



PREVENTION AND PATHOGENETIC TREATMENT OF PATIENTS WITH ODONTOGENIC PERIOSTITIS OF THE JAWS

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Abstract

Acute odontogenic periostitis refers to a purulent form of the disease, characterized by infection of the periosteum of the alveolar process with the localization of the primary focus of inflammation in the periodontal tissues. Most often, purulent periostitis occurs in the lower jaw.

Keywords. odontogenic periostitis, Odontogenic inflammatory, periodontitis.

In recent years, both in polyclinic dental institutions and in maxillofacial hospitals, there has been an increase in patients with acute odontogenic periostitis up to 40% among all purulent-inflammatory diseases of the maxillofacial region [1]. If at the beginning of the XX century. the disease occurred mainly in able-bodied people at a young and middle age [8, 11], but now, due to the general aging of the population, the proportion of pyoinflammatory diseases occurring in the elderly and senile age is steadily growing [10].

The most common are acute and chronic periodontitis, exacerbation of chronic periodontitis, acute purulent periostitis of the jaw, acute osteomyelitis of the jaw, abscess, phlegmon, lymphadenitis.[1] Odontogenic inflammatory diseases of the maxillofacial region, among which abscesses and phlegmons occupy a significant share, are characterized by a wide spread and cause significant socio-economic damage. [2]

In the special literature, there are different data regarding the causes of the development of the disease. The cause of acute purulent odontogenic periostitis of the jaws is most often the exacerbation of chronic periodontitis (67.2–78.2%), less often - the abscessing form of periodontitis [7–9]. According to VV Kravchenko, IG Leshchenko, the cause of the development of acute purulent periostitis is the exacerbation of chronic periostitis (75% of all patients) [5]. The data on the localization of the inflammatory process are also somewhat contradictory. The process develops mainly on the lower jaw, is observed in 60–65% of patients [8–10]; according to M. Yu. Ignatov [4], on the contrary, on the top - in 60.9% of cases, approximately to the same extent, depending on the side of the lesion. The aim of the study was to study the prevalence, causes of development and features of the





localization of the inflammatory process in the periostitis of the jaws in adults of different age groups.

According to the literature, the number of patients with acute purulent-inflammatory processes of the face and neck is 3-4% of General surgical patients with purulent infection and 50-70% of the total number of patients being treated in the departments of maxillofacial surgery.[3] Phlegmon of the maxillofacial region is a serious and extremely dangerous disease. The severity of the condition with a spilled inflammatory process is determined by high intoxication of the body. Well-expressed innervation of the maxillofacial area determines sharp painfulness in the development of inflammatory infiltrate. The danger of phlegmon in the maxillofacial region is due to the proximity of vital formations, as well as anatomical and topographical features of this area, which contribute to the spread of the inflammatory process to neighboring parts of the body.[4,5]

Odontogenic inflammatory diseases of the maxillofacial region and neck develop as a result of the introduction of an infectious agent through the root canal of the tooth affected by caries and its complications (intra-canalicular pathway of infection), or through the periodontal pocket into the periapical tissues (retrograde pathway).[6] For a long time it was assumed that the microbiological landscape in odontogenic infection is represented mainly by monoculture (Streptococcus, Staphylococcus), or in the form of associations of staphylococci and streptococci, gram-negative rods, diplococci.[7] Due to the development of methods for identifying various microorganisms, the use of modern diagnostic methods, other microbial associations were identified and verified, and the role of gram-negative opportunistic flora and anaerobes was established [10]

The study of the etiology of infectious diseases, including infectious and inflammatory processes of the maxillofacial region and neck, up to now has been conducted on the basis of the determination of pure cultures of microorganisms isolated from the pathological focus.[7] This traditional way of cultivating bacteria has clarified many aspects of the physiology of microorganisms, but the growth of pure culture in a suspended state is extremely rare in nature.[8] Currently, the main part of microbiologists has recognized that the majority of microorganisms in natural and artificially created environments exist in the form of structured communities attached to the surface-biofilms.[9]

At an outpatient dental appointment, such acute purulent-inflammatory processes of the oral cavity as periostitis, pericoronaritis, abscessing periodontitis, alveolitis are most often encountered. The severity and prognosis of the course of purulent-inflammatory processes directly depends on the severity of catabolic processes, the





presence of exo- and endotoxins, microorganisms and other biologically active substances [1,2]. All of them are antigens that affect the level of phagocytic activity of neutrophils, a nonspecific link in the immune system [3]. Phagocytes occupy an important place not only in nonspecific responses of the immune system to antigenic structures, but also in specific reactions of the body. Assessment of the severity of the local status of the pathological process, as a component of assessing the severity of the state of the body as a whole, is of great importance in predicting infectious and inflammatory diseases [4,5]. The outcome of the disease depends on the well-coordinated interaction of local and systemic factors of immunity, on the understanding of the role of one or another protective mechanism at a certain stage in the development of the inflammatory odontogenic process [8, 9]. A known method for assessing the course of the inflammatory process using smears-prints of the wound surface involves the study of the state of leukocytes by counting the number of dystrophic and unchanged forms, which allows one to judge the degree of healing of the wound surface and the progress of tissue regeneration [10]. The disadvantage of this method is its traumatic effect, because direct contact with the wound surface is required to obtain a smear-print. Also, for an indirect assessment of the state of inflammation of the soft tissues of the oral cavity, the "Yasinovsky test" is used [11]. However, the disadvantage of this method is its complexity and lack of ranking of the degrees of inflammation of the soft tissues of the oral cavity. In this regard, the main task of our study was a comprehensive study of various links (local and general) of nonspecific reactivity of the body to determine the relationship between local and general systems of antimicrobial defense. We approached the solution of the problem of finding an adequate method of express diagnostics for planning timely adequate therapy in patients with acute pyoinflammatory processes of the maxillofacial region in each specific case.

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