

Improving Diagnostic Methods and Conservative Treatment of Chronic Pharyngitis in Patients with Chronic Tonsillitis

Khodjiyeva Kamilla Feruzovna

2nd Department of Otorhinolaryngology, Master's Program Resident, Samarkand State Medical University

Shadiyev Anvar Erkinovich

2nd Department of Otorhinolaryngology, PhD Associate Professor, Samarkand State Medical University

Uktamov Diyorbek Shukratovich

2nd Department of Otorhinolaryngology, Assistant, Samarkand State Medical University

Annotation: Chronic pharyngitis and chronic tonsillitis represent one of the most pressing problems in modern otorhinolaryngology, requiring a comprehensive interdisciplinary approach to diagnosis and treatment. These diseases are characterized by high prevalence in the population, tendency to recurrent course, and significant impact on patients' quality of life. According to various authors, the prevalence of chronic pharyngitis ranges from 15% to 35% among the adult population, with 60-80% of patients showing concomitant tonsillar pathology.

Keywords: chronic pharyngitis, chronic tonsillitis, therapeutic approaches.

Introduction. Chronic pharyngitis is a long-term inflammatory disease of the mucous membrane and lymphoid structures of the pharynx, characterized by periodic exacerbations and remissions. The disease has a polyetiological nature and can be caused by various factors: infectious agents (bacterial, viral, fungal), allergic reactions, exposure to adverse environmental factors, gastroesophageal reflux disease, endocrine disorders, and other causes. The clinical picture is characterized by persistent symptoms of throat discomfort, including sensations of tickling, dryness, foreign body sensation, pain syndrome of varying intensity, and cough. Chronic tonsillitis, in turn, is a chronic inflammatory disease of the palatine tonsils, which can occur in compensated and decompensated forms. The pathogenesis of the disease is associated with impaired self-cleaning processes of tonsillar crypts, formation of chronic infection foci, and development of immune disorders. Beta-hemolytic streptococcus group A, Staphylococcus aureus, pneumococcus, and other opportunistic microorganisms play a leading role in etiology. Clinical manifestations include periodic exacerbations with pain syndrome, subfebrile temperature, regional lymph node enlargement, and development of systemic complications. Special attention in modern otorhinolaryngology is given to studying the relationship between chronic pharyngitis and chronic tonsillitis. The anatomical proximity of pharyngeal and tonsillar structures, common lymphatic pathways, and immune mechanisms determine the high frequency of their combined lesions. It has been established that chronic tonsillitis can serve as a source of constant pharyngeal reinfection, contributing to the maintenance of inflammatory processes in its structures. At the same time, chronic pharyngitis can aggravate the course of tonsillitis, creating conditions for the persistence of pathogenic microorganisms and development of antibiotic resistance. Pathogenetic mechanisms of chronic pharyngitis development against the background of chronic tonsillitis include several key links. First, there is a disruption of local immunity of the pharyngeal mucosa, characterized by decreased activity of secretory immunoglobulin A, lysozyme, and other factors of nonspecific protection. Second, changes in the pharyngeal microbiocenosis occur with predominance of opportunistic flora and formation of biofilms resistant to antibacterial therapy. Third, chronic inflammation develops with activation of pro-inflammatory cytokines, leading to morphological changes in the mucosa and underlying tissues. Modern approaches to diagnosing chronic pharyngitis associated with chronic tonsillitis are based on comprehensive clinical-laboratory and instrumental examination. However, existing diagnostic methods do not always allow objective

assessment of the degree of inflammatory process, identification of etiological factors, and determination of optimal treatment tactics. Traditional clinical diagnostic criteria are often subjective and do not reflect the true activity of the pathological process. Bacteriological examination of throat swabs is not always informative due to the complexity of cultivating some microorganisms and the presence of biofilm forms. Endoscopic examination methods, including fibrolaryngoscopy and nasopharyngeal endoscopy, allow visualization of morphological changes in the mucosa but do not provide information about the functional state of tissues and inflammatory process activity. Histological examination of pharyngeal mucosa biopsies is used limitedly due to the invasiveness of the procedure and complexity of result interpretation. Immunological research methods aimed at assessing local and systemic immunity require further improvement and standardization. Molecular genetic diagnostic methods, including polymerase chain reaction (PCR) and 16S rRNA gene sequencing, open new possibilities for pathogen identification and pharyngeal microbiome study. However, their widespread implementation in clinical practice is limited by high cost and complexity of result interpretation. Metagenomic analysis methods are promising, allowing comprehensive assessment of microbial community composition and functional activity. Therapeutic approaches to treating chronic pharyngitis associated with chronic tonsillitis traditionally include antibacterial therapy, local anti-inflammatory treatment, immunomodulating drugs, and physiotherapeutic methods. However, the effectiveness of existing treatment regimens is often insufficient, due to the development of antibiotic resistance, biofilm formation, local immunity impairment, and other factors. Antibacterial therapy remains the main treatment method for exacerbations of chronic pharyngitis and tonsillitis, but its effectiveness decreases due to growing resistance of main pathogens to traditionally used drugs. Beta-lactam antibiotics, long considered drugs of choice for treating streptococcal infection, currently demonstrate decreased effectiveness. Macrolides and fluoroquinolones, used as alternative drugs, also face resistance problems. Local therapy, including antiseptics, anti-inflammatory drugs, and gargling solutions, plays an important role in comprehensive treatment, but its effectiveness is limited by insufficient drug penetration into deep tissue layers and tonsillar crypts. Modern drug delivery systems, including liposomal forms and nanoparticles, can increase local therapy effectiveness. Immunomodulatory therapy is aimed at correcting local and systemic immunity disorders characteristic of chronic disease course. Various drug groups are used: bacterial lysates, synthetic immunomodulators, interferon preparations and its inducers. However, optimal immunomodulatory therapy regimens require further study and individualized approaches. Physiotherapeutic treatment methods, including UHF therapy, laser irradiation, ultrasonic therapy, and other methods, are widely used in comprehensive treatment of chronic pharyngitis and tonsillitis. However, the evidence base for their effectiveness remains insufficient, requiring additional clinical studies. The socio-economic significance of chronic pharyngitis associated with chronic tonsillitis is determined by high disease prevalence, frequent exacerbations leading to temporary disability, necessity of long-term treatment, and high risk of complications. Direct medical costs include expenses for diagnosis, exacerbation treatment, hospitalization, and surgical intervention. Indirect costs are related to temporary disability, reduced work productivity, and deteriorated patient quality of life. Quality of life in patients with chronic pharyngitis and tonsillitis significantly decreases due to constant throat discomfort, sleep disturbances, limited social activity, and psychological discomfort. Studies show that these diseases negatively affect all aspects of quality of life: physical, psychological, social, and environmental. Preventive aspects include primary prevention aimed at preventing disease development, secondary prevention of exacerbations, and tertiary prevention of complications. Primary prevention includes elimination of risk factors, hardening, rational nutrition, and immunity maintenance. Secondary prevention is aimed at timely detection and treatment of chronic infection foci, correction of concomitant diseases, and remission maintenance. Modern trends in chronic pharyngitis and tonsillitis treatment include personalized approaches based on molecular genetic analysis results, probiotic use for normal microflora restoration, application of new drug forms and delivery systems. Gene therapy, immunotherapy, and regenerative medicine methods are promising. An interdisciplinary approach to treating chronic pharyngitis associated with chronic tonsillitis involves participation of various specialists: otorhinolaryngologists, immunologists, allergologists, gastroenterologists,

endocrinologists, and other physicians. Such an approach allows identification and correction of all factors contributing to pathological process development and maintenance.

Conclusions. Thus, improving diagnostic and therapeutic approaches for chronic pharyngitis associated with chronic tonsillitis represents an urgent medical and social problem requiring comprehensive solution. The necessity of developing new diagnostic methods based on modern molecular genetic and immunological approaches, creating effective treatment regimens considering individual patient characteristics, and implementing preventive programs determines the relevance of this research.

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