unlike antibiotics, have a wide range of antibacterial action and rarely cause the development of microorganism resistance;

Chlorhexidine is an antiseptic with a bactericidal effect against a wide range of gram-negative and gram-positive microorganisms, as well as yeast fungi, dermatophytes and lipophilic viruses. It affects bacterial spores only at elevated temperatures. In low concentrations, chlorhexidine disrupts the osmotic balance of bacterial cells, causing the release of potassium and phosphorus, which provides a bacteriostatic effect. It remains active even in the presence of blood and pus, is non-toxic, does not accumulate in the body and does not have carcinogenic properties. Chlorhexidine provides a long-term antibacterial effect due to its ability to bind to proteins of saliva and mucous membranes, creating a depot of the active substance. Chlorhexidine destroys biofilms in which anaerobes often hide, which facilitates the action of metronidazole. Gum gel "Metrogyl Denta Professional" is the only ready-to-use dental preparation containing metronidazole 25% and chlorhexidine 0.1% in stable concentrations. This gel has a pleasant taste, easily dissolves in water without interfering with the outflow of exudate, and due to its high fluidity completely fills the periodontal pocket. After contact with gingival fluid containing esterases, hydrolysis of inactive metronidazole benzoate occurs, activating it. Metronidazole provides anaerobic action on bacteria localized in periodontal pockets or gingival sulcus. Metronidazole destroys anaerobic bacteria, and chlorhexidine prevents further reproduction of other pathogens, helping to restore the microbial balance. During the treatment of periodontitis using metronidazole, various means and methods aimed at the regeneration of periodontal tissues can be used simultaneously. Periodontal tissue restoration is a complex process that includes regeneration of the gum, alveolar bone, root cementum and periodontal ligament. Metronidazole effectively eliminates bacterial infection, which creates favorable conditions for tissue restoration, but requires additional measures for regeneration.

The oil can be used to massage the gums, which helps improve blood circulation and stimulate tissue regeneration. Applying the oil topically (diluted 1:3 in olive oil) to periodontal pockets can reduce inflammation and speed up healing. (This method of dilution can reduce the concentration of active substances, reduce the likelihood of irritation and increase tolerance.)

Conclusion. H. pylori can indeed exist in the oral cavity as a commensal, especially in healthy people or with a balanced microbial ecosystem. However, its conditional pathogenic potential does not allow us to unambiguously classify this bacterium as harmless microorganisms. Thus, the status of H. pylori in the oral cavity depends on many factors, including the state of the immune system, the microbial composition of the oral cavity and the level of virulence of the bacteria. Local antibacterial therapy opens up new possibilities in the treatment of chronic generalized periodontitis, especially in patients with gastrointestinal ulcers. This method combines high efficiency and safety, minimizing systemic complications and providing comfort for the patient. The combination of metronidazole and chlorhexidine is an effective treatment for inflammatory periodontal diseases, especially in chronic generalized periodontitis.

Local application of these drugs minimizes side effects and provides a high concentration of active substances in the inflammation site.

The use of pomegranate seed oil diluted in olive oil for the treatment of gums with periodontitis against the background of a stomach ulcer is safe when used correctly. It has a mild but effective anti-inflammatory and antimicrobial effect, improves the condition of the gums and promotes their healing. However, this remedy should be used as part of complex therapy.

The key aspect of successful treatment is the close interaction of the dentist and gastroenterologist, which allows the therapy to be adapted to the individual needs of the patient.

LITERATURE:

1. X.P.Kamilov, K.A.Taxirova, Sh.T.Xojiakbarova, Sh.R.Boymirzaeva «Obzor sovremennix podxodov v etipatogeneticheskom lechenii xronicheskogo parodontita.» // Medicine and innovations.// №2, 2021pp 30-36.
2. Булкина Н.В., Островская Л.Ю. Новые возможности местной антибактериальной терапии воспалительных заболеваний пародонта на фоне патологии органов пищеварения. //Рмж. //2007;4:230.
3. Shadieva sh.sh. Helicobakter pylori bilan bog'liq funktsional dispepsiya bilan og'rigan bemorlarda tish holati va hayot sifatining o'zgarishi // Gospodarka i innowacje - Polsha -2022 - no. 21 - 283-284 betlar (if - 8.01)
4. Шадиева Ш.Ш. Результаты комплексного лечения больных с воспалительными заболеваниями пародонта и функциональной

диспепсией // Тиббиётда янги кун - Бухоро - 2022 №5 (43) 314-322 бетлар (14.00.00. №22)
5. Шадиева Ш.Ш. Роль иммунных механизмов у больных с воспалительной патологией пародонта // Тиббиётда янги кун - Бухоро - 2020 №4 (32) - 314-322 бетлар (14.00.00. №22)
6. Шадиева Ш.Ш., Абдурахманов М.М. Роль хелекобактерной инфекции в развитии функциональной диспепсии и воспалительных заболеваний пародонта // Стоматология – Тошкент -2021 №2(83) - 76-80 бетлар (14.00.00. №12)
7. Шадиева ш.ш. Динамика микрофлоры полости рта у больных воспалительными заболеваниями хронического генерализованного пародонтита и функциональной диспепсии // Тиббиётда янги кун - Бухоро – 2022 - №9 (47) 137-138 бетлар (14.00.00. №22)
8. Шадиева Ш.Ш., ҳабибова н.н. Динамика микрофлоры полости рта у больных воспалительными заболеваниями хронического генерализованного пародонтита и функциональной диспепсией // Тиббиётда янги кун - Бухоро - 2022 №10 (48) - 9-14 бетлар (14.00.00. №22)
9. Шадиева Ш.Ш., Ҳабибова Н.Н. Функционал диспепсия билан оғриган беморларда яллиғланишли пародонтал касалликлар диагностикасида цитологик тадқиқотларни қўллаш // Тиббиётда янги кун - Бухоро - 2022 №11 (49) - 170-175 бетлар (14.00.00. №22)
10. Shadieva Sh.Sh. Changes in gastroenterological symptoms depending on the selected treatment scheme in patients with functional dyspepsia, inflammatory diseases of the periodontium // American journal of medicine and medical sciences - АҚШ- 2022 - 12 (8)-p. 821-823- бетлар (14.00.00. №3)
11. Shadieva Sh.Sh. Role of immune mechanisms in patients with inflammatory periodontal pathology // chinese journal of industrial hygiene and occupational diseases – Хитой 2021, 39 - p. 3-11. (Scopus – q3)
12. Giyazova Malika Muxamadovna, Analytical methods. CRITICAL REVIEWCRISPR/Cas-based colorimetric biosensors: a promising tool for the diagnosis of bacterial foodborne pathogens in food products. The Royal Society of Chemistry 2024. Analytical Methods Critical Revie
13. Саноева М. Ж, Гиязова М. М., Некоторые этиопатогенетические аспекты и особенности поражения структур полости рта при коронавирусной инфекции. (обзор) //Journal of neurology and neurosurgery research Volume 2, ISSUE 4. – 2021. – С. 48-53
14. Гиязова М.М., Саноева М.Ж. Нейростоматологические особенности поражения структур полости рта при коронавирусной инфекции // Республиканская научно-практическая конференция (с международным

участием) Нейродегенеративные и сосудистые заболевания нервной системы. 10 февраля 2022 года С.28-29

15. M. Giyazova, M. Sanoeva Violation of motor and non-motor in patients with COVID-19 with oral pathology //World congress on Parkinson's diseases and related disorders. A comprehensive educational program 2022, 01-04 May P.158-159
16. Раджабова А. Ф. Особенности стоматологического статуса пациентов с воспалительными заболеваниями кишечника // Eurasian journal of medical and natural sciences // 2022 // volume 2 // issue 11, october // issn 2181-287x // p. 293 – 298 .
17. R.A. Farmonovna. Immunological aspects of the development of oral lesions in inflammatory bowel disease // American journal of pediatric medicine and health sciences // volume 01, issue 10, 2023 // issn (e): 2993-2149// p. 682-689.
18. Раджабова А.Ф. Питание и пародонтит // "World of science" republican scientific journal // 25th june 2024 // volume-7 // issue- / p.81-88.
19. Radjabova A.F. Basic types of digestion, basic functions of the digestive system // International bulletin of medical sciences and clinical research // - 2023 - volume 3 / issue 5 , май. Issn: 2750-3399 / p. 67-71.
20. Раджабова А.Ф. Питание и пародонтит // "World of science" republican scientific journal // 25th june 2024 // volume-7 // issue- / p.81-88.
21. Раджабова А. Ф. Особенности стоматологического статуса пациентов с воспалительными заболеваниями кишечника // Eurasian journal of medical and natural sciences // 2022 // volume 2 // issue 11, october // issn 2181-287x // p. 293 – 298 .
22. R.A. Farmonovna. Immunological aspects of the development of oral lesions in inflammatory bowel disease // american journal of pediatric medicine and health sciences // volume 01, issue 10, 2023 // issn (e): 2993-2149// p. 682-689.
23. Radjabova A.F. Basic types of digestion, basic functions of the digestive system // International bulletin of medical sciences and clinical research // - 2023 - volume 3 / issue 5 , май. Issn: 2750-3399 / p. 67-71.