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Assessment of the Diagnosis and Treatment of Allergic Rhinitis in School-Age Children

Zukhra Juraevna Jumaeva, Nuriddin Umarovich Narzullaev, Mansurova Malika Hasanovna
Bukhara State Medical Institute, Bukhara, Uzbekistan

Abstract

The analysis showed the presence of distinctive features of the manifestation of allergic rhinitis in the surveyed contingent of sick school-age children, which suggests the rational use of various methods of diagnosis and treatment. It was revealed that the existing diagnostic methods and especially treatment (for example, surgical treatment, prescription of first generation antihistamines, decongestants, unreasonable prescription of oral hormonal drugs) are used untimely and inadequately, which results in the progression of the disease, the formation of various complications.
Keywords: ENT, allergic rhinitis, pediatric diseases, diagnostics

INTRODUCTION

Allergic diseases are a global health problem. Allergic rhinitis is most common among both children and adults. According to WHO, more than 40% of the population of developed countries have signs of allergic readiness. Currently, the frequency of allergic rhinitis in the general population is 10–20%, and at the same time these figures tend to further increase this disease [1,3].

According to the results of epidemiological studies, about 20% of the population of all age groups suffer from allergic rhinitis. According to various sources, in 54-75% of patients with allergic diseases, a hereditary predisposition is revealed.The relationship between the course of AR and the functional state of the autonomic nervous system (ANS), the features of the manifestation of autonomic changes in various forms and severity of the course of the disease, their dynamics under the influence of various methods of treatment, targeted correction, morphological changes in the tissues of the nasal cavity, taking into account the initial autonomic tone of the body [6, 10].

Thus, the analysis of modern literature has shown that the problem of the formation and course of allergic rhinitis in children is one of the significant aspects of medicine, including otorhinolaryngology.

The occurrence and course of allergic diseases are significantly influenced by climatic and geographical conditions of the human environment, ethnic characteristics of the population, lifestyle and nutrition, individual reactivity of the organism, that is, the disease has clearly defined regional features [2,5,9].

Analysis of the literature indicates the need for a more in-depth study of the features of the course of AR in children in order to clarify its pathogenesis and develop sparing methods of treatment, improve the quality of life of patients [10].

The reasons for unsatisfactory outcomes are the absence of a simplified diagnostic algorithm, which includes the most informative research methods, determining the order of interaction and the priority of work of doctors of various specialties in children with AR. In some cases, it is required to clarify the indications, nature, volume, sequence and timing of sparing surgical interventions, depending on an objective assessment of the severity of AR and the presence of concomitant diseases [4].

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Today, the priority of state policy in our country is the creation of a high-quality health care system, which allows maintaining and improving the health of the population, creating conditions for raising a healthy generation. Therefore, in order to radically improve the quality and expand the volume of medical care provided to the population, targeted measures are being taken that meet the requirements of world standards. The main attention is paid to the introduction of modern methods of molecular genetic diagnostics, screening and health monitoring, given that the main goal is to improve the prevention and treatment of diseases with the introduction of high technologies, including microsurgery and minimally invasive pediatrics. further improvement of medical services, implementation of early care programs for vulnerable children, improvement of the system of diagnostics, treatment and rehabilitation of children with diseases.

Objective of the study is to assess the state of diagnosis and treatment of allergic rhinitis in schoolchildren

RESULTS AND DISCUSSION

For the purpose of a detailed assessment of the state of medical and diagnostic assistance to sick school-age children in the AR, a survey was conducted of 90 doctors working in primary health care from 3 regions of Bukhara using a simplified questionnaire. Of these, 30 were otorhinolaryngologists, 50 were pediatricians and 10 were allergists.

The primary referral of patients to specialists regarding AR was as follows: 59% to a pediatrician, 28% to a pediatrician, 8% to other specialists, and only 5% purposefully visited an allergist. At the time of inclusion in the development of this study, 81% of patients were using nasal decongestants, of which 22% - constantly and 78% - periodically. 14% of patients took antihistamines, and 61% of them without a doctor's prescription.

In 58% of school-age children, AR treatment was started with conservative therapy, 38% - surgical and 4% - non-traditional methods of treatment. The most common surgical methods were adenotomy (79%), vasotomy (12%), septoplasty (8%), polypotomy (1%).

The list of clinical and diagnostic methods used by the doctors is presented in Table 1.

As can be seen from the data in the table, the entire range of clinical diagnostic methods was not fully performed by a specialist of any profile. Allergists used the largest number of research methods, but the key research was that they did not examine the ENT organs. This often has a significant impact on the differential diagnosis of allergic rhinitis. Although, otorhinolaryngologists have not carried out a number of studies, but a cumulative assessment of complaints, anamnesis of the disease. allergological history, results of examination of ENT organs, radiation methods for examining the nose and paranasal sinuses can provide valuable information in the diagnosis of allergic rhinitis.

Pediatricians had the greatest limitations in the diagnosis of allergic rhinitis in school-age children, which dictates a revision of their competence in addressing this issue.

Table 1. The list of clinical and diagnostic methods used by doctors, in percentage

List of clinical diagnostic methods	Specialty of doctors and their use of clinical and diagnostic methods, in percent		
	Allergist N = 20	ENT (otorhinolaryngologist) N = 30	Pediatrician N = 40
Complaints and medical history	100	100	100

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Clarification of an allergic anamnesis	100	90	80
Referral to other professionals	20	20	60
Skin testing for allergens	60	0	0
Examination of ENT organs	0	100	0
General blood analysis	95	95	95
Radiation methods of research of the nose and paranasal sinuses	50	90	30
Research of cytology of nasal secretions	10	0	0
Assessment of the respiratory function of the nose	40	95	40
Determination of the level of total IgE in serum	40	0	0

Table 2 shows the respondents' assessment of the diagnostic value of the diagnostic methods used in practice.

In the absence of access to the diagnostic method, doctors were not sufficiently aware of their capabilities and diagnostic significance (for example, the study of cytology of the nasal secretion).

On the other hand, there were cases of overestimation of the significance of research methods, in particular, a general blood test.

Table 2. The diagnostic value of research methods used by doctors

List of clinical diagnostic methods	Specialty of doctors and their assessment of the significance of clinical diagnostic methods, in absolute numbers		
	Allergist N = 20	ENT N = 30	Pediatrician N = 40
Complaints and medical history	+++	+++	+++
Clarification of an allergic anamnesis	+++	+++	+++
Skin testing for allergens	+++	++	++
Examination of ENT organs	+	+++	+
General blood analysis	+++	+++	+++
Radiation methods of research of the nose and paranasal sinuses	+	+++	+
Research of cytology of nasal secretions	++	+	0
Assessment of the respiratory function of the nose	+	+++	+
Determination of the level of total IgE in serum	+++	+	+

Note: Diagnostic value: +++ high; ++ medium;
+ low; 0 no answer

The methods used by the respondents for treating sick school-age children with AR are presented in Table 3.

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The widest coverage of therapeutic measures has been achieved by doctors and allergists. This was manifested in the achievement of long-term remission of the disease in 80%. used the largest number of research methods, but the key research - examination of the ENT organs was not carried out by them.

Although, otorhinolaryngologists have also achieved high efficiency in achieving long-term remission, tactical errors in the planning and sequencing of treatment measures have been noted. As in the diagnosis of AR in school-aged children, pediatricians had the greatest limitations in the process of treatment, which dictates a revision of their competence in resolving this issue.

Table 3. List of therapeutic measures used by doctors, in percent

List of treatment measures	Specialty of doctors and their use of therapeutic measures, in percent		
	Allergist N = 20	ENT N=30	Pediatrician N=40
Elimination activities	100	90	80
Diet recommendation	100	90	80
Decongestants	60	80	60
Antihistamines, of which: 3rd generation 2nd generation 1st generation	90 70 30 20	100 50 25 25	100 40 25 35
Derivatives of cromoglycic acid	10	0	5
Mast cell membrane stabilizers	5	0	0
Topical glucocorticoids	95	95	70
Systemic glucocorticoids	20	5	0
Compliance with the principles of step therapy	40	30	20
Surgical treatment, of which: primarily failure of conservative therapy	10 10 90	50 35 65	10 10 90
The effectiveness of treatment of allergic rhinitis in the form of achieving long-term remission	85	70	50

CONCLUSION

Thus, the analysis showed the presence of distinctive features of the manifestation of allergic rhinitis in the surveyed contingent of sick school-age children, which suggests the rational use of various methods of diagnosis and treatment. It was revealed that the existing diagnostic methods and especially treatment (for example, surgical treatment, prescription of first generation antihistamines, decongestants, unreasonable prescription of oral hormonal drugs) are used untimely and inadequately, which results in the progression of the disease, the formation of various complications, which increases healthcare costs for treatment these patients. It is extremely necessary to constantly improve the knowledge and management skills of providing assistance to school-age children with allergic rhinitis, their effective implementation into the everyday practice of doctors at various levels of health care. Networking as well as managing interactions between doctors of different specialties is an integral part of this process. It is imperative that this consultation be effective and stepwise.

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CONSENT

Written informed consent was obtained from all participants of the research for publication of this paper and any accompanying information related to this study.

CONFLICT OF INTEREST

The authors declare that they have no competing interests.

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