

PSORIASIS

Psoriasis is one of the most common chronic dermatoses, affecting from 3 to 7% of human population. Lately, psoriasis has been considered as a systemic disease due to the involvement into the process not only skin, but also joints, some internal organs and therefore known as "psoriatic disease".

Etiology. The cause of psoriasis is not clearly known. There are various theories on the origin of psoriasis proposing the following causes such as infectious, neuroendocrine, metabolic and viral ones, but none of the proposed etiological concepts explains the occurrence of psoriatic skin rashes. Currently, this dermatosis is considered as a multifactorial disease with the participation of genetic, environmental and immune factors. There are two types of psoriasis: type I and type II. Type I psoriasis is associated with the HLA antigen system (HLA — B13, HLA — B17, HLA — Bw57, HLA — Gw6). This type of psoriasis affects 60-65% of patients, and the disease often begins at the age of 20-25 years. Type II psoriasis is not associated with the HLA antigen system and occurs equally often in men and women in middle and old age.

Certain resolving factors play an important role in the development of genotypic disorders in psoriasis: transcriptional activity of a number of protooncogenes, exposure to bacterial antigens, stress, alcohol and nicotine sensitization, taking certain medications, HIV infection, traumas and excessive insolation.

Pathogenesis. One of the leading causes of the development of psoriasis is known to be immunological disorders, which characterize this dermatosis as an autoimmune disease mediated by T-lymphocytic infiltration of the epidermis. The formation of psoriatic lesions is a dynamic process that includes a complex of interactions between type 1 T-helpers and type 1 T-suppressors, as well as interactions between T-lymphocytes and keratinocytes. Further development of inflammatory immunopathological processes in the skin is determined by the constant excitation of T-lymphocytes as a result of the presentation of antigen / superantigen-antigen-presenting cells, and as a result of autoreaction. These changes lead to the synthesis and secretion by T-cells and keratinocytes of a number of cytokines (tumor necrosis factors - α , interleukins 1, 2, 4, 6, 8, interferons). The outcome of such changes is the hyperproliferation of keratinocytes and impaired keratinization in the epidermis.

Classification.

Currently, psoriasis is classified according to the clinical forms, extent, nature of morphological elements, seasonal type and phase.

Clinical forms	Vulgar psoriasis (papular, plaque, papular - plaque, large, diffuse) and its variety (point, drop-shaped, "geographical", linear, psoriasis gyrata), as well as atypical forms of psoriasis (exudative, verrucous, intertriginous, rupioid, follicular, seborrheic, psoriatic erythroderma, pustular psoriasis).
Extent	Focal, disseminated, diffuse, universal
Character of morphological elements	Papular, papular plaque, plaque, large plaque
Seasonality	Winter, summer, not dependent on season
Phase	Progression, stabilization, regression
Other injuries	Onychodystrophies (like a "thimble" and "oil stain", onychogryphosis, onycholysis, paronychia, subungual hemorrhages). Psoriatic arthritis (by the number of arthritis - monoarthritis, oligoarthritis, polyarthritis; by the form - arthralgia, synovitis, synovial-bone form; by the degree of activity - low, moderate, high)

Clinical picture.

Psoriasis vulgaris. The primary morphological element in psoriasis is the epidermal - dermal papule. The papules are pink in color (“Pilnov's symptom”), a flat surface covered with silvery-white scales and a corolla of erythema along the periphery, free from peeling. Fresh psoriatic nodules have a rounded shape, 1-2 mm in diameter, gradually increase due to peripheral growth and merge with each other, forming small or large plaques, diffuse infiltrated foci of irregular outlines. Guttate psoriasis is characterized by the presence of papules of the size of a pinhead or millet grain. Drop-like psoriasis is characterized by the elements with the diameter of lentils located in isolation, rarely merge with each other. In psoriasis gyrata, geographical, linear psoriasis, the elements are arranged in the form of arcs, garlands, often resembling a geographical map or foci of a linear shape. Slight itching or absent. By localization it is arranged in the area of the elbows, knee joints, hairy part of the head (typical localization), trunk and extremities.



Exudative psoriasis. As a result of exudate penetration, psoriatic elements are covered with loose yellowish flake-crusts. In the folds, the surface of the foci becomes intensively hyperemic, oozing is determined. Intense itching.



Intertriginous psoriasis. It is localized in large folds. The lesions are bright red, with clear boundaries, moist smooth surface, significantly infiltrated, weakly scaly, along the periphery there is a detachment of the stratum corneum of the epidermis. It is accompanied by burning sensation and itching.



Verrucous psoriasis. Papules are hypertrophied with a rough surface, horny layers, papillomatous growing. According to the localization the area of appearance is the knee and ankle joints, the lower part of the legs.

Lang-Anderson's psoriasis. It is characterized by massive layered dry scales (not crusts) of a dirty gray color on the surface of nodules and plaques, which gives them an oyster-like appearance. It is localized more often on the extensor surfaces of the extremities. The development of atrophy is possible with resolution.

Krakht's follicular psoriasis is represented by multiple miliary nodules of a whitish color with a funnel-shaped impression in the center. It is localized on the surface of upper and lower extremities, in the hair follicles. On the inner surface of the scales, there are keratinized spines.



Verrucous psoriasis



Lang-Anderson's psoriasis

Seborrheic psoriasis. It develops in patients with seborrhea in the most favourable places (chest, face, hairy part of the head). The borders of the foci are clear, nodules and plaques are covered with loose, "fat" yellowish scale-crusts. On the head there is profuse pityriasis and finely lamellar peeling.



Psoriatic erythroderma. It occurs more often under the influence of irrational therapy. It develops acutely or gradually. Papules and plaques merge with each other in such a way that the skin is completely (total erythroderma) or partially (partial erythroderma) is hyperemic, infiltrated, flakes off with lamellar scales. The state is accompanied by chills, feeling of constriction, itching of the skin. The body temperature rises and general toxic syndrome is developed.



Pustular psoriasis is present in a number of clinical forms. Small pustules with a tense cover and unclear sterile contents may appear along the periphery of existing psoriatic foci (vulgar psoriasis with pustulation), on the palms and soles against a background of erythema and infiltration (Barber's type), on the terminal phalanges of the hands and feet (acrodermatitis Hallopeau), acute edema, diffuse erythema, fusion into solid foci ("purulent lakes"), hectic fever, rapid generalization throughout the skin (generalized Tsubush pustular psoriasis).



Generalized Tsubush pustular psoriasis



Barber's type psoriasis

Psoriasis of the nail plates is quite common. It is characterized by point depressions in the nail area (thimble type), the presence of yellowish spots in the proximal parts of the nail (“oil spots”, psoriatic papules of the nail bed, subungual psoriatic erythema), changes in color, shape, thickness, nail consistency (psoriatic onychia), exfoliation of the nail plates (psoriatic onycholysis), swelling, redness, purulent discharge from under the nail, subungual striped or punctate hemorrhages (subungual hemorrhages).





Thimble type onychodystrophy



Onycholysis



Subungual hyperkeratosis



Psoriatic papules of the nail bed (oil spot)

Rashes of psoriasis may be focal, disseminated and diffuse. The characteristic nature of skin lesions corresponds to psoriatic erythroderma.

According to the primary morphological elements, papular, papular-plaque psoriasis, plaque and large plaque psoriasis are distinguished.

Psoriasis is usually seasonal. Exacerbations occur in winter or summer periods. There may be an off-season course of dermatosis.



The progressive stage of psoriasis is characterized by the growth of elements along the periphery, the fusion of papules into plaques, the appearance of fresh elements at the site of injuries (Koebner's phenomenon). Efflorescences are bright pink, covered with silvery-white scales. Along the periphery there is a corolla of erythema ("growth"), free from peeling. Psoriatic phenomena are positive. This stage is accompanied by itching.



Stabilization period of psoriasis is characterized by no fresh elements, the plaques are stagnant red, moderately infiltrated and slightly flaky. Scales completely cover the rash. The psoriatic triad is dubious. Itching practically disappears.



The regression stage of psoriasis is characterized by the absence of desquamation, significant decrease in infiltration, resolution of plaques in the center, and the formation of pseudo-atrophic Voronov's rim along the periphery. The psoriatic triad is uncertain. There are no subjective sensations.

Psoriatic arthritis occurs in three clinical forms. Firstly, the small distal joints are affected, and then the large joints and the spine are involved in the process. Arthralgia is characterized by the presence of constant pain, aggravated by movement without clinical and X-ray changes in the affected joints. In a synovial form, there is a swelling of the joints, the skin over the joints becomes hyperemic, tender to touch, and stiffness in the morning occurs. Synovial-bone form is manifested by hyperemia and edema of the periarticular tissues. The pain is intense. Active and passive movement capacity is limited. On radiographical examination periarticular osteoporosis, narrowing of joint spaces, cystic enlightenment, destruction of bone tissues and osteophytes are determined.



Diagnosis

Psoriasis is characterized by the presence of three consecutive pathognomonic phenomena during the scraping of nodules.



The phenomenon of “stearin spot” is manifested by abundant flaking silvery white scales resembling stearin. It is based on the accumulation of air bubbles in the stratum corneum and a decrease in lipid content with a weakening of intercellular connections.



The phenomenon of the “terminal film” is characterized by the appearance of a moist shimmering surface after the removal of the scales similar to a film (exposure of the spiny layer of the epidermis).



The phenomenon of “bleeding point” or “blood dew” (Auspitz’s sign) is detected with further scraping and manifested by drop bleeding due to trauma on the surface of network of capillaries and papillomatosis.

In addition it is taken into account the appearance of psoriatic eruptions at the site of skin injury, exactly resembling its shape (Koebner’s isomorphic phenomena) and the typical localization of rashes.

To assess the severity of the psoriatic process, Psoriasis Area Severity Index (PASI) is used. When calculating the index, the body is divided into 4 areas, each of which is assessed separately according to the area of the rash in percentage, as well as in points from 0 to 4 according to the signs: erythema / infiltration / peeling. The total score multiplied by the total lesion area gives the complete PASI index, which can range from 0 to 72.

Histopathology is characterized by parakeratosis, interpapillary acanthosis, Munro-Kopytovsky microabscesses (accumulation of neutrophils in the epidermis), papillomatosis, perivascular infiltrates from fibroblasts, leukocytes and lymphocytes.

Differential diagnosis. Psoriasis should be differentiated between lichen planus, seborrheic eczema, guttate parapsoriasis, pink versicolor of Gibert, secondary syphilis.

Psoriasis differential diagnosis

Skin disorder	Skin failure
Red plane lichen	Flat glistening polygonal nodules with an umbilical depression in the center, without peripheral growth, coloration with a bluish tint, the presence of a Wickham's striae. Typical localization is the flexible surfaces of the extremities. Mucous membranes are affected. Severe itching.
Seborrheic eczema	Rash is arranged strictly on the scalp (in psoriasis at the border of hair growth – "psoriatic crown"), erythematous, moderately infiltrated lesions without clear-cut borders, loose yellowish crusts on the surface. Absence of triad of psoriasis phenomena. Moderate itching. Localization mainly in "seborrheic" places.
Guttate parapsoriasis	Nodules are small, reddish-brown, without peripheral growth and fusion, On the surface there are thin scales, visible peeling is not typical. Phenomena of "cachet", "latent peeling", "purpura" are positive. No itching.
Pink versicolor of Gibert	Disease of infectious-allergic nature characterized by acute onset, rapid dissemination of rashes in mechanical irritation, the presence of a "maternal

	plaque”, a yellowish coloration of efflorescences, elements of more often spotty character with weak peeling in the center (“crumpled tissue paper”), elongated, located along Langer's lines. The psoriatic triad and the Koebner phenomenon are absent. Itching is weak or absent. The course is favorable.
Secondary syphilis	The characteristic feature is staging of the course. The nodules are bluish-pink in color, do not grow along the periphery, do not flake off and do not merge with each other. On the palms and soles the papules are dermal, deeply located, weakly flaky along the periphery, like Bielt's collar. There are no subjective sensations. Rapid resolution under the influence of specific antibiotic therapy. Serologic tests for syphilis are positive.

Treatment. The treatment is directed to the elimination of inflammation, suppression of excessive proliferation of keratinocytes, normalization of their differentiation, contribution to the resolution (regression) of psoriatic efflorescence, and improvement of the life quality of patients.

On prescribing treatment for patients with psoriasis, it is necessary to take into account the prevalence of skin lesions, the stage of the disease, age, presence of concomitant diseases and contraindications to one or another treatment method or drug. Therapy for psoriasis should be comprehensive and combine the use of both local (external) and systemic therapy.

Dietary indiscretions. Patients with psoriasis should give up alcohol, fatty and spicy foods. In addition, the consumption of easily digestible carbohydrates (sugar, honey, jam) must be controlled. At the same time, complete proteins contained in dairy products, fish, meat, as well as vegetables, fruits, berries and seafood are of use. Patients should care for their skin: do not comb the affected areas, do not expose the skin to mechanical injury.

Calcium (chloride, gluconate, lactate, glycerophosphate) and sodium thiosulfate preparations are used in the progressive stage of psoriasis. They have a hypo-sensitizing, detoxifying and anti-inflammatory effect, reduce the permeability of the vascular wall, and increase diuresis. If there is a severe itching and exudation antihistamines of the first (suprastin, tavegyl, phencarol, diphenhydramine, diazolin, etc.) and the second generation (claritin, telfast, aeriuss, zyrtek, kestine, etc.) are administered.

Psychotropic medicines (such as tranquilizers, antidepressants, antipsychotics) are important in the complex treatment of patients with psoriasis, who have elements of asthenia and neurotization in their psycho-somatic status.

Detoxification therapy. Hemodez, hepasol, mafusol, enterosorbents (activated carbon, polyphedan, enterogel, etc.) are prescribed. The use of enzyme preparations (Festal, Mezym, Kreon, Enzystal, etc.) and hepatoprotectors (Essentiale, Heptral, Chophytol, etc.) are recommended.

Angiotropic agents (xanthinolanicotinate, theophylline, papaverine, etc.) are used in psoriasis. Since these medicines stimulate microcirculation in the lesions, therefore the resolution of the lesions is accelerated.

In the treatment of psoriasis, immunotropic agents (pyrogenal, prodigiosan, levamisole, takgivin, thymalin, thymogen, glutoxim, imunofan, neovir, licopid, myelopidum, etc.) are used. In addition to the effect on T- and B-lymphocytes and macrophages, they normalize the imbalance in the cytokines system, reduce tissue sensitivity to inflammatory mediators, and promote the synthesis of antihistamine and anti-serotonin antibodies.

In the stationary phase of the disease, vitamins B (B1, B2, B6, B12), ascorbic acid, folic acid, vitamins A, E, PP are administered.

Indications for the use of systemic drug suppressive therapy include pustular psoriasis, psoriatic erythroderma and polyarthritis, as well as vulgar generalized psoriasis resistant to other methods of treatment. The medicines in this group include aromatic retinoids - isotretinoin (roaccutane), etretinat (tigazone), neotigason, psoriaten. Cytostatic immunosuppressants are also used as immunosuppressants in psoriasis. Currently, the treatment of patients with dermatosis, methotrexate and cyclosporin A are most often used. Methotrexate inhibits the activity of dehydrofolate reductase and thymidylate synthase, disrupting the formation of tetrahydrofolic acid, which as a coenzyme is involved in the conversion of uracil deoxyriboside into thymidine, which destructs DNA replication. As a result suppression of cellular mitosis and proliferation occurs. Cyclosporin-A (Sandimmun-Neoral) suppresses cellular and humoral immune responses by inhibiting the transcription of i-RNA encoding pro-inflammatory lymphokines and the ability of T-helpers to synthesize IL-2. In psoriasis with an immunosuppressive purpose, preparations of vitamin P and its analogues - calcipotriol, tacalcitol - are used. Calcipotriol interacting with specific receptors in keratinocytes inhibits the proliferation of these skin cells, accelerating their morphological differentiation.

In recent years, a new “biological” strategy for the therapy of patients with psoriasis has been developed. It is based on the principle of blocking pro-inflammatory cytokines or immunocompetent cells using their specific inhibitors and using recombinant DNA technology. This group of medicines includes biological products: alefacept (Araeive), efalizumab (Raptiva), etanercept (Enbrel) and infliximab (Remicade). Currently, the

Russian Federation has accumulated a certain experience in the use of monoclonal antibodies to tumor necrosis factor- α , which plays a key role in the immunopathogenesis of dermatosis. Infliximab (remicade) is prescribed for patients with severe psoriasis, including psoriatic arthritis, for people with moderate forms of the disease if systemic therapy with other drugs is ineffective or if there are contraindications to PUVA therapy. The initial dose of infliximab is 5 mg / kg. Intravenous infusions are carried out 2 and 6 weeks after the first injection, then every 8 weeks. It is extremely important to follow a treatment regimen that involves multiple infusions of the drug. If there is no therapeutic effect within 14 weeks, infliximab treatment should be discontinued. Infliximab is contraindicated in case of individual intolerance, sepsis, tuberculosis, abscess or any other severe infection, degree II and III circulatory insufficiency, pregnancy, breastfeeding, as well as persons under the age of 18. Selective immunosuppressant efalizumabum (raptiva) is able to block the activity of T-lymphocytes in the lymph nodes, vascular endothelium and tissues. At the same time, the raptiva does not have a cytostatic effect on active T-lymphocytes in the bloodstream, and therefore does not cause cytopenia. It is prescribed in a dose of 1 mg / kg once a week subcutaneously for a long-term use. The drug is indicated for the treatment of moderate to severe psoriasis in adults if other therapies including cyclosporine / methotrexate and photochemotherapy have failed or contraindicated. In case of manifested infiltration in psoriatic foci, treatment with a raptiva can be combined with the appointment of methotrexate. Raptiva is contraindicated in such forms of psoriasis as erythroderma, pustular, teardrop-shaped and psoriatic arthritis, as well as hypersensitivity to efalizumab, malignant growths, active tuberculosis, other severe infectious diseases and immunodeficiency conditions. After the first injection of raptiva, 30% of patients experience flu-like syndrome. This effect is not revealed after the repeated injections. At the end of the course of treatment with raptiva a rebound effect is rarely observed. In some patients the course of psoriasis is aggravated and psoriatic rash is increased.

The only indication for the application of systemic corticosteroid therapy in psoriasis is psoriatic erythroderma. Prednisolone is used orally 40-60 mg / day with a gradual dose reduction until its complete cancellation, equivalent to dexamethasone, betamethasone, triamcinolone orally and parenterally.

Physiotherapy is also widely used in the treatment of patients with psoriasis.

Ultraviolet irradiation therapy (UVR) in erythemal and suberythemal doses, with weak cytostatic and antimetabolic effect, is used to treat patients with psoriasis in the stationary stage and in the stage of regression. Currently, narrow-band medium-wave UV therapy (311 nm) is more often used in the complex treatment. Sessions are carried out 4 times per week, for a course of 20 procedures. If erythema develops, it is advisable to interrupt the course of treatment for 2-3 days. The occurrence of flaking and dry skin is not a reason to interrupt the course of phototherapy.

Selective phototherapy – ultraviolet therapy in the medium wavelength spectrum (wavelength 280-320 nm) is indicated for patients with less vivid manifestations of psoriasis and in the absence of obsolete infiltrated plaques. The procedures are carried out 5 times per week, for the course of 20-25 sessions.

The ability of some derivatives of furocoumarins under the influence of UV rays of the long-wave spectrum is to react with target molecules, and primarily with pyrimidine bases of nuclear DNA that underlies the method of photochemotherapy (PUVA-therapy). Photosensitizers (psoralen, ammifurin, oxSORalen and etc.) can be prescribed both externally in the form of ointments and internally 2 hours before the therapy. Sessions are carried out 3-4 times per week, for a course of 15-25 procedures. In this case, the dose of photosensitizers is calculated according to the patient's body weight. In the course of treatment, the total indicators of bilirubin and blood aminotransferases are controlled.

Another effective method of treatment of patients with psoriasis is balneophotochemotherapy (PUVA baths), bath is taken with 0.3% solution of the photosensitizer ammifurin and 20-30 minutes later a phototherapy session is performed. This technique is acceptable in persons with concomitant severe pathology of the gastrointestinal tract, since it allows you to avoid side effects of oral photosensitizers and at the same time to be sure of their presence in the patient's skin.

The method combined with photochemotherapy and the intake of synthetic retinoids orally (Re-PUVA-therapy method) significantly enhances the effectiveness of treatment. In this case, neotigason is prescribed 7-10 days before photochemotherapy at 10-50 mg / day, and then it combines aromatic retinoids and photochemotherapy. In Re-PUVA therapy, the monitoring of content of total lipids, neutral fats, triglycerides, bilirubin and aminotransferases in the patient's blood is performed.

Excimer laser of 308 nm is indicated in the stabilization stage of psoriasis when the prevalence of the process on the skin is less than 20% of the size of the skin and there are contraindications to general photochemotherapy.

Other physiotherapy procedures are also used in the therapy of psoriasis: magnetotherapy, UV-C therapy, phonophoresis with corticosteroid ointments and reflexotherapy.

Topical corticosteroids are currently used as external therapy for psoriasis, often in combination with salicylic acid (belosalic, diprosalic, elocom S), calcipotriolum (daivobet), as well as tar preparations (dithranol), zinc pyrithione derivatives (skin cap) .

Evaluation of the effectiveness of therapy. The criteria for the effectiveness of treatment is the reduction or complete regression of psoriatic eruptions. A significant improvement characterizes the regression of 75% of rashes or more. Improvement is stated when regression of 50-75% of psoriatic lesions is observed.

Course and prognosis. According to the nature the psoriatic process is chronic and recurrent. Long-term remission can be from several months to several decades of years, but in some patients remission does not occur at all.

Prognosis for life for patients with psoriasis is favorable. Exceptions may refer to severe cases of pustular psoriasis and psoriatic arthritis. The prognosis for complete cure is not clear. Dispensary observation of patients is necessary. The correct regimen, avoidance of stress, the limitation of the use of medications (first of all, 3-blockers, lithium salts, a-interferons, etc.) are essential. The preventive course should include sedation, vitamin therapy, treatment of concomitant diseases and thalassotherapy.