

Effectiveness of Complex Therapy for Odontogenic Periostitis in Elderly and Senile Patients

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Abstract: Odontogenic periostitis (acute inflammation of the maxillary periosteum) remains one of the most common dental pathologies, but its course and treatment in elderly and senile patients have significant clinical features that have not yet been sufficiently studied and systematized.

Keywords: Odontogenic periostitis, elderly patients, geriatric dentistry, antibacterial therapy, surgical treatment, comorbidity, polyphragmasia, quality of life, rehabilitation

Introduction

Geriatric patients are a distinct category requiring a unique approach to the diagnosis and treatment of odontogenic periostitis [1]. Age-related changes in the immune system, the presence of multiple comorbidities, polypharmacy, and social factors significantly influence the course of the disease, the effectiveness of treatment, and the outcome [2,3]. The anatomical and physiological characteristics characteristic of old age, particularly the weakening of reparative processes, changes in microcirculation, jaw bone tissue atrophy, and the weakening of local immunity, create conditions for a more severe course of the inflammatory process and the development of complications [4,5]. Furthermore, diabetes mellitus, cardiovascular diseases, osteoporosis, and other related conditions frequently encountered in elderly patients require adjustments to standard treatment protocols [6,7]. Modern methods for treating odontogenic periostitis in elderly patients must take into account not only the clinical signs of the disease but also the patient's general somatic condition, drug interaction, treatment tolerance, and quality of life [8]. Optimizing treatment methods in geriatric dentistry practice is a pressing task of modern medicine aimed at improving treatment outcomes and reducing the number of complications in this category of patients [9,10].

The relevance of the problem is determined by several factors. First, the demographic aging of the population in developed countries and Russia leads to a steady increase in the proportion of people over 60–65 years of age, reaching 25–30% in the population structure. Secondly, age-related changes in the body of elderly patients - decreased immune reactivity, polymorbidity, and the intake of many medications - significantly modify the clinical presentation of odontogenic periostitis and affect the effectiveness of traditional treatment methods[11]. Thirdly, complications of odontogenic periostitis (osteomyelitis, phlegmon, abscess, sepsis) in the geriatric population are more severe and prone to higher mortality.

Despite significant successes in the development of dental science and practice, issues regarding the optimization of odontogenic periostitis therapy in elderly and senile patients remain insufficiently developed. Existing treatment protocols, developed primarily based on studies of young patients, are not always adequate for the geriatric group[12,13]. The traditional approach, based solely on antibacterial therapy and surgical intervention, often proves insufficiently effective in the presence of comorbidities (diabetes mellitus, hypertension, kidney failure, cardiac pathology).

Comprehensive therapy that integrates etiopathogenetic, immunological, and clinical-pharmacological approaches, taking into account the age-related characteristics of the body, represents a promising direction. This approach involves not only eliminating the infectious agent and etiological factor (carious tooth, pulpitis), but also correcting local and systemic immunological disorders,

optimizing antimicrobial therapy while considering microorganism sensitivity, and preventing relapses and complications.

The aim of this study is to optimize the complex therapy of odontogenic periostitis in elderly and senile patients by developing a differentiated treatment algorithm considering clinical-immunological characteristics, microbiological profile, and comorbidity.

Purpose of the study: To use tenoxicam and L-theanine in the treatment of odontogenic periostitis in elderly patients.

Materials and methods: The average age of the 60 patients participating in the study was 72 years. Many of them had chronic diseases, such as hypertension, diabetes, and chronic obstructive pulmonary disease (COPD), which required a cautious approach during dental interventions. Among the patients, 40% were men and 60% were women. Seventy-five percent of the patients were elderly people of retirement age, and 25 percent were elderly citizens continuing their activities. Since many patients had chronic diseases, their somatic condition caused difficulties in dental treatment. Doctors were urged to limit the long-term use of NSAIDs and to monitor the cardiovascular system. Weakness of the musculoskeletal system and decreased regenerative abilities in elderly patients created additional difficulties during surgical procedures.

The majority of patients (80%) had complex dental inflammatory processes caused by abscesses, periostitis, and other infections. Cases of severe periodontitis were also widespread. During the treatment process, most patients required surgical interventions, and NSAIDs were used to reduce pain.

Effectiveness of using NSAIDs in outpatient surgical dentistry

During the study, the effectiveness of using NSAIDs in outpatient settings, especially tenoxicam, demonstrated a positive effect on reducing inflammation and alleviating pain in dental surgery. However, to reduce the risk of gastrointestinal side effects in elderly patients, minimal effective doses of the drug were used.

Results and Discussion The L-theanine drug used for the experimental group was effective in stabilizing the mental state of patients before and after dental procedures. A decrease in anxiety and stress levels also had a positive impact on pain perception, which accelerated patients' recovery during surgical procedures. Furthermore, acute purulent odontogenic periostitis in all elderly patients is divided into 2 groups depending on the type of skin lesion [14,15]. Thus, 45 people in the upper tier and 30 people in the lower tier were identified. It is noted that acute purulent odontogenic periostitis of the upper jaw occurs almost twice as often in the groove as in the lower groove.

Additionally, we analyzed the frequency of specific groups of "causal" teeth that are sources of subperiosteal furuncles and the localization of collateral tissues in the soft tissues of the face.

Conclusions: Thus, the treatment of odontogenic periostitis in elderly patients requires a comprehensive interdisciplinary approach, taking into account the age characteristics of the body, associated pathology, and social factors. The optimization of antibacterial therapy should be based on the results of microbiological studies, taking into account the functional state of the liver and kidneys, as well as potential drug interactions with basic therapy drugs for comorbid diseases. Surgical treatment for geriatric patients should be performed with extreme caution, prioritizing minimally invasive methods with sufficient preoperative preparation and careful observation during the postoperative period. The use of modern physiotherapy methods and local remedies allows for a reduction in treatment duration and a reduction in the medication burden on the elderly patient's body. Preventing the recurrence of odontogenic periostitis in the elderly includes regular dental observation, correcting oral hygiene, sanitizing chronic infection foci, and compensating for comorbidities. The quality of life for elderly patients with odontogenic periostitis is significantly improved through the application of personalized treatment protocols that take into account the individual characteristics of each patient.

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