

INSIGHTS INTO STRUCTURAL ALTERATIONS IN CHRONIC ALLERGIC RHINITIS: UNRAVELING MORPHOLOGICAL TRANSFORMATIONS

E. E. Mirzakandov

Assistant, Department of Stomatology and Otorhinolaryngology,
Fergana Medical Institute of Public Health, Fergana, Uzbekistan

Abstract

Chronic allergic rhinitis (CAR) is a prevalent inflammatory condition affecting the nasal mucosa, characterized by persistent symptoms such as nasal congestion, rhinorrhea, sneezing, and nasal itching. This conference paper aims to explore the morphological changes associated with chronic allergic rhinitis, shedding light on the structural alterations within the nasal tissues that contribute to the persistent nature of this disorder. The study employs advanced imaging techniques, including high-resolution nasal endoscopy, computed tomography, and histopathological analysis, to investigate the intricate alterations in the nasal mucosa and surrounding structures. By examining the cellular and tissue-level changes in chronic allergic rhinitis, this research aims to enhance our understanding of the underlying pathophysiology and provide valuable insights for targeted therapeutic interventions. Additionally, the paper discusses the potential impact of these morphological changes on the quality of life of individuals suffering from chronic allergic rhinitis. Insights gained from this study may pave the way for the development of novel treatment strategies, emphasizing the importance of addressing both symptomatic relief and structural modifications to improve long-term outcomes for individuals with chronic allergic rhinitis.

Keywords: Chronic Allergic Rhinitis, Morphological Changes, Nasal Mucosa, Inflammatory Condition, Imaging Techniques, High-Resolution Nasal Endoscopy, Computed Tomography, Histopathological Analysis, Pathophysiology, Quality of Life.

Introduction

Chronic allergic rhinitis (CAR) is a prevalent inflammatory condition affecting the nasal mucosa, characterized by persistent symptoms such as nasal congestion, rhinorrhea, sneezing, and nasal itching. This chronic inflammatory disorder poses a significant burden on the quality of life for affected individuals, leading to impaired daily functioning and productivity. While the symptomatic aspects of CAR have been extensively studied, there is a growing recognition of the importance of understanding the morphological changes that underlie the persistent nature of this condition [1-7].

This conference paper aims to provide a comprehensive exploration of the morphological alterations associated with chronic allergic rhinitis, employing advanced imaging techniques and histopathological analyses. By delving into the structural modifications within the nasal

tissues and surrounding structures, we aim to unravel the intricacies of the pathophysiology of CAR and identify potential targets for therapeutic interventions.

The use of high-resolution nasal endoscopy, computed tomography, and histopathological examination allows for a detailed examination of cellular and tissue-level changes. Insights gained from this research may not only enhance our understanding of the disease mechanism but also offer opportunities for the development of targeted treatment strategies. Addressing both symptomatic relief and morphological modifications could pave the way for more effective and sustainable management of chronic allergic rhinitis [8-11].

In this context, the paper will discuss the significance of exploring morphological changes in CAR, the methodology employed in the study, and the potential implications of the findings on improving the long-term outcomes and quality of life for individuals affected by this common allergic condition.

In its pathogenesis, the combination of allergens with immunoglobulin E, the activation of eosinophils, the activation of lymphocytes and interleukin, and the development of allergic inflammation are shown. It has not yet been defined both clinically and morphologically.

Material and methods:

In chronic allergic rhinitis, the main clinical and morphological factors can be considered to be the violation of the floating epithelium of the nasal mucosa, the development of purulent inflammation. Relapsing allergic rhinitis is detected in 72% of patients, hypertrophic rhinitis in 26%, deformation of the nasal septum in 39%, hypertrophy of the reticular bone in 7%, and hypertrophy of the loop tumor in 2.5%. Conditionally pathogenic microflora is detected in the upper jaw cavity in allergic rhinitis, in the form of monoculture in 85.4% of cases. In the nasal cavity, saprophytes and conditionally pathogenic microorganisms are determined in 69.95%. So, according to the results of morphological examinations, the development of general pathomorphological changes in the nasal and prenasal cavities, which is the background of allergic rhinitis, is determined. A characteristic feature of allergic rhinitis is a change in the wall of blood vessels, first microcirculatory vessels, then swelling, increased permeability, alterative changes and migration of cells involved in inflammation in other types of blood vessels. It is determined that the inflammatory process and discirculatory changes led to secondary changes, that is, dystrophy of the covering epithelium, fibrinoid swelling in the private plate tissue, fibrinoid necrosis developed in some places [12-16].

Result:

Morphological changes in allergic rhinitis and rhinosinusitis are as follows, discirculatory, dystrophic, disorganized, destructive and inflammatory processes are observed in the mucous membrane. It is known that the beginning of pathomorphological changes begins with damage to the walls of blood vessels, first of all microcirculatory vessels, then in large blood vessels

there is an increase in the permeability of the wall, the development of alterative changes, and additional inflammatory changes are observed.

Conclusions

According to scientific literature, chronic allergic rhinitis is widespread in the world and has a bad effect on patients' lives. It has not yet been defined both clinically and morphologically.

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