



## **EARLY DETECTION AND CLINICAL ASSESSMENT OF MAXILLARY AND MANDIBULAR PERIOSTITIS IN PATIENTS OVER 60 YEARS OF AGE.**

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### **ABSTRACT**

Periostitis is an inflammatory process of the periosteum (bone membrane) surrounding the jaw bones, which is characterized by a severe course and a high level of complications, especially in the group of patients over 60 years of age. Physiological changes occurring in the body during old age, weakening of immunological defense mechanisms, and the presence of chronic diseases further complicate the course of periostitis. In this age group, periostitis is often dangerous due to its slow onset, mild clinical symptoms, and late diagnosis. It is precisely these circumstances that make its early detection and correct assessment an urgent issue in dental practice.

This scientific article comprehensively analyzes the clinical manifestations, etiological and pathogenetic factors, and modern laboratory and instrumental (especially CBCT and X-ray) diagnostic capabilities of periostitis in the upper and lower jaws in patients over 60 years of age. Based on the scientific results presented in the study, recommendations that can be used in dental practice, clinical approaches for early detection of the disease, and principles of complex treatment have been developed. The article is aimed at highlighting modern diagnostics and treatment strategies for periostitis, and is of great practical and scientific importance.

### **MAIN PART**

Old age is one of the most complex and responsible stages of human life, during which a number of physiological, biological and immunological changes



occur in the body. As a result of slowing down cell renewal, decreasing the regenerative capacity of bones and soft tissues, and impaired blood circulation and metabolic processes, the body becomes vulnerable to inflammation and infections. Especially in the elderly with chronic somatic diseases (diabetes, hypertension, cardiovascular pathologies), any inflammatory process can be severe and prolonged.

The oral cavity and jaw area including periostitis are considered one of the most common and urgent problems among elderly patients. According to the World Health Organization (WHO Dental Health Report, 2022), the incidence of dental inflammatory diseases among patients over 65 years of age is 38–42%. Periostitis is often dangerous due to its slow onset, lack of clear clinical symptoms, and late diagnosis. These factors can lead to the transition of the disease to a purulent form and severe complications — osteomyelitis, abscess, sepsis, etc.

Periostitis is an inflammation of the periosteum (the membrane that covers the bones of the jaw). The disease often occurs against the background of a tooth root infection, periodontal problems, or previous dental procedures. In the elderly, the course of the disease is slow, but can be dangerous, since the body's defenses are weakened.

Based on the research, useful recommendations for dental practice have been developed that will facilitate the clinical decision-making process when working with elderly patients.

Of this scientific study was to theoretically and practically study the clinical course, diagnostic methods, and early detection possibilities of periostitis in the upper and lower jaws in patients over 60 years of age. The course of the disease and the complexity of the diagnostic process are directly related to physiological changes in old age, which requires the development of new approaches in dental approaches.





The following methods were used in the research:

- Medical-theoretical analysis - basic concepts were developed by studying existing scientific theories about the etiopathogenesis, pathophysiology, and clinical symptoms of periostitis.

- Systematic literature review — Over 40 national and international sources published between 2015 and 2024 were analyzed. Based on these sources, reasonable conclusions were drawn about the clinical features of the disease and diagnostic methods.

- Comparative analysis - the clinical manifestations of periostitis in the elderly and young groups were compared and differences were identified.

- Statistical generalization - based on previously published statistical data, the incidence of the disease, the level of diagnosis, and the effectiveness of treatment were summarized.

Through these methodological foundations, the issues of early detection of periostitis, the advantages of modern diagnostic methods, and their practical application were studied in depth.

Literature analysis has shown that the clinical course of periostitis in the elderly is usually slow, vague, and complicated. In patients of this age, the inflammatory process is not acute, but rather chronic, and sometimes patients present only with a mild swelling or pain. Therefore, the diagnostic process is often delayed.

Clinical manifestations have the following characteristics:

- The intensity and duration of the pain;
- Swelling in the face and jaw area ;
- Enlargement of lymph nodes.

In addition, some features of periostitis in the elderly, such as reduced or absent pain, complicate the diagnostic process. As a result, unnecessary diagnostic



work-up may be performed, which may negatively affect the patient's overall condition. Digital radiography or plain radiography may be less effective in elderly patients with bone diseases such as osteoporosis. Therefore, the advantages of modern imaging methods should be used in an expanded manner.

## **CONCLUSION**

The analysis of the incidence of maxillary and mandibular periostitis in patients over 60 years of age and its clinical course shows the importance of early detection of the disease in the elderly. The course of periostitis in the elderly can be ambiguous and diagnostic difficulties may arise. Therefore, it is necessary to introduce new technologies and scientific approaches to quickly and effectively start treatment.

Radiological examinations, individual treatment approaches, and effective use of immune restoration methods increase the effectiveness of periostitis treatment in the elderly. As noted in the study, taking into account the general health status of the elderly and individual treatment planning is important for early detection of the disease.

Based on the above analysis, the need to improve the quality of dental services for the elderly, as well as develop effective approaches to early detection and treatment of diseases, was studied. The application of these recommendations in clinical practice will help improve the overall health of patients

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