



Local allergic rhinitis. Diagnosis protocol.

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Abstract

Local allergic rhinitis is a relatively recently described disease, and is currently unknown to many physicians. The objective of this manuscript is to disseminate the knowledge of this pathology, since due to its known high prevalence, it affects the quality of life of patients who do not receive timely and adequate treatment.

Keywords: Allergic Rhinitis; Diagnosis; Protocol.

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INTRODUCTION

DEFINITION

Local allergic rhinitis (LAR) is a recently proposed rhinitis phenotype that has three characteristics, which in turn make up the elements for its diagnosis:

- presence of nasal specific IgE (IgEs), but without demonstration of systemic atopy,
- Th2-type inflammatory cell response in nasal secretion,
- positive response to nasal provocation tests with allergens,

The above in the absence of demonstrated systemic atopy [1].

EPIDEMIOLOGY

In more than 60% of patients diagnosed with non-allergic rhinitis, the cause is unknown and it is classified as idiopathic rhinitis. Carney et al. found that about two-thirds of patients previously diagnosed with idiopathic rhinitis had symptoms on provocation tests, mainly those performed with mites (*Dermatophagoides pteronyssinus*) [2,3].

Rodón et al. found that 54% of patients previously diagnosed with persistent non-allergic rhinitis had positive nasal provocation tests [1].

Badran et al. conducted a prospective multicenter study, which included 1230 patients with chronic rhinitis; they found that the nasal provocation test can identify LAR in 84.6% of patients who had a negative skin prick test and who were previously considered to have non-allergic rhinitis [4].

PATHOPHYSIOLOGY

Th2-type nasal inflammation has been confirmed by flow cytometry studies of nasal lavage fluid in patients with LAR after allergen exposure. Rodón et al. documented increased mast cells, basophils, eosinophils, CD3+ and CD4+ T cells after exposure to grass pollen [1].

For these patients, skin prick tests and IgE levels are negative.

CLINICAL PICTURE

These patients present clinical symptoms suggestive of allergic rhinitis; however, both allergic skin tests and serum IgE determination are negative. They have positive response to nasal provocation tests with allergens.

DIAGNOSIS

The diagnosis is based on the clinical history, the demonstration of a positive symptomatic response to the nasal allergen challenge test and/or the detection of nasal IgE [5,6].



Objective parameters of acoustic rhinometry have also been used for diagnosis by several authors [1].

Acoustic rhinometry is a diagnostic technique based on the reflection of an acoustic wave, which allows the measurement of different nasal cross-sectional areas with respect to the distance from the nostrils. It does not require nasal flow, it is a safe and highly reproducible procedure that requires minimal collaboration from the patient, which makes it highly attractive for use in the pediatric population. It is a noninvasive examination that evaluates the geometry of the endonasal cavity through acoustic reflection. A sound generator obtains a sonic pulse of 146 dB SPL and 50 microseconds in duration, which propagates in a tube and penetrates the nasal cavity. The signals reflected there, due to structural changes in the nose, are measured in a microphone located in the tube and then processed by a computer. This, finally, provides us with information about the entire nasal cavity and allows us to measure the minimum nasal section area and its distance from the entrance of the nose. This area and its location represent the anatomical site of maximum resistance and various investigations have established that it corresponds to an exact relationship of the anatomical plane that it claims to measure. Thus, the graph produced by the device informs us about the minimum section area (cm²), the distance (cm) and the volume of the nasal cavity analyzed [7].

TREATMENT AND PROGNOSIS

A therapeutic alternative is allergen-specific immunotherapy (IT). There are publications that support treatment with IT, since a significant improvement is achieved; after 12 months, negativization was observed in the nasal challenge tests and an increase in serum IgG4 levels, with good tolerance and without adverse reactions, which manages to have a very positive impact on the quality of life of patients, modifying the natural history of the disease [8].

DISCUSSION

LAR is a well-differentiated clinical entity now, with a low rate of systemic atopy development, a natural progression towards worsening, and a risk factor for asthma, since bronchial challenge studies exist, and the results suggest the existence of a new asthma phenotype (local allergic asthma) defined by the absence of systemic atopy and a positive allergen challenge test. This condition is beyond the scope of the review in this document [9,10].

CONCLUSIONS

We believe it is important to raise awareness of this pathology within the medical community, in order to refer, diagnose and offer timely treatment to patients, so that they do not remain with only symptoms and poor quality of life, labeled with wrong diagnoses.

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