

Dermatitis contacta allergica

'Allergic contact dermatitis' is a manifestation of immunopathological reaction type IV. to substances coming into direct contact with the skin (usually happens).

Etiology and pathogenesis

The development of contact allergic eczema takes place in two phases: **sensitizing** and **equipment**. Due to their size, haptens acquire antigenic properties only after binding to epidermal protein carriers. Antigen is recognized and processed by Langerhans cells, which present it to T-lymphocytes. Langerhans cells then migrate to the regional lymph nodes, changing their phenotype. They elute "IL-1", "IL-6" and "TNF- α ", leading to the proliferation of T cell clones that have receptors for the respective antigen. T-lymphocytes then migrate to various organs, including the skin (10-20%). The sensitization process spreads throughout the body, requiring at least 5-7 days to fully sensitize. The onset of sensitization is influenced by a number of factors such as the time and intensity of action of allergen, its allergenic properties, the state of immunity and the disposition of the individual. The resulting hypersensitivity is usually permanent.

Common sensitizers:

- metals (Ni, Co – jewelry, watches);
- cosmetics ingredients;
- chemicals from the work environment;
- local anesthetics;
- dyes, etc.

After leaving the vessels, the T-lymphocytes can be activated by contact with the appropriate antigen and macrophages, mast cells and possibly keratinocytes are used as the **accessory phase**. Each new contact between the allergen and the sensitized T-lymphocytes triggers the immediate release of cytokines, that direct the immune response to remove the allergen from the body as quickly as possible.

If contact eczema is caused by a single substance, it is a so-called monovalent hypersensitivity, more than 1 and less than 5 substances produce oligovalent hypersensitivity, and more causative agents are polyvalent hypersensitivity. Group hypersensitivity refers to a specific part of the primary antigen molecule, resulting in hypersensitivity to a number of chemicals that contain this structure in their molecule. Combined hypersensitivity is caused by the simultaneous or sequential action of two allergens in one substance.

Clinical picture

Manifestations 24-48 h. after contact with the allergen and are limited to the point of contact. In the **acute** phase, a strongly reddish edematous deposit with rapidly eroding papulovesicles and wetting on the surface is formed, rarely with the formation of bul. **Microscopically**, spongiosis and intracellular edema are visible, intraepidermal blisters form. Later, crusts form. In the chronic phase, the surface becomes hyperkeratotic and ragads form on it, or lichenification predominates.

The hematogenous form caused by a substance to which the patient is sensitized by blood to the skin, where it causes urticaria. Chemically or lymphogenically, chronic contact eczema may also spread beyond the primary site of contact.

Diagnostics

In addition to a careful history, the basic examination is epicutaneous test. The principle is the application of the test substance under standard conditions and in the correct concentration on healthy skin at a time interval of 2-3 weeks from the healing of skin manifestations. The following is an evaluation and interpretation.

 For more information see *Epicutaneous test*.

Differential diagnosis

It is necessary to distinguish:

- toxic dermatitis,
- atopic eczema,
- superficial dermatophytosis,
- erysipelas.

We distinguish between chronic manifestations

- psoriasis,

- lichen planus,
- Paget's disease,
- Bowen's disease.

Therapy

The basic premise is to remove the antigen and prevent its further action. In the acute phase, we apply drying compresses, later solutions of organic dyes, creams, ointments. Topical corticosteroids are effective, in chronic forms of eczema they are combined with ichthamol or tar preparations. In resistant forms, X-ray irradiation with a "Bucky lamp" is sometimes effective.

Links

Související články

- Allergens
- Treatment of allergies
- Urticaria
- Erythroderma

Used literature

- ŠTORK, Jiří. *Dermatovenerologie*. 1. edition. Praha : Galén, Karolinum, 2008. ISBN 978-80-7262-371-6.
- KLENER, P, et al. *Vnitřní lékařství*. 3. edition. Praha : Galén, 2006. ISBN 80-7262-430-X.