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## АЛЛЕРГИЧЕСКИЙ КОНТАКТНЫЙ ДЕРМАТИТ

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## Аннотация

**Введение.** В настоящее время распространенность контактной аллергии растет во всем мире. Это приводит к ухудшению качества жизни пациентов. **Цель исследования** - проанализировать и определить аллергический контактный дерматит, выявить характерные признаки при первоначальном проявлении заболевания, установить методы профилактики и лечения, чтобы избежать рецидива. **Материалы и методы.** Для достижения цели и ее проверки рассматриваются научные статьи дерматовенерологов, которые подробно исследовали данное заболевание. **Результаты.** В ходе изучения данного заболевания были рассмотрены его симптомы, методы диагностики, лечения и исключения ремиссии, а также выявлены факторы, влияющие на проявление дерматита, и аллергены, вызывающие заболевание. **Обсуждение.** Аллергический контактный дерматит является распространенным кожным заболеванием, зачастую возникающим из-за аллергенов, которые наиболее

часто встречаются в жизни многих людей. **Выводы.** Сенсibilизация кожи и сопровождающие аллергические факторы являются серьезной проблемой, для начала проявления характерных симптомов.

**Ключевые слова:** дерматовенерология, кожное заболевание, аллергический контактный дерматит.

## **ALLERGIC CONTACT DERMATITIS**

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### **Abstract**

**Introduction.** Currently, the prevalence of contact allergy is growing all over the world. This leads to a deterioration in the quality of life of patients. **The aim of the study** – to analyze and determine allergic contact dermatitis, to identify characteristic signs at the initial manifestation of the disease, to establish methods of prevention and treatment in order to avoid recurrence. **Materials and methods.** To achieve the goal and verify it, scientific articles of dermatovenerologists who have studied this disease in detail are considered. **Results.** During the study of this disease, its symptoms, methods of diagnosis, treatment and exclusion of remission were considered, as well as factors affecting the manifestation of dermatitis and the allergens causing the disease were identified. **Discussion.** Allergic contact dermatitis is a common skin disease that often occurs due to allergens that are most common in the lives of many people. **Conclusions.** Skin sensitization and accompanying allergic factors are a serious problem for the onset of characteristic symptoms.

**Key words:** dermatovenerology, skin disease, allergic contact dermatitis.

### **INTRODUCTION**

Currently, the prevalence of contact allergy is growing worldwide, it is about 20%. Sometimes dermatitis is observed in children under the age of one year. The disease is more often registered in residents of industrialized countries who are active consumers of household chemicals, medicines, cosmetics, chemicals, etc.

**The aim of the study** – to analyze and determine allergic contact dermatitis, to identify characteristic signs at the initial manifestation of the disease, to establish methods of prevention and treatment to avoid relapse.

### **MATERIALS AND RESEARCH METHODS**

To achieve the goal and verify it, scientific articles of dermatovenerologists who have studied this disease in detail are considered.

### **RESULTS**

During the study of this disease, its symptoms, methods of diagnosis, treatment and exclusion of remission were considered, as well as factors affecting the manifestation of dermatitis and allergens causing illness were identified.

### **DISCUSSION**

Allergic contact dermatitis (ACD) is a form of contact dermatitis that is the manifestation of an allergic reaction in the body caused by contact with a substance and is a common occupational and environmental health problem. Workplace

exposure, age, gender, use of consumer products, and genetic predisposition were identified as the most important risk factors.

About 20% of the general population suffers from a contact allergy to at least one contact allergen. The most common allergies are nickel, flavors and preservatives.

Allergic reactions to chromate and p-phenylenediamine (PPD) as a rule, they are less common. Contact dermatitis occurs twice as often in women as in men and often begins at a young age, with a prevalence of 15% between the ages of 12 and 16 years. Occasionally, dermatitis is observed in children under one year old.

In addition, the most common allergens that cause allergic contact dermatitis are:

- Plants: poison ivy, oak, sumac, including hogweed, primrose, marigolds, chrysanthemums, etc.
- Cosmetics (creams, perfumes, deodorants, lipsticks, mascaras, varnishes, etc.).
- External preparations containing lanolin, neomycin and other antibacterial agents, formaldehydes, benzocaine, etc.
- Leather care products, shoe parts: paints, rubber, chromates and aldehydes.
- Household chemicals.

Allergic contact dermatitis is a type 4 or delayed hypersensitivity reaction and occurs 48–72 hours after exposure to the allergen. The mechanism involves CD4+ T-lymphocytes, they recognize an antigen on the skin surface, releasing cytokines that in turn activate the immune system and are the causative agents of contact dermatitis.

Symptoms of allergic contact dermatitis are:

- severe itching;
- edema;
- redness;
- vesicles with serous fluid, which then dry up and form scales, crusts;
- pain as a result of scratching and attaching a secondary infection.

When dermatitis becomes chronic, peeling and thickening of the skin in the foci of inflammation may occur. If the patient does not start treatment in a timely manner, then the disease begins to progress, and allergies appear - rashes on other parts of the body, away from the primary focus. Dermatitis can affect various parts of the body: the scalp, face, eyelids, mouth, lips, neck, hands, feet, limbs.

Methods of diagnostics of ACD are:

Allergy skin testing is a diagnostic procedure that aims to identify allergies in patients to substances that come into contact with the skin. The technique is as follows: apply a small amount of diluted allergens to the skin, which are left on the skin for 2 days. If the patient is allergic to any of these substances, then in within 2 days, he develops a delayed-type hypersensitivity reaction in the form of a patch of dermatitis at the site of application of the allergen.

In case of allergic contact dermatitis, it is necessary to draw the patient's attention to the fact that further contact with the allergen may lead to a chronic process, that contributes to the development of polyvalent allergies, and the formation of eczema.

Dermatologists will perform patch tests in patients with suspected contact allergy, particularly if the reaction is severe, recurrent or chronic. The tests can identify the specific allergen that causes the rash. Fungal scrapings of skin for microscopy and culture can exclude fungal infection. Dimethylglyoxime test is available to 'spot test' if a product contains nickel.

Contact dermatitis treatment is:

- Eliminating contact with the irritants;
- Following a hypoallergenic diet - exclude spicy, smoked dishes, spices, alcohol from the diet, limit sweets, citrus fruits, honey. A hypoallergenic diet is needed in the treatment of common allergic dermatitis;
- Taking antihistamines. More often, a dermatologist prescribes 2nd generation drugs, such as, cetirizine, kestin, levocetirizine. The doctor selects drugs depending on the clinical picture, the age of the patient and the presence of concomitant diseases;

If allergic contact dermatitis of the lips and oral cavity is suspected, it is recommended to use pure petroleum jelly to moisten the lips, and natural toothpastes that do not contain sodium lauryl sulfate for brushing teeth.

Patients who have an allergic reaction to acrylate dentures are recommended to boil them for a long time, this will reduce their allergenicity.

If with severe allergic contact dermatitis, the prevalence exceeds 20% of the skin, it is shown:

- systemic therapy with glucocorticosteroid drugs - prednisolone for 5-7 days, followed by a dose reduction until complete withdrawal;
- topical treatment - cool lotions, opening blisters, drying pastes, methylene dyes, topical corticosteroid ointments;
- with the addition of a secondary infection - antibacterial agents.

Treatment of chronic contact dermatitis requires long-term use of corticosteroid ointments, sometimes under an occlusive dressing (wound sealant). Additionally, moisturizers and emollients (emollients) must be prescribed.

The prognosis of simple contact dermatitis is favorable, as a rule, it does not recur. The disease can be completely cured in 10-14 days, provided that the patient seeks help from a qualified specialist. With allergic dermatitis, relapses are possible upon repeated contact with the substances that caused sensitization.

The best way to prevent contact dermatitis is to avoid exposure to allergens and irritants that cause symptoms.

If this can not be fixed, then:

- wash off the irritant with water;
- cleanse the skin;
- use protective gloves, mask, clothing;
- read the labels on clothes, products that come into contact with the skin - this will help identify substances that can cause dermatitis.

## **CONCLUSION**

In conclusion, we can state that this work allowed us to understand the following:

skin sensitization and subsequent contact dermatitis is a significant problem for consumers and workers. We have discovered that the immune response to contact allergens is more complex than previously thought and described. Different allergens cause all kinds of immune responses and the mechanisms by which allergens are activated can vary significantly. Research efforts are underway to elucidate the complex biochemistry and molecular biology underlying contact dermatitis. Several in vivo systems have been developed that are capable of reliably identifying potential allergens and evaluating their effectiveness. At the same time, in vitro tests are being developed due to public demand to replace in vivo tests, animal welfare and costs. However, their regulatory acceptance will depend on careful validation not only against other methods, but also against human observational data from clinical surveillance systems. This verification is an indispensable gold standard for any predictive safety assessment. Legislation should aim to protect consumers and workers from potential allergens, and it is constantly being adapted as our understanding of allergic contact dermatitis develops.

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**СОЦИАЛЬНЫЕ СЕТИ: ПРОСТРАНСТВО СОЦИАЛЬНОГО ЗЛА ИЛИ БЛАГА?**