



SPECIFIC DIAGNOSIS OF ALLERGIC DISEASES

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Allergic diseases attract more and more attention of doctors of different specialties every year. Despite the fact that allergic diseases have been known to mankind for more than two and a half thousand years, in the modern world the problems related to the diagnosis of allergopathology remain very relevant [4,5,6].

Keywords: allergic diseases, tests, diagnosis, sensitisation, allergy.

The widespread prevalence of allergic diseases (more than 20% of the world's population) has turned the problem of allergy into a global medical and social problem. Allergic diseases are among the first three pathologies in the structure of human diseases in terms of socio-economic damage, impact on the level of health and quality of life of patients [4,5,6].

Allergies have been called the 'disease of civilisation'. In highly developed countries, the percentage of allergy sufferers (mainly young people) is much higher than in developing countries. Taking into account the annual growth of allergic pathology registered everywhere (up to 40% of allergic patients in the population, every third inhabitant of the planet suffers from allergic rhinitis and every tenth suffers from bronchial asthma), we can speak of an epidemic of allergy, which covered



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most countries of the world at the end of the last century and tends to grow in the 21st century [22,23,24].

As studies over the last 30 years have shown, the prevalence of allergic diseases everywhere is doubling every 10 years. The high prevalence and hypodiagnosis of allergic diseases, their socio-economic impact on the life of society and each patient make it necessary to constantly update the knowledge of specialist doctors: allergist and immunologist, pulmonologist, as well as general practitioner about the basic principles of diagnostics of allergic diseases [20,21].

All the main methods of specific allergological diagnosis can be divided into four groups:

1. allergological history.
2. Skin allergy tests.
3. Provocative allergy tests.
4. Laboratory tests [18,19,20].

Skin tests are a diagnostic method of detecting specific sensitisation of the organism by injecting an allergen through the skin and assessing the magnitude and nature of the resulting swelling or inflammatory reaction. Skin allergy tests are the most common, simple in technique, quite specific and safe method of specific diagnostics of allergic diseases. If properly performed and adequately interpreted, skin tests with high-quality, standardised allergens (all allergens found in the respective region must be used) are a highly effective diagnostic method. For this reason, skin testing is considered the primary method of allergy diagnosis, which is performed by specially trained specialists. There are several technical modifications of skin testing: prick-tests, scarification tests, intradermal tests, application tests (epicutaneous, scratch-tests) [16,17,18].

The choice of skin testing method depends on:

- 1) the type of disease;
- 2) the suspected type of allergic reaction;
- 3) presumed group affiliation of the allergen.

In case of hypersensitivity to simple chemical substances, some medications, expressed clinically by contact dermatitis, only application tests are of diagnostic value. In case of pollinosis, bronchial asthma, allergic rhinitis, urticaria and



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angioedema, in which anamnestic sensitivity to allergens of non-bacterial origin is suspected, the investigation should be started with prick or scarification tests. Only after negative or doubtful results are obtained, provided the history is positive, should intradermal testing be performed [13,14,15].

To diagnose hypersensitivity to allergens of fungal origin (domestic allergens), intradermal testing is performed [10,11,12].

The indication for skin tests is anamnesis data indicating the causal role of a particular allergen or group of allergens in the development of the disease [6,7,8,9]. A full allergy examination is not recommended for children under 3 years of age. Skin tests should be refrained from in patients under treatment with steroid hormones, bronchospasmodic agents and antihistamines (these drugs may reduce skin sensitivity), as well as after an acute allergic reaction, since during this period the tests may be negative due to depletion of skin-sensitising antibodies [1,2,3,4,5]. Application tests are the gold standard for the diagnosis of contact allergic dermatitis. The technique for performing these tests has been standardised by a North American panel of experts. The antigen must be dissolved in petroleum jelly or water at a concentration that is not acutely irritating but sufficient to elicit a specific response. The mechanism of the response is that the allergen applied to the patient's skin interacts with T-lymphocytes and antigen-presenting cells (Langerhans cells and macrophages). In the presence of sensitisation, this leads to the development of inflammation, the severity of which is assessed on a special scale [24,25].

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