

SYSTEMIC AUTOIMMUNE DISEASES AND THEIR IMPACT ON ENT ORGANS.

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Abstract. This study reviews the impact of systemic autoimmune diseases on ENT (ear, nose, and throat) organs. Autoimmune conditions such as SLE, Sjögren's syndrome, and vasculitis frequently affect the ENT region, causing diverse clinical manifestations. Early diagnosis and management are crucial to prevent complications and improve patient quality of life. This review emphasizes clinical features, diagnostic strategies, and treatment approaches.

Keywords. Systemic autoimmune diseases, ENT organs, SLE, vasculitis, Sjögren's syndrome, laryngitis, diagnosis, management.

Introduction.

Systemic autoimmune diseases are a heterogeneous group of disorders characterized by an aberrant immune response in which the body's immune system mistakenly attacks its own tissues. These conditions can involve multiple organ systems, leading to widespread tissue damage and functional impairment. According to recent epidemiological data, autoimmune diseases affect approximately 5-8% of the population worldwide, most frequently impacting women of reproductive age. The pathophysiology involves complex interactions between genetic predispositions, environmental triggers, and dysregulation of immune processes, including abnormal autoantibody production, immune complex deposition, and chronic inflammation.

One of the less emphasized yet clinically significant aspects of systemic autoimmune diseases is their impact on the ENT (ear, nose, and throat) organs. The ENT region, due to its rich vascularization and exposure to environmental factors, is particularly vulnerable to inflammatory and ischemic processes initiated by autoimmune reactions. Patients often present with a variety of ENT symptoms such as persistent sinusitis, otitis media, sensorineural hearing loss, oral ulcerations, and laryngitis, which may precede or coincide with systemic manifestations. Recognizing these manifestations is vital for early diagnosis and appropriate intervention, thereby preventing significant morbidity.

Autoimmune diseases such as Systemic Lupus Erythematosus (SLE), Sjögren's syndrome, Granulomatosis with Polyangiitis (formerly Wegener's granulomatosis), Scleroderma, and Rheumatoid Arthritis are among the most commonly reported conditions affecting ENT structures. Each of these diseases has distinct pathophysiological pathways that target different tissues within the ENT sphere. For example, SLE is linked with vasculitis leading to mucosal ulceration, while Sjögren's syndrome predominantly involves the salivary and lacrimal glands, resulting in dryness and secondary infections.

Pathophysiological Mechanisms.

The mechanisms underlying ENT involvement are multifactorial. Autoantibodies such as anti-dsDNA, anti-SSA/SSB, and antineutrophil cytoplasmic antibodies (ANCA) induce immune complex-mediated vascular inflammation, leading to tissue ischemia and necrosis. This vasculitis or inflammation results in mucosal ulcerations, granulomatous lesions, and fibrosis,

affecting functions such as hearing, olfaction, breathing, and speech. Additionally, chronic inflammation can cause structural damage to cartilage, bones, and soft tissues, further impairing function.

Clinical Significance.

The clinical presentation of ENT involvement in autoimmune diseases varies depending on the specific condition and the affected tissue. Common manifestations include recurrent or chronic sinusitis, nasal crusting, epistaxis, sensorineural hearing loss, vertigo, oral ulcers, and dysphagia. These symptoms often intersect with general systemic signs such as fatigue, fever, and arthralgia, complicating diagnosis. The overlap with infectious or other inflammatory processes warrants a high index of suspicion and comprehensive evaluation, including serological testing, imaging, and tissue biopsy.

Delay in recognition and treatment of ENT involvement can lead to irreversible tissue damage, such as saddle-nose deformity in granulomatosis with polyangiitis, persistent hearing loss, or obstructive airway issues. Hence, understanding the spectrum of ENT manifestations and their underlying mechanisms is essential for clinicians managing patients with autoimmune diseases.

Conclusion.

Systemic autoimmune diseases significantly affect ENT organs, presenting with a wide range of clinical symptoms that may precede or coincide with systemic manifestations. Early recognition and accurate diagnosis are essential for effective management and to prevent irreversible damage. Multidisciplinary collaboration among rheumatologists, otolaryngologists, and radiologists improves patient outcomes. Continued research into pathophysiological mechanisms and therapeutic strategies remains vital for advancing care in this complex intersection of autoimmune pathology and ENT health.

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