

№ ЛД-16 ИИ

**Federal State Budgetary Educational  
institution of higher education  
"NORTH-OSSETIAN STATE MEDICAL ACADEMY  
Ministry of Health of the Russian Federation "**

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DEPARTMENT OF DERMATOVENEREOLOGY

**Principles of diagnosis and treatment  
IN DERMATOVENEREOLOGY**

(Methodical recommendation)

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## GENERAL DERMATOSIS THERAPY

For the general treatment of skin diseases, almost the entire arsenal of means and methods adopted in the treatment of internal diseases is used: sedative, hyposensitizing, hormonal, immune therapy, chemotherapy, antibiotic treatment, etc. When choosing drug therapy in dermatology with its rational prescription, a very individual complex combination is required etiological, pathogenetic and symptomatic indications.

*Hyposensitizing therapy*. In the pathogenesis of many dermatoses, allergies play a certain role. Therefore, in their treatment, an important role is assigned to the elimination of the allergen and hyposensitization. The main difficulty lies in the fact that with polyvalent sensitization inherent in many allergic dermatoses, the exact determination of the allergen is not feasible. If an allergen is detected, then specific desensitization should be carried out, for which small amounts of the allergen are injected into the patient's skin according to a certain scheme (staphylococcal toxoid, antifagin, filtrate and bacteriophage, streptococcal and staphylococcal vaccines) - specific hyposensitization.

More often in dermatology, non-specific hyposensitization with calcium preparations, sodium thiosulfate, antihistamines, corticosteroids is used.

By active inflammatory and allergen substances include salicylates (sodium salicylate, acetylsalicylic acid), active, including, and kortizonopodobno as possess stimulating effects on the synthesis of adrenocortical hormones.

*Antihistamines hyposensitizing drugs* are often the leading ones, the main ones in the treatment of allergic dermatoses, eczematous process, since histamine is the most important mediator for many immediate antigen-antibody reactions. In the body, there are specific histamine receptors, which are subdivided into H<sub>1</sub> and H<sub>2</sub> receptors. Excitation of peripheral H<sub>1</sub>-receptors is accompanied by spastic contraction of the bronchi, intestinal musculature, and the activity of the antigen-antibody reaction of an immediate-delayed type. When H<sub>2</sub> receptors are excited, the most characteristic is an increase in the secretion of the gastric glands, a dysregulation of the smooth muscle tone of the uterus, intestines and blood vessels. It is known that H<sub>2</sub> receptors determine the development of allergic reactions of the cytotoxic type. Physiological antagonists of histamine are adrenaline and other sympathomimetic agents: acetylcholine, histaglobin, intal, corticosteroid hormones. The most widely used blockers of H<sub>1</sub> receptors: diphenhydramine, diazolin, diprazine (pipolfen), tavegil, fenkarol, peritol, etc. The main representative of H<sub>2</sub> receptors is cimetidine, which is used for the treatment of gastric ulcer and duodenal ulcer.

Also used are drugs that block the histamine release process: cromoglycate sodium (Intal, cromolyn-sodium).

*Adrenergic blocking drugs*. By ganglioblokatorov having  $\alpha$ -adrenoceptor blocking effect, include drugs used to treat diseases associated with impaired peripheral circulation (endarteritis, acrocyanosis, syndrome of Raynaud, scleroderma, atrophoderma et al.). Used pirroksan, benzogeksony, pentamine, pyrylium et al.

*Tranquilizers*. The use of sedatives and tranquilizers is widespread in dermatology. It is rational to prescribe these drugs for a short time. Prescribe magnesium sulfate, which, in addition to a calming, detoxifying, antispastic effect, has a hyposensitizing, choloretic, laxative, hypotensive effect, which helps to reduce tissue swelling. Introduced intramuscularly or intravenously in the form of 25% p-ra in 1-2 days No. 10-15.

As a sedative, normalizing sleep purposeful according designate sibazon Medazepam, phenazepam et al. A positive result in the treatment of neurotic states in patients with severe chronic dermatoses with liver associated diseases, biliary dyskinesia, chronic pancreatitis is observed in addition to the complex lipotropic agents, alkaloids of belladonna and phenobarbital (bellataminal, belloid, bellaspon). Among other means of sedative action, tincture of valerian, motherwort, bromide preparations are used.

*Immunomodulators and immunostimulants.* In the process of the formation of inflammatory dermatoses, various disorders of biological processes occur, which are caused by immunological disorders. Therefore, in various dermatoses, infectious and parasitic diseases, various types of immunotherapy are widely used. With pyoderma caused by strepto- and staphylococci, in many cases, active immunization with antifagin, toxoid, vaccination, as well as the introduction of antistaphylococcal  $\gamma$ -globulin and antistaphylococcal plasma is used.

Human leukocyte interferon has an immunomodulatory effect in viral infections. Among the inducers of interferon, the most effective domestic synthetic low-molecular-weight interferon inducer - cycloferon. Interferons also include viferon (suppositories and ointment), intron-A and roferon.

Among immunopotentiating agents, levamisole (decaris) is often used, which has a wide range of immunostimulating effects. Specific immunocorrectors are T-activin, thymalin. Humoral and cellular factors, phagocytosis activity and protein synthesis stimulate methyluracil and pentoxil. Sodium nucleinate enhances antiviral and antistaphylococcal immunity, having interferonogenic activity. Dibazol is less active. The drug has the properties of an immunostimulant and an adaptogen.

*Hormonal agents.* Among the numerous endogenous factors influencing the activity of immune mechanisms, the endocrine system is of great importance. Hormones affect protein synthesis, cell division, the activity of immunocompetent cells, etc.

Corticosteroids are the most widely used in dermatology. Among dermatoses isolated group of diseases in which appointment glucocorticoids vital: pemphigus vulgaris, acute lupus erythematosus, dermatomyositis, nodular minutes nodosa, angiopathy, cap koidoz, malignant T-lymphoma skin, psoriatic erythrodermia, arthropathic psoriasis, and other pituitary hormones (ACTH) and adrenocortical (glucocorticoids) peculiar active antiinflammatory, hiposensibilic action, so they are administered as eczema, atopic dermatitis, drug reaction, multiphoton conformal exudative erythema, Bndrome Stevens - Dzhonsona et al.

Prednisolone and its analogs are prescribed orally, intramuscularly and intravenously. The duration of the course depends on the nature of tolerance and therapeutic action. Due to the fact that the rapid withdrawal of drugs leads to an exacerbation of dermatosis (withdrawal syndrome), treatment is stopped gradually, slowly reducing the therapeutic dose.

*Antibiotics* - the most important group of means of antimicrobial etiological therapy - are used primarily for pustular skin diseases, sexually transmitted infections, etc. They are prescribed in the presence of general phenomena, dissemination of a pustular rash, the appearance of regional lymphadenitis, as well as in the localization of deep pyoderma in the head and neck region. Before prescribing one or another antibiotic, the sensitivity of the flora should be established. Single, daily and course doses of drugs depend on the severity of the patient's condition and are usually in the middle parameters. Penicillin preparations and its semi-synthetic derivatives are still widely used. The new semi-synthetic drugs are characterized by a wider spectrum of action, activity against resistant pathogens. The search and introduction of new drugs for the treatment of mycotic infections are constantly being carried out. Used previously for treatment of dermatomycoses griseofulvin, and for treatment of patients with candidiasis nystatin, levorin, amphotericin B are in agents arsenal, but along with them appeared imidazoles: kanesten (clotrimazole), ketoconazole (Nizoral), itraconazole (orungal), terbinafine (Lamisil, binafin).

*Sulfonamides* (norsulfazole, etazole, sulfadimethoxine, sulfamonomethoxin, biseptol) are prescribed for pyoderma, acne, erysipeloid, and also for antibiotic intolerance. Of the complications when taking sulfa drugs, the most dangerous are agranulocytosis, anaphylactoid reactions. Possible development of toxic-allergic fixed erythema.

*Sulfone drugs* (DDS, dimocypion, diucifon) are used to treat patients with leprosy, Duhring's dermatitis, eczema, neurodermatitis, psoriasis, scleroderma, etc. The drugs have a

pronounced anti-inflammatory effect, inhibit the growth of bacterial populations, and stimulate the phagocytic activity of leukocytes.

*Antimalarial* aminohinolinovogo preparations ( rezohin , Plaquenil , chloroquine , delagil ) are used in dermatology as a fotodesensibiliziruyuschie agent for lupus erythematosus, photodermatosis, late cutaneous porphyria , poikilodermatomiozite et al.

*Metronidazole* ( Trichopolom ) is characterized by a wide spectrum of action against protozoa. It actively neutralizes anaerobic infection, stimulates the factors of cellular and humoral immunity of the T-system, enhances the protective and regenerative properties of the gastric mucosa. Trichopolom is used to treat various forms of rosacea , perioral dermatitis, seborrhea , trichomoniasis, etc.

*Sorption detoxification* is based on the removal of toxic substances of endogenous and exogenous origin from blood and other biological fluids using sorbents. Detoxification of blood is called hemosorption , and the removal of toxic substances from lymph, plasma and cerebrospinal fluid is called lymphosorption , plasma sorption and liquorosorption , respectively . For the purpose of detoxification , blood substitute hemodez is also used .

- *Vitamins* are classified as non-specific anti-inflammatory and hyposensitizing agents. The vital need for vitamins is due to their participation in the construction of many enzymes as prosthetic or coenzyme groups, which ensures the regulation of metabolism, adaptation-trophic mechanisms and immunocorrective action. In dermatology, vitamins of the B complex are widely used, especially B1, B2, B5, B12, B15, vitamins A, E, C, P in combination with other therapeutic agents.

*Preparations that normalize gastrointestinal enzymes.* In patients with allergic dermatoses, pancreatic insufficiency, enterokinase deficiency, amylase, lactase and proteinase deficiency are often revealed as comorbidities . There are drugs of enzymatic action that promote the activation of the gastroenterological system in patients with skin pathology: pepsin and its analogs ( acidin- pepsin, acippepsol ), abomin , pancreatin, solizim , festal , digestal , mezim -forte, essential -forte, etc.

## **PHYSIOTHERAPEUTIC METHODS OF TREATMENT OF PATIENTS IN DERMATOVENEROLOGY**

In complex application in patients with skin diseases, numerous means and methods of physiotherapy are used. Physical factors have a reflex, humoral and direct physicochemical effect at various levels. When choosing physical methods of treating dermatoses, it is recommended to take into account the stage of the disease, its form, the nature of the course, as well as the patient's age, the functional state of the neuro-endocrine , cardiovascular systems and the presence of concomitant diseases.

*Galvanization* is a method of electrotherapy, in which the body is exposed to a constant electric current of low strength and low voltage. Apply directly to the affected area, reflex-segmental zones and for general treatment. It is indicated for neurodermatitis and other itchy dermatoses, scleroderma, nodular vasculitis , psoriasis, lichen planus and keloid scars. Contraindications to galvanization are eczema, dermatitis, pyoderma , hypertension stage III, fever, malignant neoplasms.

*Electrophoresis* is a method of combined action of direct current and a medicinal substance. As medicinal substances can be used: solutions of magnesium sulfate, calcium chloride, lidase , novocaine, ichthyol, dimexide , etc.

*Therapeutic electrolysis* is a method of destruction with a therapeutic purpose using an electric current. The method is used in dermatological practice to destroy warts, condylomas, papillomas and angiomas.

*Electrosleep* is a method of influencing the central nervous system with an impulse current. The electrosleep procedure significantly reduces emotional stress, has a pronounced anti-

stress and sedative effect. The sleep that occurs during the procedure, unlike medication, approaches natural, physiological sleep.

*Diadynamic therapy* is a method of electrotherapy using low-frequency impulse currents of low strength and low voltage. With diadynamic therapy in patients with skin diseases, there is a decrease in erythema, edema, infiltration and itching. In addition, in dermatology, DDT is widely used for diathermocoagulation of warts, papillomas, vascular nevi, telangiectasias, tattoo removal, keloids. Contraindications: thrombophlebitis, infectious diseases, malignant neoplasms, cardiovascular insufficiency of II and III degrees, Parkinson's disease, pregnancy, mental disorders.

*Electrical stimulation* is a method of applying various low-frequency impulse currents to restore trophism of organs and tissues. Electrical stimulation is indicated for scleroderma, dermatomyositis, atrophoderma, Pasini-Pierini atrophy, because it improves blood supply to the skin and muscles, reduces the accumulation of lactic acid and increases energy supply.

*Electropuncture* is a method of electrotherapy that involves exposure to low-frequency impulse currents on biologically active points without using needles. Electropuncture refers to the methods of reflex-segmental physiotherapy. The method has a normalizing effect on the body through biological points, as well as an analgesic, desensitizing, vasodilating, anti-inflammatory effect. Electropuncture is indicated for eczema, neurodermatitis, psoriasis, urticaria, shingles.

*Amplipulse therapy* is an electrotherapy method carried out using sinusoidal pulsed modulated currents of low strength and low voltage. It has an analgesic effect, stimulates microcirculation, tissue trophism and improves the functional state of the central and peripheral parts of the nervous system.

*Darsonvalization* is an electrotherapy method that uses pulsed alternating current of high frequency, high voltage and low strength. The method increases vascular tone, improves microcirculation, improves the trophism of the skin and mucous membranes, and enhances regeneration processes. Darsonvalization is used for hair loss, in patients with acne, chronic eczema, lichen planus, limited and diffuse neurodermatitis, psoriasis, trophic ulcers and varicose syndrome, focal and systemic scleroderma, keloids.

*Induction therapy* is a method of therapeutic exposure to an electromagnetic field of high and ultra-high frequencies with inductive transmission of a high-frequency magnetic field. The method stimulates the glucocorticoid function of the adrenal glands, increases enzymatic, metabolic processes in tissues. It is used to treat eczema, neurodermatitis, psoriasis, lichen planus.

*Ultra-high-frequency currents, or UHF*, is a method of treatment with ultra-high frequency alternating electric current. The mechanism of action of UHF is based on the primary effect on the electrically charged particles that make up the tissues of the body. It is used to treat acute purulent-inflammatory diseases of the skin and subcutaneous tissue (boils, carbuncles, hydradenitis, skin vasculitis, trophic ulcers). Contraindications: cardiovascular insufficiency, systemic skin diseases, malignant neoplasms, pregnancy, hypotension.

*Ultrasound therapy* is a mechanical, thermal and physical-chemical effect on certain parts of the patient's body. Use direct (on the skin, muscles, joints) and indirect (on the spinal roots, nerve trunks) impact. Direct action is used for hydradenitis, localized pruritus, limited scleroderma, limited neurodermatitis, trophic ulcers, indirectly for chronic urticaria, universal pruritus, diffuse neurodermatitis, systemic scleroderma. The introduction of drugs using ultrasound is called *phonophoresis*. Contraindications: general infectious diseases, hypertension, pregnancy, cachexia, cardiovascular failure, syringomyelia, blood diseases.

*Phototherapy* is a method based on the use of short-wave rays of the solar spectrum (heliotherapy) and artificial sources of ultraviolet radiation. Ultraviolet rays have a positive effect on the central and autonomic nervous systems, have a pain- and itching effect, have bactericidal and bacteriostatic activity, stimulate hair growth, increase sebum- and perspiration.

*Ultraviolet irradiation (UVR) of autoblood* increases the bactericidal activity of blood serum due to the activation of phagocytosis, increases the number of leukocytes, basophilic granulocytes, normalizes the number and ratio of immunoglobulins G, M,

A and E, intensifies immunological activity. It is used to treat patients with psoriasis (winter form), diffuse neurodermatitis, eczema, streptostaphyloiderma .

*PUVA - therapy - the combined use of photosensitizing drugs ( psoralen , methoxalen , puvalen , oxoralen , etc.) with irradiation with long-wave ultraviolet rays of the spectrum A. In recent years, this is one of the most effective physiotherapeutic methods for treating dermatoses: psoriasis, fungal mycosis, lichen planus, acne, eczema, diffuse dermatitis, etc. Complications of PUVA therapy include: the appearance of keratomas and papillomas, recurrence of simple vesicular lichen, damage to the visual analyzer , impaired pigmentation , hypertrichosis, skin aging, the appearance of malignant neoplasms ( keratoacanthomas , basal cell carcinomas) etc.*

*X-rays and Bucchi radiation have anti-inflammatory, resorptive and itching effects. Since the use of X-ray radiation is accompanied by frequent complications in the form of X-ray dermatitis, skin atrophy, the appearance of papillomas, keratomas , keratoacanthus , ulceration with malignancy, this limits the use of this method in the treatment of dermatoses. Only in rare cases, if the treatment of malignant neoplasms is ineffective by other methods, X-ray therapy is used. Boundary rays ( Bucca radiation ) are used more often , in which the damaging effect on the skin is practically absent or less pronounced. Bucchi radiation is prescribed for draining, rising acne, chronic eczema, keloid scars, limited forms of neurodermatitis, etc.*

*Cryotherapy is a cold treatment carried out with carbonic acid snow. For the same purpose, applications with freezing with liquid nitrogen are used. The dosage of cryotherapy depends on the power of the infiltrate and the depth of inflammation of the object to be removed. Various cryotherapy methods are used to remove foci of chronic lupus erythematosus, annular granulomas, angiomas, warts, keratomas , vascular nevi , and other benign skin neoplasms.*

*Laser therapy is the use of low-intensity laser radiation as a therapeutic factor. Laser therapy has anti-inflammatory, analgesic, immunomodulatory, reparative , metabolic and reflex effects. The most widespread use of laser therapy is found in the treatment of ulcerative trophic lesions, scleroderma, alopecia areata , skin vasculitis , shingles and some other diseases. Contraindications: blastomatous processes, systemic blood diseases, diseases of the cardiovascular system in the stage of decompensation, diabetes mellitus, thyrotoxicosis.*

## **SPA TREATMENT**

Sanatorium care is one of the important stages in the treatment of dermatovenerological patients. Unlike pharmacological preparations, natural therapeutic factors are natural means of influence and, when used rationally, do not have side effects, do not cause complications. In chronic skin diseases of a neurogenic, allergic or metabolic nature, it is extremely useful to include various spa factors in the therapeutic cycle. This is usually done after stopping the relapse of the disease (during the rehabilitation period) with the complete or almost complete absence of eruptive elements.

Spa factors include climatotherapy, balneotherapy, heliotherapy, thalassotherapy, pelloid therapy .

The influence of climate on the course of individual dermatoses can be radical. For example, with a long stay (at least 3 years) in a dry climate, atopic dermatitis can be cured . Short-term climatotherapy can prolong the remission time.

For many skin diseases (eczema, psoriasis, neurodermatitis, scleroderma, prurigo), balneotherapy is effective - treatment with mineral waters. Heliotherapy in the form of air baths is indicated for the treatment of dermatoses in the conditions of the resorts of the middle and southern strip. On the seaside thalassotherapy is also possible - treatment by sea bathing.

With dermatoses with persistent infiltration, good results are obtained by pelloid therapy - the application of therapeutic mud.

## EXTERNAL DERMATOSIS THERAPY

In the treatment of dermatoses, several directions can be distinguished:

- Elimination of the cause of the disease by the use of antibacterial, antimycotic, antiparasitic, antiviral drugs, agents that protect the skin from various influences (with professional dermatoses, photodermatitis, insect bites, etc.)
- Elimination of the pathological process in the skin, depending on its severity, prevalence, localization, subjective sensations.

When conducting external therapy, it is important to observe the sequence of administration of dosage forms.

In acute and subacute weeping inflammatory process, aqueous solutions are needed in the form of lotions or aerosols.

In acute and subacute inflammation without soak apply lotions, and erozoli, water ball carcass, powders, pastes and oily mash.

In a chronic nonspecific inflammatory process, ointments, warming compresses, films, varnishes, and plasters are used.

In a chronic specific process, specific drugs are injected into the foci.

With skin growths (warts, papillomas) - cauterizing (keratolytic) agents.

In the stage of progression of diseases accompanied by infiltration (psoriasis, lichen planus), keratoplastic agents are used in the form of ointments, creams with a low content of active ingredients: 2% salicylic acid, 2-5% sulfur, 5% naphthalan.

In the stage of stabilization and regression of the infiltrative process, keratolytic agents (with an increasing content of active substances) are used: ointments, films, plasters.

Before starting pharmacotherapy for dermatoses, it is necessary to take into account the indications and contraindications to the use of a particular drug; the possibility of getting used to local remedies; the patient's age (children's skin more actively absorbs drugs, for example, boric acid, sulfur, salicylic acid, tar, hormonal drugs); the possibility of developing allergic reactions (when using antibiotics, furacilin, brilliant green, etc.); the possibility of side effects, for example, with prolonged use of corticosteroids (skin atrophy, hypertrichosis, telangiectasia, cushingoid, etc.).

Before prescribing local medicines, it is necessary to cleanse the skin in the foci from scales, crusts, remnants of previously used drugs. Usually, boiled vegetable oils are used for this purpose. The medicine is applied to a limited area and only after making sure that it is tolerated by the patient - to the rest of the skin. It is important to observe the correct application of lotions, medicinal and ointment dressings, lubricants, rubbing, applications, time intervals, etc.

Topical corticosteroid agents effectively suppress skin inflammatory reactions, including allergic ones. Corticosteroids (especially fluorinated ones) reduce the rate of cell division, which is important for infiltrative-desquamative dermatoses (psoriasis, neurodermatitis, lichen planus, ichthyosis, etc.).

When infected with lesions, they are not used without the addition of antibacterial agents, since the progression of inflammation and dissemination of the process is possible.

When applied to large areas of lesion (especially erosive and ulcerative), there is a significant risk of resorption of local fluorinated corticosteroids, suppression of adrenal function, while their teratogenic effects are not excluded.

In connection with the above, when prescribing topical corticosteroids, the following recommendations should be followed:

- At the beginning of treatment, not the most active drugs are used;
- If they are ineffective, a highly effective drug is prescribed up to obtaining a pronounced improvement, after which they switch to a less active drug;



- The preparations are applied to the lesions with a thin layer;
- Occlusive (under compress paper or cellophane film) dressings should be used only for a short time;
- Highly active drugs are prescribed for discoid lupus erythematosus and lichen planus, moderately active drugs for psoriasis, with low activity (hydrocortisone, prednisolone) for eczema, dermatitis.

### Classification of topical steroid preparations

1. Very potent: beclomethasone , galcinonide , diflucortolone , clobetasone ( dermovate ).
2. Potent : betamethasone ( betnovate , beloderm ), hydrocortisone butyrate ( locoid ), triamcinolone , fluocinolone ( sinalar ).
3. Having average activity: hydrocortisone with urea, clobetasol .
4. Weak : hydrocortisone, methylprednisolone .

In case of infected skin lesions, antimicrobial and antimycotic agents ( neomycin , clotrimazole , heliomycin , nystatin , gentamicin , etc.) are added to corticosteroids , while the steroid prevents possible reactions to these substances.

Adverse reactions are more likely to develop with treatment with potent corticosteroids. They are expressed in the addition of infection, skin atrophy (sometimes irreversible), stretch marks , local hirsutism in young women, perioral dermatitis, local depigmentation, acne .

You should not apply potent corticosteroids to the skin of the face (with the exception of discoid lupus erythematosus), eyelids (due to the possibility of developing glaucoma).

Contraindications to the use of topical corticosteroids (especially highly active) are bacterial, viral, fungal dermatoses, perioral dermatitis, specific skin infections (tuberculosis, syphilis), skin tumors, pregnancy (lactation), extensive skin lesions, dermatoses in children under one year old.

**Dusts (powders)** are used to reduce the symptoms of acute inflammation (in the absence of wetness ). They absorb grease and sweat, cooling and drying the skin. Indifferent mineral powders are used (zinc oxide, talc, etc.), sometimes disinfectants, antipruritics are added to them . When prescribing indifferent powders, it is advisable to combine minerals (zinc, talc) and vegetable (starch), since the former absorb fats better, and the latter - water. Do not use herbal powders for lesions located on contiguous skin areas (under the mammary glands, in the femoral- scrotal region), since here, under the influence of significant moisture, the powders quickly decompose, which leads to the progression of the inflammatory process.

#### Example .1. Zinci oxydi

Talci  
Amyli tritici aa 10 , 0  
M . D . The S . Powder

#### 2. Urotropini

Acidi borici aa 2 , 5  
Zinci oxydi  
Talci aa 25 , 0  
M . D . The S . Powder for sweating feet.

**Shaken suspensions (talkers)** are used to reduce inflammation, dry and cool the skin. The talker consists of 30-40% powdery substances (zinc, talc, starch) and 60-70% liquid (water and glycerin; water , glycerin and alcohol). Powders applied to the skin after evaporation of water remain on it in a thin layer and, thanks to glycerin, are retained for many hours. The oil talker is composed of zinc oxide (30.0) and vegetable oil (70.0). If necessary, another medicinal substance can be added to the zinc oil, for example 2% boric acid, 5% ichthyol. Shaken suspensions are used

for acute, subacute skin inflammations (dermatitis, eczema, etc.), absence of wetness and excessive dryness of the affected skin areas.

**For example . 1.** Zinci oxydi 30 , 0

Olei Helianti 70 , 0

M . D . The S . Lubricate the skin 2 times a day

2 Sulfuris pp . Vidal's milk

Sp . camphorati aa 6 , 0

Ol . Ricini

Sol . acidi borici 2%

Sp . aethylici 96% aa 50 ml

M . D . The S . apply to lesions after shaking 1-2 times a day

*Paste n* is a mixture of fatty substances with indifferent powders in equal parts. Pastes occupy an intermediate position between shaken mixtures and ointments, acting deeper than the first, and more superficial than the second. Pastes should not be used for weeping processes, as well as on hairy skin. To enhance the anti-inflammatory, antipruritic effect of pastes, ichthyol, preparations of sulfur and tar, naphthalan , boric acid, etc. are added to them . The usual paste (base) is zinc paste, consisting of equal amounts of powders and fats.

**Example. 1.** Pastae Zinci 40 , 0

D . The S . Apply to the lesions 2 times a day.

2. Acidi salicylici 1 , 0

Pasta Lassara

Zinci oxydi

Amyli tritici aa 12 , 5

Vaselini ad 50 , 0

M . D . The S . apply to lesions 1-2 times a day

Pastes are usually applied once a day, as they, in contrast to ointments, stay on the skin longer due to their thicker consistency. The remains of pastes and talkers are usually removed with a swab dipped in indifferent fat.

*Lotions* are used to reduce wetness , swelling and burning and itching sensations. The lotions should be cold, they should be changed as they dry and warmed up every 3-5 minutes for an hour, 2-3 times a day. With longer exposure, the skin in the lesions becomes dry, cracks may appear. It is advisable not to use lotions in infants. For lotions use a 2% solution of boric acid, 1-2% solution of resorcinol, 0.25% solution of silver nitrate, solution of potassium permanganate, lead water. Gauze folded in 6-8 layers is impregnated with one of the specified solutions, squeezed out and applied to the wet area . The lotion has a cooling and vasoconstrictor effect.

**Example. 1.** Sol . Acidi borici 2% 300 , 0

D . The S . For lotions

2. Sol . Resorcini 2% 300 , 0

D . The S . For lotions

3 . Sol . Kalii permanganatis 0 , 5 % 300.0

D . The S . For lotions

*Wet-drying dressings* are prescribed with significant weeping and the presence of infiltration, as well as with intense subjective sensations. They are applied as follows: a layer of gauze moistened with one of the same solutions as for lotions is applied to the affected area, a

layer of cotton wool is applied on top and bandaged. The dressings are changed every 4-5 hours. In this case, there is a slow evaporation of the medicinal solution and some cooling of the skin surface.

**Compresses** infiltrates, reduce inflammation. Alcohol, drilling fluid, boric acid, lead water, etc. are used for compresses. Sometimes compresses are applied to an indifferent paste previously applied to the skin. In this case, epithelialization of the weeping areas occurs .

**Lubrication and wiping with** various solutions is widely used to treat various skin pathologies. So, alcohol solutions with the addition of various drugs are prescribed for itching, acne, etc. Aqueous solutions of some drugs are used for rubbing in the treatment of patients with scabies (sodium hyposulfite, hydrochloric acid), for rinsing the oral mucosa, douching and instillations. In the treatment of boils, lubrication with pure ichthyol is used.

**Example. 1.** Laevomycetini

Ac . borici aa 3 , 0

Ac . lactici 1 , 0

Sp . aethylici 70% 100 ml

M . D . The S . Wipe your face 2 times a day.

2. Ac . salicylici 3 , 0

Sp . aethylici 70% 100 ml

M . D . The S . Wipe face skin 2 times a day

**Baths** with the use of various substances (potassium permanganate, starch, sea salt) and medicinal herbs (oak bark, chamomile, pine needles extract) are also used in the treatment of skin patients.

**Lucky** . The base of the varnishes is an elastic colloid with 10% castor oil or traumatsitin (rubber in chloroform). Salicylic, carbolic, lactic acids, resorcinol, tar and other substances are introduced into the base. The varnish hardens on the skin in the form of a thin film; the substances contained in it penetrate deeply into the skin. It is removed with gasoline. Varnishes have a keratolytic , exfoliating, fungicidal , antiparasitic effect. It is used to treat callosities , warts, onychomycosis .

**Example. 1.** Ac . salicylici 12.0

Ac . lactici 6 , 0

Collodii elastici 100 , 0

M . D . The S . Lubricate the lesions once a day

**Band-aids** . The base of the patch is wax or rosin, which provides a thick and sticky consistency. Administered keratolytic concentration alitsilovoy acid, uric us, iodine, carbolic acid and acetic acid, lead oxide, etc. They have an active absorbing, exfoliating, loosening, disinfecting, fungicidal effect. Used to remove callus , loosening of nails, treatment of the nail bed with onychomycosis , verrucous form of lichen planus, limited neurodermatitis, chronic inflammatory processes in the skin.

Before use, the plaster is heated, the focus is wiped with alcohol, changed once every 2-3 days.

**An example . 1.** Ac . salicylici

Emplastri Plumbi aa 30 , 0

M . D . The S . Apply to the hearth once a week

2. Ureaplasti 50 , 0

D . The S . Apply on nails for 48 hours

Pure *oils* are used to cleanse the affected areas from secondary painful layers, to remove the remnants of the medicinal substances used from the skin. Various oils are used: peach, sunflower, olive, etc. ( Ol . Persicorum , Ol . Helian tum , Ol . Olivarium )

**Aerosol and** is a dispersed system consisting of a gaseous medium in which solid and liquid drugs are suspended. They usually contain corticosteroids, antibiotics, and are available in special sealed containers with a valve. According to the mechanism of action, they are close to shaken suspensions. They are used for various degrees of skin inflammation, including those accompanied by weeping , pyoderma, and mycoses complicated by inflammation.

**Example. 1.** Aerezoli “ Oxycortum ”

D . The S . Irrigate affected areas 2-3 times a day

**Ointment** is a dosage form based on fat or a synthetic fat-like substance. In this regard, the application of the ointment to the affected area of the skin leads to the cessation of cutaneous perspiration, which causes a local increase in skin temperature, loosening of its surface layers and a slight vasodilation. Due to this, medicinal substances are absorbed into the skin. The main indication for the use of ointments is the presence of skin infiltration in the absence of acute or subacute inflammatory phenomena. Usually, the base of the ointment is yellow petroleum jelly, lanolin and lard, sometimes naphthalan . Various medicines are introduced into ointment bases, depending on the indications: sulfur, tar, mercury, salicylic and boric acids, ichthyol, resorcinol, menthol, anestezin, diphenhydramine, papaverine, etc.

**For example . 1.** Acidi salicylici 2 , 0

Vaselini ad 100 , 0

M . D . The S . Lubricate the skin 2 times a day

**2.** Acidi salicylici Sulfur -salicylic ointment

Sulfuris pp aa 2 , 0

Vaselini

Lanolini aa 48 , 0

M . D . The S . Lubricate the lesions 2 times a day

**3.** Acidi borici Boric tar ointment

Olei Rusci aa 0 , 6

Vaselini 30 , 0

M . D . The S . Lubricate the skin 2 times a day

**4 .** Resorcini Andriasyan Peeling Ointment

Ac . lactici

Ac.Salicylici aa 15 , 0

Vaselini ad 100 , 0

M . D . The S . Apply to nail beds for 48 hours

Ointments, creams and aerosols containing only corticosteroids (hydrocortisone, prednisolone , " Lokoid ", " Beloderm ", " Celestoderm ", " Elokomp ", " Advantan "), corticosteroids and antibiotics (" Belogent ", " Celestoderm with garamycin " , " Hyoxysone ", " Oxycort "), corticosteroids and salicylic acid (" Belosalik ", " Diprosalik ", " Lorinden A "), etc.

Currently, for the treatment of many chronic dermatoses (psoriasis, lichen planus, atopic dermatitis), ointments containing calcipotriol ( psorkutan , daivonex ) and calcipotriol with betamethasone ( daivobet ) are used.

For the treatment of atopic dermatitis, 1% pimecrolimus cream ( elidel ) is widely used , which makes it an alternative to topical corticosteroids.

In addition to high quality nutritious animal fat and vegetable oil, **the cream** contains an aqueous phase.

Thus, a cream is an emulsion in which, in an emulsified state, water particles are in oil and, conversely, oil particles are contained in an aqueous medium.

**An example . 1. Lanolini**

Unna's Cream

Ol . Persicorum

Aq . destil . aa 50 , 0

M . D . The S . Lubricate the skin 2 times a day

**2 . Sol. Dimedroli spirituosae 20% 20 , 0**

Prednisoloni 0 , 2

Lanolini

Ol.Helianti

Aq . Destil . aa 10.0

M . D . The S . Lubricate the lesions 2 times a day.