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Optimization of Treatment of Steroid-Sensitive Dermatoses by Methods of Traditional Medicine

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Abstract: Despite the variety of etiological factors, mechanisms of development of allergic dermatoses, as well as huge clinical differences in localization, morphology of rashes, subjective complaints of the patient, a number of immunological changes are the basis for the implementation of inflammation in the skin. Approaches to the treatment of these diseases are determined by their etiological and pathogenetic mechanisms of development and consist in carrying out elimination measures, the use of both systemic and external pharmacotherapy.

Key words: allergic dermatosis, atopic dermatitis, allergic contact dermatitis, external therapy, goose fat.

Relevance. According to epidemiological studies, atopic dermatitis (AD) is detected in 25% of children and 2-3% of adults. Over the past half century, the prevalence of AD has doubled in industrialized countries. Today, AD is in second place among the reasons for visiting dermatologists in Russia. The prevalence of AD among the adult population is 1–5%. It accounts for 90% of all cases of occupational skin diseases. The frequency of AD in children and adolescents is 20% of all dermatitis. In the structure of allergic dermatosis, the most frequently recorded are urticaria, atopic dermatitis (AD), eczema, psoriasis, toxicoderma, allergic contact dermatitis and photodermatitis. both in establishing its causes and in the choice of therapy. Most researchers recognize the division of allergic dermatosis into allergic (atopic), which has an immunological mechanism for the formation of mediators and non-allergic, when immune mechanisms are not involved in the release of the same mediators. The concept of "steroid-sensitive dermatoses" includes skin diseases that are sensitive to corticosteroid therapy. The most common include atopic dermatitis (AtD), eczema, psoriasis, toxicoderma, lichen planus, contact allergic and irritant dermatitis, photodermatitis, skin forms of lupus erythematosus. These diseases are characterized by a long, often relapsing course, genetic predisposition, an immune-dependent mechanism of development, and the absence of specific therapy. Patients with steroid-sensitive dermatoses have severe cosmetic problems and a significant decrease in quality of life. The term "allergodermatoses" means a formally distinguished group of inflammatory diseases, in the development of which allergic reactions play a significant role. Treatment of dermatosis includes stopping the progression of the disease, achieving stabilization of the inflammatory process using systemic or topical therapy. When treated with topical drugs, it is possible to achieve restoration of damaged epithelium and dermis, elimination of skin dryness and improvement of the barrier properties of the skin. The use of topical corticosteroids can achieve the effect of suppressing the inflammatory process, have antiallergic, vasoconstrictive, antiproliferative and immunosuppressive effects. Today in the domestic pharmaceutical market there is a large selection of topical corticosteroids. The basis of these drugs is betamethasone dipropionate, which has a high anti-inflammatory and anti-allergic activity and does not have a noticeable systemic effect. The presence of different clinical forms of drugs (cream and ointment) allows them to be used at various stages of the inflammatory process. Intermittent therapy with the use of topical corticosteroids can significantly improve the quality of life of patients. Maintaining a long-term remission, in turn, significantly improves the condition of the skin: the level of sebum secretion increases, transepidermal water loss decreases, skin hydration improves, and peeling decreases.

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For more than half a century, glucocorticoid preparations have been successfully used in the external treatment of many skin diseases. The effectiveness of topical glucocorticosteroids (GCS) has been proven by many years of clinical practice, numerous controlled studies and meets evidence-based standards of high reliability (level A-B recommendations). The greatest experience in the use of these drugs has been accumulated in the treatment of allergic and inflammatory skin diseases. This group of diseases, which includes acute and chronic dermatoses of various nature, has been called steroid-sensitive dermatoses. They are characterized by a high population frequency, a long, often relapsing course, a genetic predisposition, an immune dependent mechanism of development, pronounced cosmetic problems, the absence of specific therapy, and a significant decrease in the quality of life. Among all these criteria, the most important and fundamental for the appointment of external corticosteroids is the immune-dependent pathogenesis of chronic inflammatory dermatoses. These diseases primarily include atopic dermatitis (AD), eczema, psoriasis, lichen planus, lupus erythematosus, lipoid noncrobiosis, alopecia areata, and others [1]. The high demand for topical corticosteroids is primarily due to the fact that so far there is no therapeutic alternative to them in terms of the onset rate and severity (activity) of the anti-inflammatory effect. Due to their high efficiency, they are indispensable in the treatment of many skin pathologies, from banal dermatitis to life-threatening bullous dermatoses. The uniqueness of the skin as an organ lies in the fact that it is available for the use of various drugs, and when they are applied directly to the skin, it is possible to quickly obtain a pronounced therapeutic response. The creation of a high concentration of corticosteroid in the area of inflammation has a powerful suppressive effect on the cells of the immune system associated with the skin, while having almost no systemic effects on the immune and other body systems, which makes it possible to avoid severe side effects. That is why local treatment plays an important and sometimes priority role in relieving the symptoms of inflammation and itching [2, 3]. External corticosteroids, acting as a powerful pathogenetic effect, can quickly reduce inflammatory changes in the skin, significantly reduce or eliminate the subjective symptoms of dermatosis (itching, burning). An improvement in the skin status undoubtedly has a positive effect on the psycho-emotional state of patients, recovery of working capacity and daily activity. The demand for topical corticosteroids is largely associated with their high aesthetic appeal, which is determined by the basis of the drug. They are quickly absorbed by the skin, do not leave marks on clothes and underwear, do not have an unpleasant odor, do not stain the skin and do not require the use of dressings, which distinguishes them favorably from classic external products. The patient expects from external treatment a quick relief of inflammatory and subjective symptoms of the disease, a reduction in the duration of the disease, but at the same time a convenient and pleasant therapeutic effect that does not limit his social and professional activity and, as a result, a significant improvement in the quality of life. The presence of various dosage forms of external steroids, a convenient dosing regimen 1-2 times a day ensures the rationality and comfort of patient therapy at any stage of the inflammatory process. Taken together, these factors determine the high compliance and adherence of patients when choosing topical corticosteroids for the treatment of both acute and chronic inflammatory dermatoses [3–5]. The active clinical use of external corticosteroids is explained by their high anti-inflammatory, antiallergic, immunosuppressive activity, as well as vasoconstrictive, antipruritic and antiproliferative effects. These actions are realized in the skin by means of [5—7]: • a decrease in the synthesis of inflammatory mediators, products of the arachidonic cascade (prostaglandins, leukotrienes, etc.); • inhibition of migration of lymphocytes, monocytes, eosinophils to the focus of inflammation and suppression of their functions; • reducing the number of antigen-presenting and mast cells; • suppression of the synthesis of pro-inflammatory cytokines (IL-1-IL-6, IL-11-IL-13, IL-16-IL-18, TNFα), a number of chemokines and adhesion molecules; • decrease in the activity of hyaluronidase and lysosomal enzymes, leading to a decrease in the permeability of the vascular wall and the severity of edema; • activation of histaminase and decrease in the content of histamine in the focus of inflammation; • inhibition of the activity of systems of natural vasodilators: histamine, bradykinin, nitric oxide; • inhibition of the synthesis of mucopolysaccharides, nucleic acids and proteases. Thus, the use of GCS allows you to extend the interrecurrent period and control the course of allergic dermatosis.

Currently, there is a significant increase and widespread allergic dermatoses [1-3]. The development of complications in these diseases predetermined the interest in improving external therapy. Violation of the skin barrier, an increase in transepidermal water loss, and a change in pH lead to a decrease in the protective mechanisms of the skin, resulting in an increased susceptibility of the skin to infections [4]. Changes in the skin microbiota contribute to constant sensitization of the body due to the antigenic activity of microbial superantigens [5]. Staphylococcus aureus superantigens stimulate the proliferation of Langerhans cells and T cells, and also act as allergens that increase inflammation, which leads to a decrease in the barrier function of the skin, promotes secondary infection, the spread of bacterial and fungal infections. Complications caused by Staphylococcus aureus are among the most frequent in allergic dermatoses [6–8]. Thus, atopic dermatitis is accompanied by an overgrowth of Staphylococcus aureus [9]. The prevalence of bacterial infection has a positive correlation with the duration of the disease and the severity of itching [10]. The high frequency of secondary infection of allergic dermatoses, disorders of innate and adaptive immunity maintain a chronic course, contribute to a decrease in the quality of life of patients. The course of secondary pyoderma is well known, accompanied by an increase in the inflammatory reaction, pustulization, the spread of serous-purulent and purulent-hemorrhagic crusts to the surface and along the periphery. atopic dermatitis is accompanied by an overgrowth of Staphylococcus aureus [9]. The prevalence of bacterial infection has a positive correlation with the duration of the disease and the severity of itching [10]. The high frequency of secondary infection of allergic dermatoses, disorders of innate and adaptive immunity maintain a chronic course, contribute to a decrease in the quality of life of patients. The course of secondary pyoderma is well known, accompanied by an increase in the inflammatory reaction, pustulization, the spread of serous-purulent and purulent-hemorrhagic crusts to the surface and along the periphery. atopic dermatitis is accompanied by an overgrowth of Staphylococcus aureus [9]. The prevalence of bacterial infection has a positive correlation with the duration of the disease and the severity of itching [10]. The high frequency of secondary infection of allergic dermatoses, disorders of innate and adaptive immunity maintain a chronic course, contribute to a decrease in the quality of life of patients. The course of secondary pyoderma is well known, accompanied by an increase in the inflammatory reaction, pustulization, the spread of serous-purulent and purulent-hemorrhagic crusts to the surface and along the periphery. The high frequency of secondary infection of allergic dermatoses, disorders of innate and adaptive immunity maintain a chronic course, contribute to a decrease in the quality of life of patients. The course of secondary pyoderma is well known, accompanied by an increase in the inflammatory reaction, pustulization, the spread of serous-purulent and purulent-hemorrhagic crusts to the surface and along the periphery. The high frequency of secondary infection of allergic dermatoses, disorders of innate and adaptive immunity maintain a chronic course, contribute to a decrease in the quality of life of patients. The course of secondary pyoderma is well known, accompanied by an increase in the inflammatory reaction, pustulization, the spread of serous-purulent and purulent-hemorrhagic crusts to the surface and along the periphery. Despite the fact that allergic dermatoses are polyetiological and multifactorial diseases and their treatment requires an integrated approach, external therapy occupies the main place in the treatment of these diseases. Rational external therapy eliminates the inflammatory reaction and subjective sensations of itching, pain, burning; reduce violations of the epidermal barrier and protect the skin from adverse environmental factors, stimulate reparative processes in the skin, control the attachment of a secondary bacterial and fungal infection.

Research objectives. In order to assess the effectiveness and safety of a complex ointment with the addition of goose fat in the form of a cream and ointment, its action and tolerance were compared in various forms of allergic dermatoses.

Materials and methods. The inclusion criteria for the study were: - clinical signs of atopic dermatitis or true eczema in the acute stage; - the severity of atopic dermatitis from 20 to 60 points on the SCORAD scale or the severity of true eczema from 20 to 50 points on the EASI; - age over 2 years. The exclusion criteria were: - condition of erythroderma; - Hypersensitivity to the components of the drugs used; - age up to 2 years; - the presence of any condition that may create an unreasonable risk of harm to the health of the patient; - therapy with systemic glucocorticoid agents during the previous 4 weeks; - Topical corticosteroid therapy within the previous 3 weeks. During the study, it was mandatory to record any adverse events for further evaluation of the safety of study drugs. Under our supervision in the main group were 62 patients aged 17 to 35 years, including 31 women, 31 men. Atopic dermatitis was diagnosed in 34 patients, true eczema - in 28 patients. The duration of the disease ranged from 3 months to 15 years. All patients had previously received repeated courses of treatment, including antihistamines, desensitizing agents, topical preparations containing glucocorticoids, naftalan, 4 patients had previously received physiotherapy in the form of UHF therapy. At the time of examination, all had signs of exacerbation of the skin process, increased itching, and sleep disturbances. - skin itching, - age-related changes in characteristic skin rashes, - chronic relapsing course, - the presence of atopic diseases in the patient and / or his relatives, - onset at an early age, - seasonal exacerbations, - exacerbation of the process under the influence of provoking factors (allergens, irritants, foods, emotional stress), - dry skin, - white dermographism, - susceptibility to skin infections, - cheilitis, - Denier-Morgan symptom - hyperpigmentation of the skin of the periorbital region, - an increase in the content of total and allergen-specific IgE in the blood serum, - eosinophilia peripheral blood. Therapeutic components of goose fat: - Polyunsaturated fatty acids - ensure normal metabolism and metabolism in tissues, increase immunity in the skin, accelerate tissue regeneration, naturally moisturize the skin and make it more elastic. - Omega 3 (oleic acid) - renews and rejuvenates tissues; - Omega 6 (linoleic acid) - restores protective functions, has antioxidant and anti-inflammatory functions, slows down moisture loss. - Vitamin E (tocopherol) - slows down the aging process of tissues, normalizes blood circulation and microcirculation in the upper layers of the skin, increases cell regeneration, helps get rid of scars, scars, smoothes wrinkles. -Vitamins of group B - enhance metabolic processes in skin cells, improve the penetration of nutrients to them. - Selenium - gives the skin elasticity and velvety, smoothes wrinkles, relieves itching and irritation. - Sodium - maintains the normal water balance of the skin; - Magnesium - improves metabolic processes in cells, slows down their aging; -Zinc - reduces redness and irritation, normalizes the sebaceous glands, improves tissue healing. RESULTS AND DISCUSSION All patients showed a pronounced decrease in itching, erythema and swelling on the 3rd day of using the natural remedy "GOOSEN FAT+". In the future, the regression of rashes gradually continued. By the 6th day of treatment, the state of health of all patients improved, itching decreased. After 7-10 days of application of "GOOSEN FAT+", a complete regression of acute inflammation was observed, and night sleep was restored. On the 12-15th day, all patients showed a significant improvement. After treatment, DIQI improved and amounted to 7.8±5.5. SCORAD decreased to 8 ± 1.0. EASI decreased to 7.1 ± 0.5.

Conclusions. The therapy was well tolerated by all patients, no adverse reactions or adverse events were noted in any case. Also, there was no negative effect of the therapy on the indicators of peripheral blood and urine. The results obtained by us confirm the previously described high therapeutic efficacy and safety of the use of the natural remedy "GOOSE FAT +" based on goose fat in allergic dermatoses. With no side effects, "GOOSE FAT+" was easily administered to patients.

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