



## PERIODONTAL DISEASE AND MODERN APPROACHES TO TREATMENT

Ruziyeva Kamola Axtamovna  
Samarkand State Medical University

### Abstract

The terminology and classification of periodontal diseases approved at the XVI Plenum of the All-Union Society of Dentists is used in our country. Periodontitis is an inflammation of periodontal tissues characterized by progressive destruction of the periodontal and bone of the alveolar process of the jaws. Periodontitis is an inflammation of periodontal tissues characterized by destruction of the ligamentous apparatus of the periodontium and the alveolar bone. Phases of the process: exacerbation, remission.

### Introduction

The severity is determined by the clinical and radiological picture. Its main criterion is the degree of destruction of the bone tissue of the alveolar process (in practice, it is determined by the depth of periodontal pockets / PC / in mm).

Severity: light (PC no more than 4 mm), medium (PC 4-6 mm), heavy (PC more than 6 mm).

The prevalence of the process: localized, generalized.

The Commission considered it necessary to identify an independent group of periodontal diseases - aggressive forms of periodontitis (prepubescent, juvenile, rapidly progressing. The latter develops in people aged 17 to 35 years).

Periodontitis is chronic generalized of mild severity

It develops as a complication of incurable chronic catarrhal gingivitis and is characterized by progressive destruction of periodontal tissues and bone of the alveolar processes of the jaws.

### Clinic:

It is characterized by an almost complete absence of unpleasant subjective sensations in the patient, hence the low availability of medical care at this stage of the disease development. Patients, as a rule, note a slight itching in the gums and their bleeding with mechanical irritation (when brushing teeth, eating hard food). The general condition is not impaired, although an in-depth, targeted examination usually reveals changes in the immune system, deviations from other organs and systems pathogenetically associated with periodontal pathology. From the anamnesis, it





should be found out that the disease began gradually, and was practically asymptomatic for a long time.

During an objective examination, chronically mild inflammation of the gums (edema, bleeding, hyperemia) is noted. Supra- and subgingival dentate deposits (mineralized and non-mineralized) are revealed. The teeth are fixed and not displaced.

Diagnostic criteria are: the presence of periodontal pockets up to 3.5 mm deep, mainly in the area of interdental spaces, and the initial degree of destruction of the bone tissue of the alveolar process (X-ray picture: absence of a compact plate on the tops of the interalveolar septa, foci of osteoporosis, expansion of the periodontal gap in the cervical region).

To make a diagnosis in this case, it is enough to question the patient, examine the oral cavity, probe clinical pockets, assess the mobility of teeth, conduct a Schiller-Pisarev test, as well as an indication and quantitative assessment of plaque. To clarify the diagnosis, X-ray examination is performed, better orthopantomography. It is advisable to do a clinical blood test, and for patients over 40 years of age - a blood glucose test. These methods are usually sufficient for the diagnosis of chronic generalized periodontitis of mild degree, if it is not accompanied by pathology of internal organs, pronounced occlusive disorders, etc.

### **Treatment:**

They are carried out in 3-4 visits. First, after antiseptic treatment of the gums, a thorough removal of dental deposits is performed. It is advisable to apply antimicrobial and anti-inflammatory drugs to the gums. Of the antimicrobial agents, 0.06% chlorhexidine solution, metronidazole (trichopol) are effective in this case. Nonsteroidal anti-inflammatory drugs (NSAIDs) are preferred among anti-inflammatory drugs- acetylsalicylic acid, indomethacin, orthophene.

The patient is taught the rules of oral hygiene, helps to choose a toothbrush and toothpaste, and gives recommendations on the use of floss. At this stage, toothpastes with anti-inflammatory and antimicrobial effects should be recommended, as well as oral baths with antiseptic solutions, decoctions of chamomile, sage, calendula. Physiotherapy gives good results: CUF on the gum area (antibacterial effect), anode galvanization, electrophoresis of drugs from the anode (vitamin B1 calcium chloride), UHF EP in an oligothermic dose, local hypothermia, radiation from a helium-neon laser, plasma flow of argon (anti-inflammatory effect). Periodontitis, as a rule, is accompanied by functional overload of the teeth, therefore, the patient should be referred for consultation to an orthopedic doctor for selective grinding and other types of orthopedic treatment. During the second, third and fourth visits (with an interval



of 1-2 days), the level of oral hygiene is checked, the removal of dental deposits is continued, and pastes based on metronidazole and NSAIDs are applied. After the relief of inflammatory phenomena, curettage of granulations is performed. This procedure allows you to improve long-term treatment results. After carrying out the described course of therapeutic manipulations, as a rule, the disease goes into remission. A follow-up examination is prescribed after 3-6 months.

Periodontitis is chronic generalized of moderate severity

It is the result of further progression of the inflammatory-dystrophic process in the periodontium. This stage of the disease is characterized by more pronounced clinical symptoms and noticeable violations of the function of the dental system, which forces the patient to seek medical help.

### **Clinic:**

It is characterized by complaints of bleeding gums, sometimes soreness, bad breath, mobility and displacement of teeth. The general condition, as a rule, is not disturbed, although an in-depth examination reveals changes in the immune system, signs of endogenous intoxication, deviations from other organs and systems.

Upon examination of the oral cavity, signs of chronic inflammation of the gums are revealed: hyperemia, bleeding, there may be purulent discharge from clinical pockets. There are supra- and subgingival deposits. As a rule, there is mobility of teeth of I-II degree, their displacement is possible.

The diagnostic criteria that make it possible to diagnose "chronic generalized periodontitis of moderate severity" are: the presence of periodontal pockets up to 5 mm deep and resorption of bone tissue of the alveolar process by X-ray at 1/3-1/2 the height of the interdental septum.

To examine the patient and make a diagnosis in this case, we recommend performing the following amount of diagnostic manipulations: questioning, examination, probing of clinical pockets, assessment of dental mobility, Schiller-Pisarev test, indication and assessment of plaque. It is necessary to conduct an X-ray examination (orthopantomography). In addition, you need to do a clinical blood test and a blood glucose test. The patient should be consulted by an orthopedic dentist, and according to indications - by an internist therapist.

The course of treatment for chronic generalized periodontitis of moderate severity consists of 6-10 visits over 20-30 days.

Therapy is primarily aimed at eliminating periodontal pathogenic factors (removal of dental deposits, selective grinding of teeth, plastic vestibule and frenules, etc.), as well as at relieving inflammatory phenomena in the gums, eliminating periodontal



pockets, stabilizing protective rows, normalizing trophic, microcirculation and protective reactions in periodontal tissues.

On the first visit, after examination and preparation of a comprehensive therapy plan, antiseptic gum treatment is performed with 0.06% chlorhexidine solution, 1% hydrogen peroxide solution, 0.2% furacilin solution. Then the supra-gingival and available subgingival dental deposits are removed. Usually, the removal of dental deposits is performed in 2-3-4 visits, although it is allowed to carry out this procedure in one visit.

The patient is taught the rules of oral hygiene, helps to choose a toothbrush and toothpaste, and gives recommendations on the use of floss. At this stage, toothpastes with anti-inflammatory and antimicrobial effects should be recommended. At home, the patient is also recommended to make oral baths with a solution of furacilin (1:5000), chlorhexidine 0.06%, decoctions of chamomile, sage, calendula 3-4 times a day for 20 minutes after meals. Oral hygiene should be monitored throughout the entire course of treatment. During the same visit, the issue of removing destroyed teeth, teeth with mobility of the III degree, replacing defective fillings, improperly made prostheses, selective grinding of teeth is resolved. The first visit ends with an application to the gum and the introduction into clinical pockets of a paste consisting of an antimicrobial drug (metronidazole) and a nonsteroidal anti-inflammatory drug (aspirin, orthophene, etc.). With severe suppuration, local application of proteolytic enzymes (trypsin, stomatozyme, imozimase), sorbents (gelevin, digispone) is also advisable. Metronidazole is administered orally: on the first day - 0.5 g 2 times (with an interval of 12 hours), on the second day - 0.25 g 2 times (after 8 hours). The drug is taken during or after a meal. It is advisable to combine the treatment with physiotherapy procedures with antimicrobial and anti-inflammatory effects: CUF, gum massage, anodgalvanization or electrophoresis of drugs from the anode, local hypothermia, etc.; for a course of 3-7 procedures. On the second visit (after 2-3 days), the patient's compliance with oral hygiene recommendations is evaluated, for this purpose, the plaque is stained with iodine-iodine-potassium solution. They continue to remove the available dental deposits, rinse the pockets with antiseptic solutions from a syringe with a blunt needle, apply to the gums and inject a mixture of metronidazole and one of the NSAIDs into the pockets. After the relief of inflammatory phenomena in the gums, the elimination of periodontal pockets begins. In case of moderate periodontitis, an "open" curettage is performed for this purpose. In a polyclinic, it is advisable to perform this operation on one segment of the jaw, i.e. in the area of six teeth, in a hospital setting - in the area of all teeth of one jaw. The "open" curettage is completed by applying a gingival protective bandage for 1-2 days.





"Home" recommendations: for the area of the postoperative wound - cold, antiseptic mouth baths, careful hygienic oral care, restriction of the use of coarse, spicy and irritating food. In subsequent visits, quality control of early operations and "open" curettage of periodontal pockets in the area of other teeth are carried out, preferably against the background of antibacterial therapy. After removal of dental deposits, elimination of other periodontal pathogenic factors, relief of the inflammatory process in the gum and elimination of periodontal pockets, periodontitis goes into remission. At this stage, therapeutic measures should be aimed at normalizing microcirculation, nervous trophism and homeostasis of periodontal tissues. Although to a large extent these processes normalize independently after the elimination of microbial attack and the inflammatory process in periodontal tissues.

Usually, physiotherapy is prescribed to solve the above tasks (5-10 procedures per course): cathode-galvanization or electrophoresis from the cathode of nicotinic acid, aloe extract, heparin, etc., gum darsonvalization, INGL, UHF EP in an oligothermic dose, local hypo-hyperthermia. It is also permissible to inject vitamins, stimulants and other drugs along the transitional fold (for a course of 10-12 injections). After the end of the course of treatment, the patient is taken for follow-up and a follow-up examination is prescribed in 2-3 months. All subsequent therapeutic and preventive measures should be aimed at maintaining the protective forces of the periodontium and preventing the formation of dental deposits. For this purpose, periodic follow-up examinations and courses of "maintenance" therapy are carried out at intervals of 2-3 and then 5-6 months. Their main purpose is to control oral hygiene, timely removal of dental deposits, stimulation of trophic, microcirculation and protective forces of periodontal tissues in order to prevent exacerbation and further progression of the disease. It is an advanced, often "terminal" stage of the inflammatory-dystrophic process in periodontitis. Unfortunately, treatment in this case is usually ineffective, leads only to short-term improvement and requires significant efforts from the doctor and the patient to maintain the relative usefulness of the dental system for some time and delay tooth loss.

### **Clinic:**

It is characterized by complaints of bleeding and sore gums, bad breath, mobility and displacement of teeth, difficulty chewing food. As a rule, the general condition of the patient is disturbed. An in-depth examination reveals endogenous intoxication, changes in the immune system, deviations from the internal organs pathogenetically associated with the inflammatory and dystrophic process in periodontitis. An objective examination determines pronounced chronic inflammation of the gums with





suppuration from periodontal pockets, periodic exacerbations and abscess formation. There are supra- and subgingival dentate deposits. There is marked traumatic articulation, pathological mobility of teeth of II-III degree, their displacement.

The diagnostic criteria that make it possible to diagnose "severe chronic generalized periodontitis" are: the presence of periodontal pockets with a depth of more than 5 mm and bone resorption of the alveolar process according to an X-ray more than S of the root length, possibly complete absence of bone tissue.

When examining such patients, the following amount of diagnostic manipulations is performed to make a diagnosis and draw up a treatment plan: questioning, examination, probing of periodontal pockets, determination of tooth mobility, indication and quantitative assessment of plaque. The Schiller-Pisarev test is being conducted. As with other forms of periodontitis, an X-ray examination (orthopantomography) should be performed. A clinical blood test and a blood glucose test are performed. The patient is consulted by an orthopedic dentist and an internist. The course of treatment consists of 8-12 visits and lasts 20-40 days, depending on the condition of the dental system and the chosen treatment tactics.

On the first visit, after examining the patient and making a diagnosis, a plan for oral sanitation and treatment of periodontal pathology is outlined, which teeth are to be removed (as a rule, with a pocket depth of over 8mm). Together with an orthopedic dentist, orthopedic treatment is planned (selective grinding, temporary splinting, direct prosthetics, manufacture of permanent prostheses with splinting elements, etc.)

In the first 3-4 visits, dental deposits are removed, periodontal pockets are treated with antiseptic solutions, gum applications are made or pastes containing antiseptics, metronidazole, NSAIDs, proteolytic enzymes are injected into pockets (compatibility of drugs should be taken into account when composing pastes).

In this case, the appointment of antibacterial therapy is indicated: Metronidazole - according to the scheme: on the first day - 0.5 g 2 times (with an interval of 12 hours), on the second day - 0.25 g 3 times (after 8 hours), in the next 4 days - 0.25 g 2 times (after 12 hours). The drug is taken during or after a meal. With persistent suppuration from periodontal pockets, as well as in the presence of concomitant general symptomatic pathology, antibiotics are prescribed, preferably lincomycin - 0.5 g 4 times a day (with an interval of 6 hours) 1-2 hours before meals (in capsules) for 5-7 to 10 days. In parallel with drug therapy, physiotherapy is prescribed (for a course of 5-7 procedures): KUF, IGNU, anodgalvanization, hydrotherapy. The patient is taught the rules of oral hygiene, given recommendations on brushing teeth, helped to choose a toothbrush and toothpaste, and taught how to use floss. At this stage, preference





should be given to toothpastes with anti-inflammatory and antimicrobial effects. At home, the patient is also recommended to make oral baths with 0.06% chlorhexidine solution, 0.2% furacilin solution, 1% hydrogen peroxide solution, decoctions of chamomile, sage, calendula 3-4 times a day for 20 minutes after meals.

Oral hygiene should be monitored throughout the entire course of treatment. After the relief of inflammatory phenomena, flap operations are performed (simultaneously in the area of 6-8 teeth) with correction of the gum edge and the use of drugs that stimulate reparative osteogenesis. The main purpose of surgery is to eliminate periodontal pockets. At the end of the treatment described above, measures are taken to normalize microcirculation and homeostasis in periodontal tissues: physiotherapy, injections of drugs into the transitional fold, drugs of general effect. Orthopedic treatment is mandatory, which is planned taking into account the functional state of periodontal tissues and the dental system as a whole. It should be recognized that, despite the use of the entire arsenal of periodontal therapy tools and methods, the treatment of severe periodontitis is rarely successful and does not lead to long-term remission. Therefore, the efforts of dentists and san-lumen work should be aimed primarily at identifying and treating the early stages of inflammatory periodontal pathology - chronic catarrhal gingivitis and mild periodontitis.

### **Periodontitis in remission**

After adequate comprehensive treatment of chronic generalized periodontitis, the stage of remission begins. This condition is regarded not as a recovery, but as a stop or slowdown in the development of the pathological process (primarily alveolar process atrophy) at the level at which treatment was initiated. Clinically, periodontitis in remission is manifested by the absence of complaints; the gum is pale pink, fits snugly to the teeth, there are no inflammatory phenomena, the necks of the teeth are exposed, clinical pockets are not determined

The diagnostic criteria for chronic generalized periodontitis, the stage of remission are: according to the anamnesis, periodontitis with complex treatment (including surgical and orthopedic methods); absence of clinical pockets and inflammatory phenomena in the gums; signs of stabilization of the process on the X-ray of the alveolar process: densification of the bone tissue of the interdental septa, the disappearance of the phenomena of osteoporosis, the restoration of vertical plates.

Prognosis of chronic generalized periodontitis

Despite the use of a wide range of remedies and treatment methods, complex therapy of chronic generalized periodontitis is not always effective.

The following factors worsen the prognosis:





the patient's failure to comply with the doctor's recommendations, primarily poor oral hygiene;

the presence of severe concomitant pathology, which sharply reduces the defenses of the periodontium and the body as a whole.

When deciding on the preservation or removal of a tooth, the following clinical situations are considered unfavorable in prognostic terms:

loss of more than 50% of bone tissue, uneven vertical bone resorption, presence of a bone pocket;

the depth of the periodontal pocket is more than 8 mm;

localization of the lesion in the bifurcation area;

mobility of the tooth of the III degree;

occlusive injury.

### **Conclusion:**

In the essay I wrote, I tried to highlight topical issues of therapeutic dentistry. The main task was the practical orientation of the information, the desire to get acquainted with the methods of treatment of one of the most common dental diseases - periodontitis. I tried to summarize data on new developments and technologies, information about which often reaches dental practitioners late and, unfortunately, is not always reliable.

### **References**

1. Astanovich A. D. A. et al. The State of Periodontal Tissues in Athletes Engaged in Cyclic Sports //Annals of the Romanian Society for Cell Biology. – 2021 Literature: . – С. 235-241.
2. . – С. 235-241.
3. Astanovich A. A. Comparative Analysis of the Stress-Strain State of the Lower Jaw with Different Splinting Systems in Localized Periodontitis of Middle Gravity by Finite Element Modeling //Scholastic: Journal of Natural and Medical Education. – 2023. – Т. 2. – №. 5. – С. 181-187.
4. Ортикова Н., Ризаев Ж., Норбутаев А. Распространенность и причины стоматофобии у детей //Общество и инновации. – 2020. – Т. 1. – №. 1/С. – С. 706-709.
5. Qobilovna B. Z., Maxzuna U. Improvement of Providing Therapeutic Dental Care to Pregnant Women. Therapeutic and Preventive Measures //Eurasian Research Bulletin. – 2023. – Т. 16. – С. 146-150.





6. Qobilovna B. Z. Modern Aspects Of Etiology And Pathogenesis Of Herpes Zoster //Web of Scientist: International Scientific Research Journal. – 2022. – T. 3. – №. 12. – C. 152-156.
7. Zарафруз B., Hekmat K. H. A. S. MANIFESTATION OF HERPETIC INFECTION IN THE ORAL CAVITY AND THEIR TIMELY ELIMINATION //Spectrum Journal of Innovation, Reforms and Development. – 2022. – T. 10. – C. 47-52.
8. Qobilovna B. Z., Nodirovich E. A. EVALUATION OF ORTHOPEDIC TREATMENT WITH REMOVABLE DENTAL PROSTHESES FOR PATIENTS WITH PAIR PATHOLOGY //Spectrum Journal of Innovation, Reforms and Development. – 2023. – T. 11. – C. 95-101.
- a. Ruziyeva K. A., Burhonova Z. K. K. Complex Application Of Magnetic Laser Therapy And Propolis Tincture For The Prevention And Treatment Of Chronic Recurrent Aphthous Stomatitis //The American Journal of Medical Sciences and Pharmaceutical Research. – 2021. – T. 3. – №. 06. – C. 127-130.
9. Sevinch E., Zарафруз B. ETIOLOGICAL TREATMENT FEATURES INFLAMMATORY PERIODONTAL DISEASE //European International Journal of Multidisciplinary Research and Management Studies. – 2024. – T. 4. – №. 03. – C. Qobilovna B. Z., Azamatovich B. M. MANIFESTATION OF SYMPTOMS241-246.
10. Zарафруз K. S. B. THE ROLE OF ORAL CAVITY MICROORGANISMS IN THE ORAL CAVITY IN PATIENTS WITH TUBERCULOSIS INFECTION //Web of Scientist: DEVELOPMENT OF INFLAMMATION AND SOMATIC PATHOLOGY //International Scientific Research Journal. – 2022. – T. 3. – №. 11. – C. 402-407.
11. Ortikova N., Rizaev J. The Prevalence And Reasons Of Stomatophobia In Children //Euro-Asia Conferences. – 2021. – T. 5. – №. 1. – C. 182-183.
12. Makhmudova U. B. The Effectiveness Of The Use Of Parapulpal Pins (Ppp) When Restoring Defects In The Crown Part Of The Frontal Teeth //Asian journal of pharmaceutical and biologicaladvanced research in education, technology and management. – 2024. – T. 3. – №. 8. – C. . – 2022.192-202.
13. Yusufboy S., Qobilovna B. Z. STUDY THE EFFECT OF HYGIENIC CARE ON THE MICROBIAL LANDSCAPE OF THE ORAL CAVITY IN PATIENTS USING COMBINED SPLINTING STRUCTURES WITH MODERATE PERIODONTITIS //European – T. International Journal of Multidisciplinary Research and Management Studies. – 2024. – T. 4. – №. 02. – C. 50-55.



14. Yusufboy S., Qobilovna B. Z. FEATURES OF THE STRUCTURE OF COPD IN ELDERLY PATIENTS //European International Journal of Multidisciplinary Research and Management Studies. – 2024. – T. 4. – №. 05. – C. 363-368.
15. Sevinch E., Qobilovna B. Z. A STUDY ON THE MORPHOFUNCTIONAL STATE OF ORAL ORGAN TISSUES DURING THE USE OF NON-REMOVABLE ORTHODONTIC STRUCTURES //European International Journal of Multidisciplinary Research and Management Studies. – 2024. – T. 4. – №. 03. – C. 247-253.
16. Shaximardonova E. S., Kobilovna B. Z. RED LICHEN PLANUS OF THE ORAL MUCOSA AND ITS CLINICAL ANALYSIS OF A PATIENT WITH, ASSOCIATED WITH THE EPSTEIN–BARR VIRUS //European International Journal of Multidisciplinary Research and Management Studies. – 2024. – T. 4. – №. 01. – C. 272-279.
17. Yusufboy S., Qobilovna B. Z. STUDY OF CHANGES IN THE ORAL CAVITY IN ENDOCRINE DISEASES //European International Journal of Multidisciplinary Research and Management Studies. – 2024. – T. 4. – №. 05. – C. 357-362.
18. Yusufboy S., Qobilovna B. Z. STUDY OF CHANGES IN THE ORAL CAVITY IN ENDOCRINE DISEASES //European International Journal of Multidisciplinary Research and Management Studies. – 2024. – T. 4. – №. 05. – C. 11. – №. 2.
19. Bakhtiyorovna M. U. Causes Of Removable Denture Breaks And Allergic Reactions //Spectrum Journal of Innovation, Reforms and Development. – 2022. – T. 10. – C. 374-377.
20. Bustanovna I. N. Assessment Of Clinical And Morphological Changes In The Oral Organs And Tissues In Post-Menopause Women //Thematics Journal of Education. – 2022. – T. 7. – №. 3..
21. Nizomitdin A. I. Therapeutic Effect Of Improved Enamel Surface Preparation Technique In The Treatment Of Acute Initial Caries Of Temporary Teeth In Children //Web of Scientist: International Scientific Research Journal. – 2022. – T. 3. – №. 11. – C. 440-445.
22. Jamshed S. Prevalence of Physiological Bite Forms In People With Different Face Types //Web of Scientist: International Scientific Research Journal. – 2022. – T. 3. – №. 11. – C. 451-454.
23. Nazhmiddinovich S. N., Obloberdievich S. J. Optimization of Orthopedic Treatment of Dentition Defects in Patients with Chronic Diseases of the Gastrointestinal Tract //Eurasian Research Bulletin. – 2023. – T. 17. – C. 157-159.





24. Berdikulovich N. A. et al. CLINICAL AND EPIDEMIOLOGICAL RESULTS OF ORTHOPEDIC TREATMENT OF PATIENTS WITH PARTIAL ABSENCE OF TOOTH //Galaxy International Interdisciplinary Research Journal. – 2022. – T. 10. – №. 1. – C. 958-960.357-362.
25. Yusufboy S., Qobilovna B. Z. SMARTBURS II–A REVIEW OF THE ADVANTAGES OF SMART BOR //European International Journal of Multidisciplinary Research and Management Studies. – 2024. – T. 4. – №. 02. – C. 56-60.

