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Clinical and Epidemiological Analysis of the Rates of Patients with Allergic Dermatoses by Age Category and Gender

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Annotation. Allergic contact dermatitis is one of the most common diseases in dermatological practice, and, according to various data, it is observed in 2-2.5% of the world population. To date, a sufficiently large number of etiological factors that can cause contact allergy are known, but it is difficult to compare the relationship with a specific allergen and rashes, therefore, it is relevant to conduct a special allergological examination.

Keywords: allergy dermatoses, clinical and epidemiology, age category, gender identity

Introduction

To date, there are no specific data regarding the incidence of this skin pathology in the general population of dermatological patients. The pathogenesis of allergic contact dermatitis (ACD) is currently poorly understood, but it is known that ACD is a delayed-type allergic reaction. Substances causing ACD are usually micromolecules and. can only be haptens [1]. They acquire the properties of a full antigen when combined with epidermal proteins. The antigen (allergen) is taken up by specialised outgrowth cells of the epidermis - Langerhans cells, in which it is partially cleaved, binds to HLA class II molecules and initiates the development of dermatitis [2]. The process is most often localised in skin areas actively exposed to allergens, usually on the hands, forearms, face, and neck. At the same time, doctors often encounter atypical (inverted) manifestations of ASD, which can lead to diagnostic difficulties. In some cases, inflammatory changes go beyond the zones of exposure to sensitising agents, spreading to other areas of the skin, often taking the mask of other common dermatoses, such as toxiderma, atopic dermatitis (AD), eczema, psoriasis, etc [3]. The intensity of the inflammatory phenomena depends on the degree of sensitisation to the allergen,

the frequency of contact with it, and the skin structure of the affected areas.

The process of sensitisation to a certain antigen may last for months and even years, and this period is not clinically manifested. It is important that the symptoms of ASD can not only mask, but also complement the clinical picture of other dermatoses, which exacerbates the diagnostic difficulties. For example, 5-15% of patients with neurodermatoses (AD, eczema) have manifestations of ASD, often hidden behind the main skin pathology and complementing it. At the same time, the variants of the clinical course of ASD in AD patients have not been sufficiently investigated [4].

Currently, there are a number of approaches to the diagnosis and treatment of ASD and associated allergodermatoses. However, the specificity and comparative analysis of allergological diagnostic methods have not been studied. In addition, the indications for allergological tests have not been defined in dermatological practice due to the lack of clear clinical and anamnestic criteria and a single systematised diagnostic approach, which in turn affects the timely choice of the correct treatment method [5].

Pseudoallergic hypersensitivity plays a major role in allergic dermatoses. In contrast to true allergic reactions, pseudoallergic reactions involve direct degranulation of basophils without the participation of antibodies and immune T-lymphocytes. As provoking exogenous and endogenous factors can be bacteria and their toxins, viruses, food products (strawberries, nuts, pickles, smoked meats), drugs, physical agents (cold, etc.), aerogenic and other pollutants. In young children with a deficiency of digestive enzymes, underdigested peptides induce this type of reaction [6].

Pseudoallergies can be provoked by any irritants directly affecting the skin: woollen and synthetic clothing, water procedures (bath, sauna), detergents. These changes are the basis of non-atopic, pseudoallergic form of AD induced by various factors against the background of b-adrenergic receptor blockade [2]. The commonality of pathogenetic mechanisms underlying allergodermatoses makes them very similar in clinical terms as well. This is reflected in the names of individual nosologies: eczematised dermatitis, atopic eczema of hands, eczematous form of atopic dermatitis [7].

The clinical picture of the diseases under consideration is characterised by extreme severity of inflammatory changes in the skin, especially during the exacerbation of the disease. Significant oedema, vivid hyperaemia, micro- and macrovesiculation, wetting with subsequent formation of crusts or scaly crusts are observed in the lesion foci [8]. Objective changes are usually accompanied by severe itching, burning or tingling of the skin. Ostial inflammatory changes in this pathology, as a rule, develop suddenly and rapidly increase in intensity, which makes patients seek emergency and active medical care and belong to the group of the most frequent urgent dermatological conditions [9]. Although this group of diseases is not life-threatening, however, severe itching and other subjective disturbances, as well as the unsightly appearance of rashes can cause significant physical and psychological discomfort and cause significant suffering to patients, disrupting their usual way of life. In chronic recurrent course of allergodermatoses, persistent clinical symptoms can lead to social isolation, reduction of daily activity, loss of ability to work and significantly worsen the quality of life of patients [10].

Purpose of the study: to investigate the clinical and epidemiological analysis of the indicators of patients with allergodermatoses by age category and sex

Materials and Methods of the Study. During 2021-2022 at the Republican Allergy Centre, we conducted a retrospective study among patients with allergodermatoses who had comorbidities such as diabetes mellitus, chronic diseases of the gastrointestinal tract and ENT organs. Third trimester pregnant patients with allergodermatoses were also included in the study.

Results of the study. In the examination of 175 patients, which were 142 females and 33 males, comparative analyses were made by sex, by age category, by etiological factor of allergodermatoses, as well as comparative analysis with the obtained results of my PhD work, defended in 2021.

While working on the patients' anamnesis, it was revealed that the main part of them had drug allergy to some drugs from the groups of antibiotics and non-steroidal anti-inflammatory drugs.

As shown in Table (1), among women with allergodermatoses, patients in the age category of 21-30 and 31-40 years were more predominant. Further comparative analysis by period of examination revealed that these patients were more in 2022 than in 2021 and accounted for 28% and 23.6% respectively.

Sorting out the subjects according to the etiological factor (Table 2)), it was found that the largest proportion of patients were those with aggravated hereditary factor 20.0 %, by medication factor 7.42 %, by seasonality 38.2 %, by food factor 21.11 %, by contact (clothing) factor 25, 7%, allergies caused by cosmetics 30.8%, odour and dust 35.4%, animals 7.42%, bed dust 37.1%, plants 16.5%, and allergies caused by infectious and inflammatory diseases 0.57%.

Table2.

Allergoanamnesis in patients with allergodermatoses by gender
gender for 2021-2022

Allergoanamnesis	**Abs**	**Abs %**	**female**	**%**	**male**	**%**
hereditary allergy	35	20,0	34	97,1	1	2,8
drug allergy	13	7,42	11	84,6	2	15,8
seasonal allergy	67	38,2	57	85,0	10	14,9
infectious	1	0,57	1	100,0	0	0
food allergy	37	21,1	32	86,4	5	13,5
Cosmetic allergy	54	30,8	47	87,3	7	12,9
Allergy to odour or dust	62	35,4	54	80,6	8	12,9
animal allergy	13	7,42	10	76,9	3	23,0
clothing allergy	45	25,7	37	82,2	8	17,7
bed pollen allergy	65	37,1	54	83,0	9	13,8
plant allergy	29	16,5	27	93,1	2	6,8
Total number of patients	**175**	**100%**	**142**	**81,1%**	**33**	**18,8%**

As shown in the table, the female half of the patients, in most cases, had hereditary allergies and this figure was 97.1% of the total number of patients, as well as seasonal allergy 85.0%, plant allergy 93.1%, cosmetic allergy 87.3%. The male half of the patients accounted for only 18.8% of the total number of patients, with a high rate of animal allergy of 23.0%. It should be noted that many patients with allergodermatoses also had a history of allergic predisposition to other allergens.

Conclusions: thus, allergic diseases in dynamics are characterised by a tendency to 'rejuvenation' of the age composition and predominance of female patients. The ratio of nosological forms of allergic diseases did not undergo changes, and also allergic diseases in dynamics (2021-2022) are characterised by a tendency to increase the number of patients among women with allergodermatoses in the age category of 21-30 and 31-40 years.

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