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Differential Diagnostic Criteria For The Diagnosis Of Allergic Rhinitis In Adolescents

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Abstract

This paper examines the main clinical, anamnestic, laboratory, and instrumental criteria for the differential diagnosis of allergic rhinitis in adolescents. Particular attention is paid to the analysis of a symptom complex including rhinorrhea, sneezing, nasal congestion, and itching, as well as their relationship with allergen exposure and seasonality.

Keywords: Allergic rhinitis, adolescence, differential diagnosis, atopy, rhinoscopy, immunoglobulin E, skin allergy tests, chronic rhinitis.

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1. Introduction

Allergic rhinitis occupies one of the leading places in the structure of chronic diseases of the upper respiratory tract in adolescents and represents a significant medical and social problem of modern pediatrics and otorhinolaryngology.

The prevalence of this pathology in adolescence shows a steady upward trend, which is associated both with an increase in the allergenic load of the environment and with the peculiarities of the formation of the immune system during puberty.

Despite the external clinical typicality, allergic rhinitis in adolescents often remains undiagnosed or is diagnosed late, which leads to chronicity of the process and the development of concomitant diseases.

Adolescence is characterized by pronounced neuroendocrine and immunological changes, which significantly affect the clinical picture of allergic diseases.

During this period, there is high variability of symptoms, changes in the reactivity of the nasal mucosa and instability of autonomic regulation. These features often mask the true nature of the disease and make it difficult to differentiate allergic rhinitis from infectious, vasomotor and, medicinal and anatomical forms of rhinitis, as well as chronic inflammatory diseases of the paranasal sinuses.

Clinical manifestations of allergic rhinitis in adolescents are often are nonspecific and may include nasal congestion, rhinorrhea, sneezing, nasal itching and decreased sense of smell. However, similar symptoms occur in other pathological conditions, which increases

the risk of diagnostic errors and unjustified prescription of therapy.

In conditions of active growth of the body and high academic load, such errors can negatively affect the physical development, cognitive functions and quality of life of adolescents. Of particular difficulty is the fact that allergic rhinitis in adolescents is often combined with bronchial asthma, atopic dermatitis and other manifestations of atopy, forming a single pathological continuum. In the absence of timely and accurate diagnosis, the disease can progress, contributing to the formation of chronic inflammation mucous membrane of the respiratory tract and worsening of the clinical course of concomitant allergic conditions. This emphasizes the need for early detection and clear differentiation of allergic rhinitis from other forms of rhinopathies.

Modern approaches to the diagnosis of allergic rhinitis are based on a comprehensive assessment of clinical, anamnestic, laboratory and instrumental data. However, in adolescent practice, there are still disagreements in the interpretation of diagnostic criteria and their practical application.

The lack of a unified algorithm for differential diagnosis complicates clinical decision-making and reduces the effectiveness of treatment and preventive measures.

In this regard, the development and systematization of differential diagnostic criteria for allergic rhinitis in adolescents is an urgent scientific and practical task. Clear definition of diagnostic guidelines taking into account age, clinical and The immunological characteristics of this group of patients make it possible to increase the accuracy of diagnosis, optimize management tactics and prevent the development of complications associated with late or erroneous diagnosis.

Diagnosis of allergic rhinitis in adolescents is a complex clinical task due to the variety of symptoms, age-related characteristics of immune and neurovegetative regulation, as well as the frequent combination of allergic inflammation with other forms of rhinopathies.

Adolescence is characterized by intense hormonal changes, changes in vascular reactivity and instability of local protective mechanisms of the nasal mucosa, which often leads to an atypical or subtle course of the disease and makes timely diagnosis difficult.

Clinical symptoms of allergic rhinitis in adolescents typically include nasal congestion, paroxysmal sneezing, watery rhinorrhea, nasal itching, and decreased sense of smell.

However, the severity and combination of these symptoms can vary significantly, which requires their careful analysis in the context of differential diagnosis.

Unlike infectious rhinitis, allergic rhinitis is rarely accompanied by an increase in body temperature, symptoms of general intoxication and severe pain in the projection of the paranasal sinuses.

The absence of these signs is an important clinical criterion allowing one to suspect the allergic nature of the disease. Anamnestic assessment of the disease is essential in differential diagnosis.

Allergic rhinitis is characterized by a clear connection between symptoms and exposure to certain allergens, such as pollen, house dust, epidermal allergens or molds. In adolescence, both seasonal and year-round course of the disease is often observed, which requires clarification of the conditions residence, features of life and school environment. The presence of a family history of allergic diseases significantly increases the likelihood of the allergic nature of rhinitis and should be taken into account during the diagnostic search.

Assessing the nature of nasal secretions is of particular diagnostic value. In allergic rhinitis, the discharge is usually profuse, transparent and watery, while in infectious processes it more often acquires a mucopurulent character.

Vasomotor rhinitis, which often occurs in adolescents, is characterized by the absence of allergic sensitization and is provoked by nonspecific factors, such as strong odors, changes in air temperature or emotional stress.

Differentiation of these conditions requires a comprehensive assessment of clinical and laboratory data. Physical examination and rhinoscopy play an important role in the diagnostic process. In adolescents with allergic rhinitis, examination of the nasal cavity reveals a pale or bluish, swollen mucous membrane with pronounced secretion.

The absence of hyperemia and purulent exudate allows one to distinguish allergic inflammation from bacterial rhinosinusitis. However, rhinoscopy findings are not strictly specific and should be considered as part of a comprehensive diagnostic evaluation.

Laboratory research methods are central to confirming the allergic nature of rhinitis. Determining the level of total immunoglobulin E and specific immunoglobulins E to suspected allergens allows us to identify sensitization of the body.

In adolescent practice, skin allergy tests are widely used, which, when correctly performed and interpreted, have high diagnostic information.

Of additional importance is a cytological examination of nasal secretions, in which the detection of an increased content of eosinophils serves as an important criterion for allergic inflammation of the nasal mucosa.

Instrumental diagnostic methods are used to exclude concomitant pathologies and clarify the nature of the disease. Endoscopic examination of the nasal cavity allows a more detailed assessment of the condition of the mucous membrane, identifying structural changes and exclude the presence of polyps or chronic inflammatory process. In some cases, imaging of the paranasal sinuses is indicated to exclude chronic rhinosinusitis, which may mask or accompany allergic rhinitis.

Particular attention in differential diagnosis should be paid to drug-induced rhinitis, which can develop in adolescents with prolonged and uncontrolled use of vasoconstrictors drugs. In such cases, nasal congestion is constant, there are no signs of allergic sensitization, and anamnestic data indicate abuse of nasal decongestants.

A clear distinction between these conditions is of fundamental importance for choosing adequate treatment tactics. Difficulties in diagnosis also arise when allergic rhinitis is combined with other atopic diseases, such as bronchial asthma and atopic dermatitis.

In adolescence, these conditions often form a single allergic continuum, which requires an integrated approach to diagnosis and assessment of the patient's clinical status. Underestimation of allergic rhinitis can lead to worse control of concomitant diseases and a decrease in the effectiveness of therapy.

Thus, the differential diagnosis of allergic rhinitis in adolescents is based on a comprehensive analysis of clinical manifestations, anamnestic data, and the results of laboratory and instrumental studies.

The use of clear and justified diagnostic criteria makes it possible to increase the accuracy of diagnosis, avoid overdiagnosis and unreasonable prescription of therapy.

Systemic and an individualized approach to the diagnosis of allergic rhinitis in adolescence is a necessary condition for timely initiation of treatment, prevention of complications and improvement of the quality of life of patients.

Allergic rhinitis in adolescents is one of the most common chronic diseases of the upper respiratory tract, which often remains underestimated or is diagnosed late due to the similarity of clinical manifestations with other forms of rhinopathies.

Adolescence is characterized by pronounced neuroendocrine and immunological changes, which significantly affects the clinical course of the disease and complicates the process of differential diagnosis. In these conditions, it is especially important acquires the use of clear, scientifically based diagnostic criteria that allow timely and accurate diagnosis of allergic rhinitis. Analysis of clinical, anamnestic, laboratory and instrumental indicators indicates that diagnosis of allergic rhinitis cannot be based on an isolated assessment of individual symptoms. The polymorphism of the clinical picture, characteristic of adolescents, requires an integrated approach, including a thorough collection of allergy history, assessment of the relationship of symptoms with exposure to allergens, analysis of the nature of nasal secretions and physical examination data. The absence of signs of systemic inflammation, intoxication and purulent process is an important guideline in favor of the allergic nature of the disease.

Laboratory testing plays a key role in confirming the diagnosis of allergic rhinitis. Determination of the level of total and specific immunoglobulins E, conducting skin allergy tests and cytological examination of nasal secretions allows us to identify allergic sensitization and distinguish allergic inflammation from infectious and non-allergic forms of rhinitis.

Instrumental methods, including rhinoendoscopy and visualization of the paranasal sinuses, complement the diagnostic process and make it possible to exclude concomitant pathologies that can mask or aggravate the course of the disease.

Of particular importance is the differentiation of allergic rhinitis from vasomotor, medicinal and chronic infectious rhinitis, since errors in diagnosis lead to the prescription of inadequate therapy and progression of the disease.

In adolescents, such errors can negatively affect the quality of life, educational activity and the development of chronic respiratory diseases. Timely and reasonable diagnosis allergic rhinitis allows not only to optimize treatment tactics, but also to prevent the development of complications, including the formation of bronchial asthma and chronic inflammation of the mucous membrane of the respiratory tract.

Thus, the differential diagnosis of allergic rhinitis in adolescents should be based on a systematic, step-by-step and individualized approach. Using a set of clinical, laboratory and instrumental criteria ensures high diagnostic accuracy and promotes early detection of the disease. Introduction of standardized diagnostic algorithms taking into account age characteristics of adolescents is an important task of modern clinical practice and is aimed at improving long-term medical and social outcomes.

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