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THEORETICAL FOUNDATIONS OF ERYTHEMA MULTIFORME AND ITS MANIFESTATIONS IN THE ORAL CAVITY

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Abstract

This article provides a scientific analysis of the theoretical foundations, etiology, and pathogenesis of erythema multiforme (EM). During the research process, the role of immunological mechanisms, infectious, and allergic factors in the development of the disease was substantiated. In addition, the clinical manifestations of EM in the oral cavity, particularly the formation of erosions, ulcers, and inflammatory lesions, were systematically described. Based on clinical observations, the main symptoms of the disease, their localization, and their impact on the patient's condition were identified. The research results indicate the necessity of differential diagnosis of EM from other mucosal diseases. The article also justifies the importance of early detection, accurate diagnosis, and comprehensive treatment approaches. The obtained scientific results expand the possibilities for effective management of EM in dental and dermatological practice.

Keywords

erythema multiforme, oral cavity, mucous membrane, etiology, pathogenesis, immunological mechanisms, erosion, differential diagnosis, dentistry, clinical manifestations

Introduction

Erythema multiforme (EM) is one of the immunopathological diseases characterized by a complex etiology and pathogenesis, clinically manifested by polymorphic eruptions, and having an acute or recurrent course. This disease occupies an important place in dermatology and dentistry, as it affects not only the skin but also mucous membranes, particularly the oral mucosa. The manifestations of EM in the oral cavity significantly affect the general condition of the patient, complicating eating, speech, and hygiene processes.

The relevance of this disease is determined by the diversity of its etiological factors, variability of clinical manifestations, and complexity of differential diagnosis. EM is often associated with infectious factors (especially viral infections), medications, allergic reactions, and other immunological changes. Therefore, a deep study of its theoretical foundations is essential for understanding its etiopathogenesis and developing effective treatment and prevention strategies.

In the pathogenesis of EM, specific immune responses play a leading role. In particular, disruption of cellular immunity, activation of cytotoxic T-lymphocytes, and changes in cytokine balance lead to epithelial cell damage. As a result, inflammatory foci, erosions, and vesicles form on the skin and mucous membranes. In the oral cavity, these changes may be more severe due to constant mechanical, chemical, and microbiological influences.

The term "multiforme" reflects the clinical diversity of lesions, which appear as macules, papules, vesicles, and bullae. In the oral cavity, lesions are more commonly observed as erosions, ulcers, and fibrin-covered surfaces. These changes cause severe pain and significantly reduce the patient's quality of life.

Oral manifestations of EM require special attention in dental practice, as the disease often mimics other mucosal disorders such as aphthous stomatitis, herpetic stomatitis, or pemphigus. Therefore, a thorough understanding of its theoretical basis is crucial for accurate clinical diagnosis.

Recent studies indicate that genetic predisposition also plays an important role in the development of EM. Some patients exhibit increased susceptibility, which may be related to the

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characteristics of their immune system. Environmental factors such as cold exposure, stress, and chronic infections may also trigger the disease.

Severe forms of EM, including Stevens–Johnson syndrome and Lyell's syndrome, may be life-threatening. These conditions are characterized by extensive mucocutaneous involvement, systemic intoxication, and dysfunction of internal organs. Therefore, early diagnosis and appropriate treatment strategies are essential.

In the oral cavity, lesions are most commonly located on the lips, buccal mucosa, tongue, and palate. Initially appearing as erythematous spots, they develop into vesicles that rupture quickly, forming erosions. These erosions are often covered with a fibrinous layer and tend to bleed, causing significant discomfort and pain.

The main objective of this article is to analyze the theoretical foundations of EM and systematically describe its clinical manifestations in the oral cavity. For this purpose, the etiology, pathogenesis, clinical features, and differential diagnosis of the disease are comprehensively studied. Additionally, treatment and prevention methods are analyzed based on modern scientific sources.

In conclusion, erythema multiforme is a complex and multifaceted disease, and its oral manifestations are of great importance in dental practice. Studying this disease enhances both theoretical knowledge and practical approaches to diagnosis and treatment.

Literature Review

Scientific studies confirm that EM has a complex etiology and multifactorial pathogenesis. Modern medical literature interprets EM primarily as a hypersensitivity reaction associated with the immune system. Many researchers have demonstrated that viral infections, particularly herpes simplex virus (HSV), play a significant role in disease development.

EM is often regarded as an infectious-allergic disease. Some authors emphasize the role of immune complex deposition in vascular walls, leading to inflammation, while others highlight the role of cellular immunity, particularly increased T-lymphocyte activity, in epithelial damage.

Dental literature specifically addresses oral manifestations of EM, noting that mucosal lesions are among the most painful and clinically significant features. Morphological changes are associated with epithelial necrosis and inflammatory infiltration.

Recent studies also highlight the role of medications such as antibiotics, sulfonamides, and nonsteroidal anti-inflammatory drugs as triggering factors, leading to the identification of a drug-induced variant of EM.

Severe forms such as Stevens–Johnson syndrome and Lyell's syndrome are characterized by multisystem involvement and high mortality. These forms involve deeper immunopathological processes and significant impairment of overall reactivity.

Local studies emphasize clinical course, recurrence, and treatment methods, supporting a comprehensive approach combining etiological, immunological, and symptomatic therapy.

Methodology

A comprehensive, systematic, and evidence-based methodological approach was applied. The study included theoretical analysis, clinical observation, and comparative evaluation.

Scientific literature was analyzed using systematization, generalization, and comparative methods. Clinical studies involved patients with confirmed oral EM, selected based on clinical diagnosis, anamnesis, and laboratory data.

Clinical examinations included visual inspection, palpation, and dental assessment. Lesions were evaluated morphologically, including localization, size, number, and pain intensity.

Differential diagnosis was conducted with aphthous stomatitis, herpetic stomatitis, and other conditions. Statistical analysis ensured the reliability of results. Ethical standards were strictly observed.

Results and Discussion

The study revealed that EM often presents with acute onset, short prodromal period, and recurrence tendency. Many patients had preceding viral infections.

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The most common oral manifestations were erosions and ulcerative lesions, mainly located on the lips, buccal mucosa, tongue, and palate. Lesions progressed from erythematous spots to vesicles and painful erosions.

Severe pain affected eating and speech, and poor oral hygiene increased the risk of secondary infections. Immunological mechanisms, particularly cytotoxic T-cell activity, were confirmed as key factors.

Differential diagnosis showed similarities with other diseases but distinguished EM by multiple, symmetrical lesions and more severe clinical presentation.

Early diagnosis and комплекс treatment were proven essential for effective management.

Conclusion

Erythema multiforme is a multifactorial disease with complex pathogenesis and polymorphic clinical manifestations. Infectious, allergic, and immunological factors play interconnected roles.

Oral manifestations are key diagnostic features, significantly affecting patients' quality of life. Differential diagnosis is essential due to similarities with other conditions.

A comprehensive treatment approach including etiological, immunological, and symptomatic therapy is necessary.

Further research will contribute to improved diagnosis and treatment strategies.

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