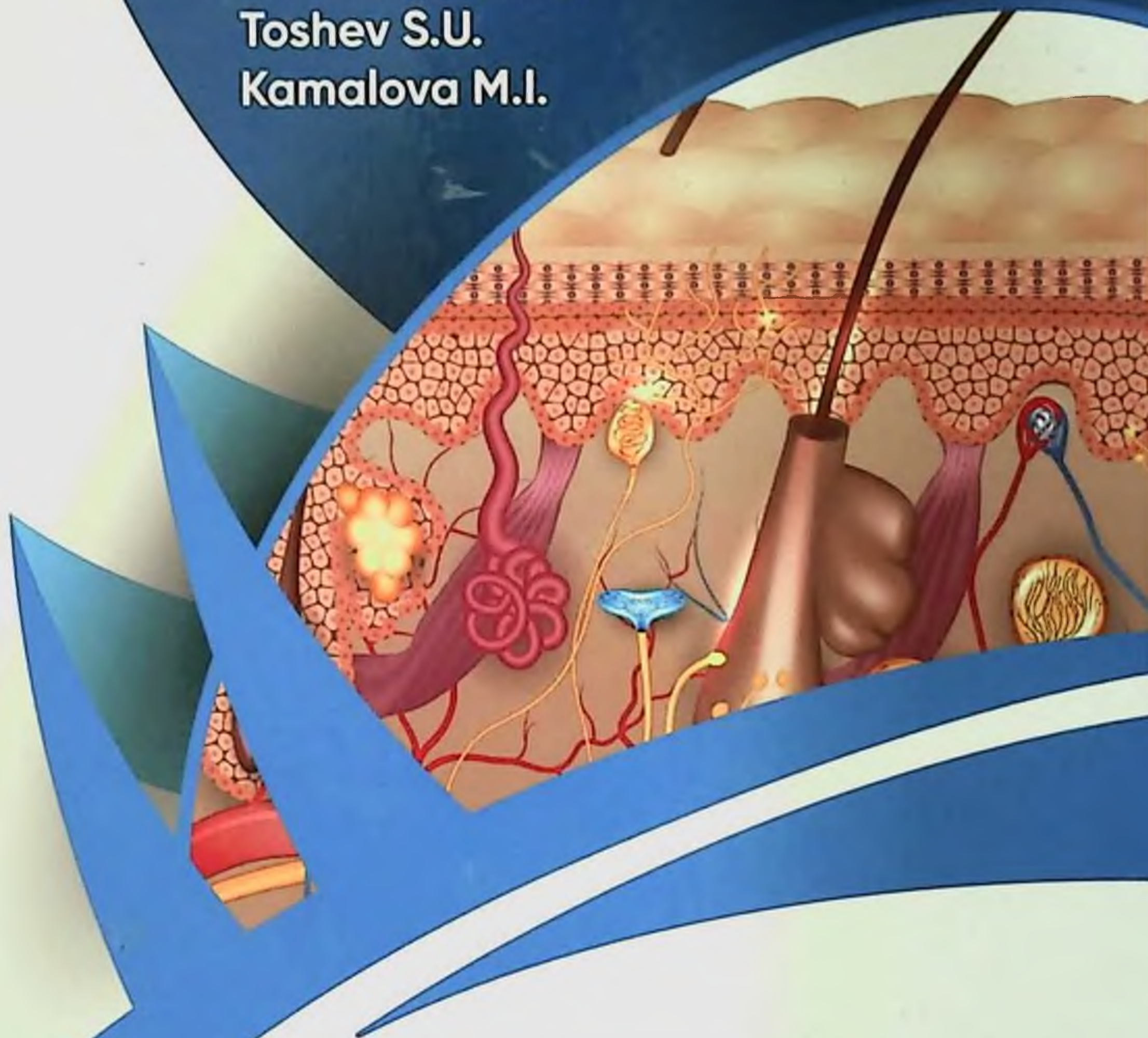


**Abdullayev D.M.  
Toshev S.U.  
Kamalova M.I.**



**DERMATOVENEROLOGY  
AND PEDIATRIC  
DERMATOVENEREEOLOGY**

**MINISTRY OF HEALTH OF THE REPUBLIC UZBEKISTAN  
SAMARKAND STATE MEDICAL UNIVERSITY**

**Abdullayev D.M., Toshev S.U., Kamalova M.I**



**DERMATOVENEROLOGY AND PEDIATRIC  
DERMATOVENEREEOLOGY**

***Textbook***

**Area of expertise - Public welfare and health care - 500000 Area of study-510000**

**Textbook on cases and admission to the publication of protocol No. "1" dated  
"31" august 2023 of the Academic Council of the Samarkand State Medical  
University.**

**For attention Medical business-5510100**



**SamDTU  
axborot-resurs markazi**

UDK 616.5(075.8)+616.97(075.8)

KBK 55.8ya73

D 45

Abdullayev D.M., Toshev S.U., Kamalova M.I.

Dermatovenerology and pediatric dermatovenerology [Text]: Textbook/  
Abdullayev D.M., Toshev S.U., Kamalova M.I. – Samarqand : Samarqand, 2023. – 164 p

**Compiled by:**

**Abdullayev Davlat** -PhD Associate Professor, Department of  
**Mukumovich** Dermatovenerology, Samarkand State Medical  
University

**Toshev Suxrob** -Assistant of the Department of Dermatovenerology,  
**Uktamovich** Samarkand State Medical University

**Kamalova Moxinur** -Assistant of the «Public health and health care  
**Iskandarovna** Management" department Samarkand State Medical  
University

**Reviewers:**

**Ruzibakieva M.R.** -Leading research of the Department of Cell Therapy  
of the Institute of Immunology and Human Genomics  
UzAS MD, PhD

**Narzikulov R.M.** -PhD Associate Professor, Department of  
Dermatovenerology, Samarkand State Medical  
University

*Despite the revolutionary changes that have taken place over the past decades, dermatology still remains an urgent problem. In active consideration, possible causes of the development of dermatoses are considered and pathogenetically sound approaches to the description of such patients are explored. A study based on studies showed the presence of persistent positive dynamics, both clinical and functional, in almost 25.2% of patients with dermatoses. One of the reasons for the resistance of the disease to the method of treatment may be the presence of concomitant therapy, which aggravates the course of the disease, the serious effectiveness of therapy and the worsening of the prognosis of the disease.*

*Educational tutorial is intended for use by students of universities, masters, as well as for general practitioners.*

ISBN 978-9910-9550-0-6

© Abdullayev D.M., Toshev S.U., Kamalova M.I  
© Samarkand 2023 y

## TABLE OF CONTENTS

LIST OF ABBREVIATIONS AND SYMBOLS .....	5
GENERAL SKIN PATHOMORPHOLOGY. FEATURES CHILDREN'S SKIN PRIMARY AND SECONDARY MORPHOLOGICAL ELEMENTS. HISTOLOGICAL CHANGES OF THE SKIN .....	7
Skin Additions.....	11
CHAPTER 2 DERMATITIS, ALLERGODERMATOSIS, SEBORRHEA, ECZEMA, URTICARIA. DESCRIPTION. ETIOLOGY, PATHOGENESIS, CLINIC, CLINICAL FORMS, BASIS OF DIAGNOSIS AND TREATMENT .....	42
CHAPTER 3 ATOPIC DERMATITIS, NEURODERMITIS, CHILDREN'S ITCH. DESCRIPTION. ETIOLOGY, PATHOGENESIS, CLINIC, CLINICAL FORMS, BASIS OF DIAGNOSIS AND TREATMENT.....	55
CHAPTER 4 VITILIGO, LEISHMANIASIS, LEPROA. DESCRIPTION. ETIOLOGY, PATHOGENESIS, CLINIC, CLINICAL FORMS, BASIS OF DIAGNOSIS AND TREATMENT .....	62
CHAPTER 5 PYODERMA. ACNE. DESCRIPTION. ETIOLOGY, PATHOGENESIS, CLINIC, CLINICAL FORMS, BASIS OF DIAGNOSIS AND TREATMENT.....	69
CHAPTER 6 HEREDITARY SKIN DISEASES. DESCRIPTION. ETIOLOGY, PATHOGENESIS, CLINIC, CLINICAL FORMS, BASIS OF DIAGNOSIS AND TREATMENT .....	84
CHAPTER 7 FUNGAL DISEASES OF THE SKIN. ALOPECIA. DESCRIPTION. ETIOLOGY, PATHOGENESIS, CLINIC, CLINICAL FORMS, BASIS OF DIAGNOSIS AND TREATMENT	92
CHAPTER 8 VIRAL AND PARASITIC DISEASES OF THE SKIN. DESCRIPTION. ETIOLOGY, PATHOGENESIS, CLINIC, CLINICAL FORMS, BASIS OF DIAGNOSIS AND TREATMENT .....	117

**CHAPTER 9 PSORIASIS. LICHEN RED FLAT. DESCRIPTION. ETIOLOGY, PATHOGENESIS, CLINIC, CLINICAL FORMS, BASIS OF DIAGNOSIS AND TREATMENT .....132**

**CHAPTER 10 LUPUUS, SCLERODERMA. PHOTODERMATOSES. DESCRIPTION. ETIOLOGY, PATHOGENESIS, CLINIC, CLINICAL FORMS, BASIS OF DIAGNOSIS AND TREATMENT.....138**

**CHAPTER 11 DISEASES OF NEWBORN CHILDREN. DESCRIPTION. ETIOLOGY, PATHOGENESIS, CLINIC, CLINICAL FORMS, BASIS OF DIAGNOSIS AND TREATMENT.....148**

**CHAPTER 12 BLISTERING DERMATOSES. DUHRING'S DERMATITIS HERPETIFORMIS. DESCRIPTION. ETIOLOGY, PATHOGENESIS, CLINIC, CLINICAL FORMS, BASICS OF DIAGNOSIS AND TREATMENT .....156**

**MAIN LITERATURE.....162**

## LIST OF ABBREVIATIONS AND SYMBOLS

- ♣ - trade name of the medicinal product  
∅ — medicinal product is not registered  
⊗ — canceled medicinal product  
AG - antigen  
AGLS - antihistamine drugs  
AD - atopic dermatitis  
ACTH - adenocorticotropic hormone  
ANF - antinuclear factor  
ASD - Dorogov's antiseptic stimulator  
AT - antibody  
NPP - antiendotoxin component  
BCG - Bacillus Calmette-Guerin  
HIV - human immunodeficiency virus  
WHO - World Health Organization  
HSV - herpes simplex virus  
HPV - human papillomavirus  
GC - glucocorticoids  
GKP - glucocorticoid drugs  
GLP - glycoprotein  
DM - dermatomyositis  
DNA - deoxyribonucleic acid  
GIT - gastrointestinal tract  
IB - immunoblotting  
IR - immune complex  
IL - interleukin  
PI - protease inhibitor  
PPI - drug intake index  
ELISA - enzyme immunoassay  
IFN - interferon  
ICG - immunochromatographic reaction  
ICL - method of immunochemiluminescence

## FOREWORD

The development in recent years of fundamental research in the field of immunology, biophysics and pharmacology has made it possible to make a breakthrough in elucidating individual links of pathogenesis, to improve the diagnosis and treatment of a number of dermatoses and sexually transmitted infections (STIs). The mechanisms of development of psoriatic arthritis and severe forms of psoriasis are clarified, methods of diagnostics and cytokine therapy are being improved. The possibilities of photodynamic therapy with the use of various photosensitizers are being expanded, non-steroidal external preparations are being used in the staged treatment of allergic dermatoses, methods of specific immunogenetic diagnosis of infectious diseases of the skin and genitourinary organs are being introduced. The skin performs many functions, has a large area, closely interacts with the internal organs and systems of the whole organism due to neurohumoral connections, and therefore is a projecting screen for various clinical stigmas, which are sometimes symptoms of very serious diseases. This underlines the importance and significance of dermatovenereology as a medical discipline. The authors analyzed new data in the field of dermatology, hereditary skin diseases and STIs and shared their experience.

The authors hope that "Dermatovenereology", based on the latest achievements of medical science, will become a reference book for dermatovenereologists and will contribute to improving the professional level of doctors and quality patient care. The skin performs many functions, has a large area, closely interacts with the internal organs and systems of the whole organism due to neurohumoral connections, and therefore is a projecting screen for various clinical stigmas, which are sometimes symptoms of very serious diseases. This underlines the importance and significance of dermatovenereology as a medical discipline. The authors analyzed new data in the field of dermatology, hereditary skin diseases and STIs and shared their experience. The brief edition of the national guide is a unique work and, in addition to the traditional sections on the specialty, includes a number of original ones: "Legal regulation of the organization of the provision of dermatovenereological care in modern conditions, ways to improve its quality and accessibility to the population", "Dermatological aspects of Lyme disease", "Tropical miases", "Medico-legal aspects of the activity of a dermatovenereologist", "Intestinal endotoxin and inflammation", "Peptide bioregulation", etc. Some chapters have been shortened due to the loss of relevance at the present time, while others, on the contrary, have been expanded.

**GENERAL SKIN PATHOMORPHOLOGY. FEATURES  
CHILDREN'S SKIN PRIMARY AND SECONDARY  
MORPHOLOGICAL ELEMENTS. HISTOLOGICAL CHANGES  
OF THE SKIN**

**General Questions Of CHAPTER Dermatovenereology Anatomy And  
Histology Of The Skin**

The skin is the outer covering of the human body, an important organ without which the human body cannot live. The skin is located on the border between the external and internal environment, and therefore it is affected by both favorable and unfavorable factors of the internal and external environment. In the anatomical structure, the skin consists of three sections: the epidermis, the dermis, or the skin itself, the subcutaneous fat, or the hypodermis.

The epidermis comes from the ectoderm; dermis and subcutaneous fat cells - weave from the mesoderm. Features of the structure of the epidermis provides its elasticity and strength, rapid recovery in case of damage. The total area of the epidermis in an adult is 1.5 - 2 m<sup>2</sup>, weight is about 0.5 kg. Its thickness depends on the stratum corneum and the number of rows of cells. In the basal layer there are melanocytes and a large number of keratinocytes in a ratio of 1:36, some researchers call this indicator the "melanin epidermal unit".

The epidermis contains Langerhans cells (a kind of macrophages), the number of which ranges from several dozen (30 - 40) to 1500 per 1 mm<sup>2</sup> area. The number of cells decreases with ultraviolet and laser irradiation, with deep cooling.

Langerhans cells have the properties of monocytes - macrophages, retain captured antigens on their surface, thus participating in the immunological reactions of the skin. After capturing the antigen in the epidermis, it is transported through the lymphatic vessels from the skin to the lymph nodes, linking the skin and lymph nodes into a single functional system. There is evidence that Langerhans cells prevent the spread of the virus within the epidermis.



Greenstein cells, the number of which is from 1 to 3% of all epidermal cells, can range from 5 to 600 cells per 1 mm<sup>2</sup>. There is a point of view that Greenstein cells are antigen presenting cells for T-suppressors penetrating the epidermis.

Merkel cells - neuroendocrine cells of the skin, have the property of perception of sensation. In the epidermis of the palms and soles, there are from 200 to 400 cells per 1 mm<sup>2</sup>, the functions of which have not yet been fully elucidated, but it has been proven that they have a mechanoreceptor function. Based on the presence of neuropeptides and specific granules in Merkel cells, they are considered neuroendocrine skin cells that play an important role in the body's immune system. The epidermis also contains intraepidermal lymphocytes and mast cells. The epidermis consists of five layers:

The basal layer is a single row of cylindrical cells and is called the basal or germinal layer, since cell division occurs in it. Cell nuclei contain one or two nucleoli. The cytoplasm is characterized by a high content of ribosomes and mitochondria.

Active processes of synthesis of fibrous protein, polysaccharides and lipids proceed in cells. They have maximum mitotic activity and contain the largest amount of DNA - and RNA - containing structures. The time for complete renewal of epidermal cells is 26-28 days, but is subject to individual and regional fluctuations.

The spiky layer normally consists of 5-6 rows of spiky epidermocytes, which are surrounded by a plasmalemma with uneven contours due to outgrowths (spikes) that penetrate into the corresponding depressions of neighboring cells and forming a zipper-type connection. As we move upward, the cells become flatter and elongated parallel to the surface of the epidermis, and the nuclei decrease. They contain neutral lipids, polysaccharides.

In the cytoplasm, the fibrillar apparatus is well developed, represented by tonofibrillates and tonofilaments, between which there is an amorphous substance. Tonofibrillates penetrate the cell, forming its framework, which protects the nucleus from compression. The cells of the

spiny layer are interconnected by means of protoplasmic bridges or desmosomes. The basal and spinous layers are called the sprout or malpighian layer. Only in this layer does mitosis occur, due to which the regeneration of the epidermis is carried out.

The granular layer normally consists of 1-2 rows of diamond-shaped cells (and up to 4 rows on the soles and palms), located parallel to the skin surface, with oval or elongated nuclei. The cytoplasm contains grains of a special protein substance - keratohyalin, a precursor of the beginning process of cell keratinization and filaggrin - the main protein of keratohyalin granules. It is synthesized only in the granular layer with the help of messenger RNA, combines with keratin filaments and is necessary for their orientation and stabilization in horny scales.

The shiny or eleidin, layer consists of 1-3 rows of elongated cells containing eleidin, a protein substance soluble in water, alkalis, acids and representing an intermediate stage of keratinization of epidermal cells. The eleidine layer is well expressed on the palms and soles, as well as in ichthyosis and parakeratosis. It should be noted that the shiny layer is not currently distinguished by electron microscopic examination as a separate layer. The stratum corneum consists of 5 - 6 rows of keratinized non-nuclear cells (up to 10-15 on the palms and soles),

contains a protein substance - keratin, fat and polysaccharides. The thickness of the stratum corneum averages 13 - 15 microns. Horny scales are located strictly one above the other. Each flake is hexagonal in shape and each side contacts the adjacent flake in a "quilt" pattern. This arrangement ensures the bonding of the scales and creates a permeability barrier. The stratum corneum is restored after 72 hours.

The dermis (skin itself) consists of two layers: papillary and reticular, or reticular. There are smooth and striated muscle tissue, circulatory and lymphatic vascular networks, sebaceous glands, nerve fibers and nerve endings. In the histological structure, it is characterized by the presence of three structures.

The fibrous structure is represented by collagen, elastic and reticular fibers.

Collagen fibers consist of numerous thin fibrils, especially significant in the reticular layer. Elastic fibers do not form bundles, especially a lot of them in the mesh layer that surround the hair follicles, sebaceous and sweat glands, penetrate from the dermis into the subcutaneous fat. Fibers have elasticity and play an important role in the protective function of the skin. Most of all, elastic fibers are developed on the palms, soles, and above the joints.

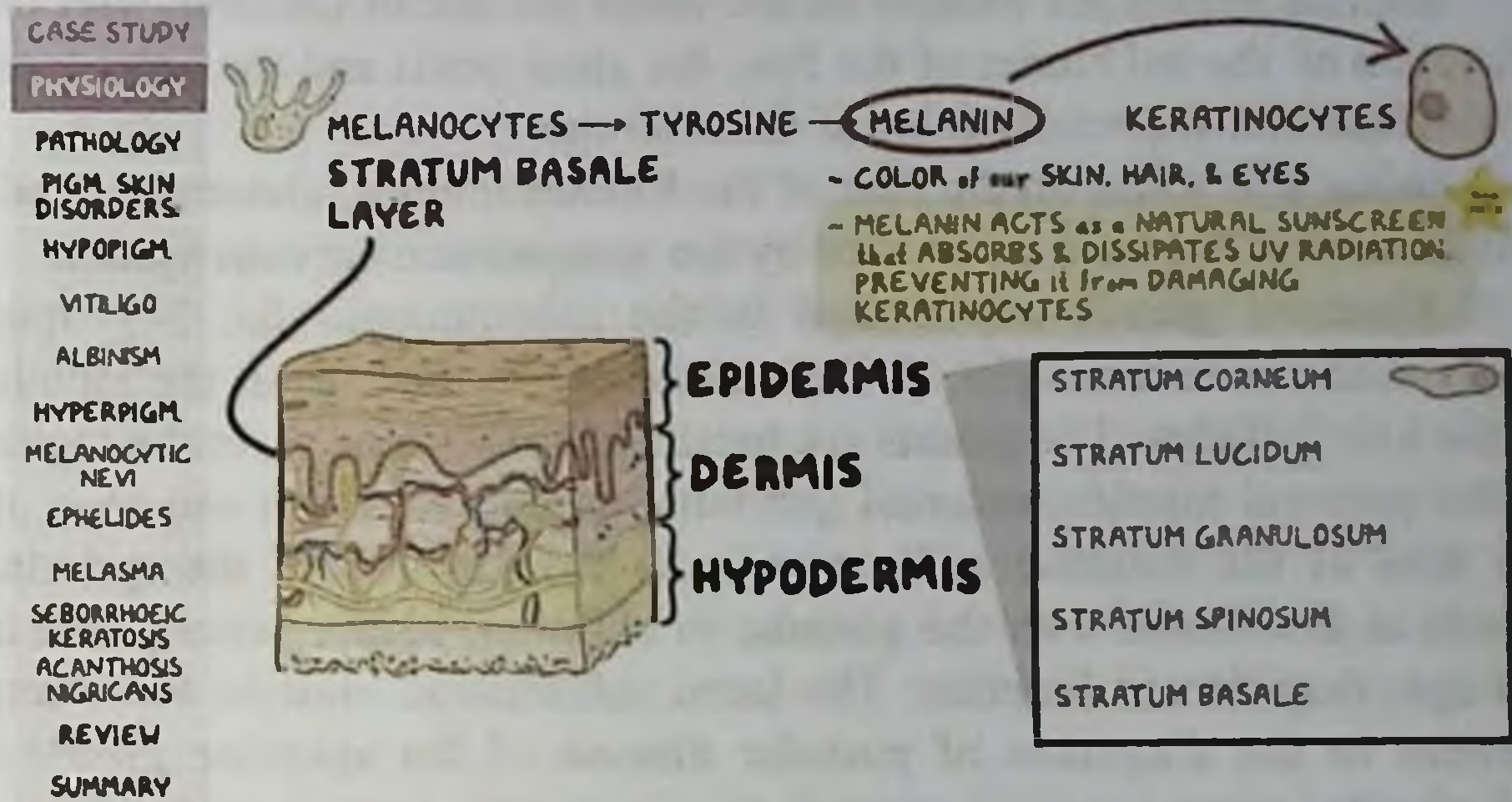
Reticulin fibers are located on the border between the epidermis and dermis, braid sweat and sebaceous glands, hair follicles. It is believed that they have a very high modulus of elasticity, close to steel.

The cellular elements of the skin itself are connective tissue cells: fibroblasts and fibrocytes are the main components of the dermis; histiocytes (macrophages), mast cells (labrocytes, mastocytes) are located in the upper parts of the dermis, around the blood vessels. They contain biologically active substances: histamine, heparin, serotonin, DOPA, kinins, hyaluronic acids; plasma, endothelial cells, lymphocytes, neutrophils and others.

The main substance, or amorphous substance, fills the space between the cells and fibers of the connective tissue and consists of mucopolysaccharides (MPS) - hyaluronic, glucuronic acids, glucosamine, acetyl-galactosamine and others. In the main substance, metabolic processes are active. Under the influence of hyaluronidase, ultrasound, X-rays and other factors, mucopolysaccharides are easily polymerized or depolymerized.

Subcutaneous fat consists of loose connective-tissue network of collagen, elastic and reticular fibers, in the loops of which there are accumulations of adipose tissue in the form of fat lobules. Subcutaneous fat contains a large amount of nutrients. Hair follicles and glomeruli of sweat glands can penetrate into the upper part of the fiber. Subcutaneous fat is absent on the eyelids,

under the nail plates, on the foreskin, labia minora and scrotum. It plays a protective role against injury and hypothermia.



Pic.1 Anatomy and histology of the skin

### Skin Additions.

The sebaceous glands are located in the dermis throughout the skin except for the palms, soles and red border of the lips.

There are three types of sebaceous glands: monolobular, without excretory ducts, open into follicles hair; two, five-lobed open in the follicles of long and vellus hair. Glands with a long wide excretory duct are not connected with the hair, they are located on the mucous membranes of the lips, mouth, nose, glans penis, inner layer of the foreskin, labia minora, etc. They produce sebum, which consists of water, glyceric acids, soaps, cholesterol, and protein containing phosphates and chlorides. For a week, the sebaceous glands secrete about 100-200 grams of sebum. Most of all it stands out on the skin of the face, upper back, chest and pubis. The tyson glands are functionally close to the sebaceous glands, located on the inner leaf of the foreskin and producing smegma.

Sweat glands are divided into eccrine and apocrine glands.

Eccrine glands are located on the entire surface of the skin, with the exception of the red border of the lips, the glans penis and the inner layer of the foreskin. Especially a lot of them on the

palms and soles, on the skin of the forehead, chest, abdomen, hands and forearms. They are innervated by the sympathetic nervous system.

Apocrine glands are located in the subcutaneous fat, 2-3 times larger than the eccrine glands, their excretory ducts open at the mouths of the hair follicles. The glands are localized in the armpits, in the region of the pectoral nipples, external genitalia, around the navel and anus, in the skin of the external auditory canal. The function of the apocrine glands is associated with the gonads; in children, before puberty and in old age, they do not function. The latest information must be taken into account in the diagnosis of pustular disease of the apocrine glands – hidradenitis.

Hair is distinguished by long, bristly, fluffy.

Long hair is located in the head, beard, mustache, armpits, genitals. Bristly - eyebrows, eyelashes, on the nasal mucosa and in the external auditory canal. Vellus hair is found over the entire surface of the body, except for the growth of long and bristly hair, palms, soles and mucous membranes.

The hair consists of a shaft and a root, the lower part of which is called the hair follicle, the medulla, the cortical layers and the cuticle. A smooth muscle is attached to the middle part of the hair, below the sebaceous gland, during the contraction of which the hair rises and the secret of the sebaceous gland is released. The average lifespan of scalp hair is about 4 years, and up to 100 or more hairs fall out per day. Eyelashes fall out after about 5 months.

The rate of hair growth depends on the state of the central nervous system, endocrine organs, sex glands, adrenal glands and other conditions of the body and is about 1 cm. per month. Throughout life, there is a periodic change of hair, which is characterized by a certain cyclicity. The period of hair growth is called anagen, about 90% of hair is in this stage. The rest period is called telogen (10% - 20% of hair), and

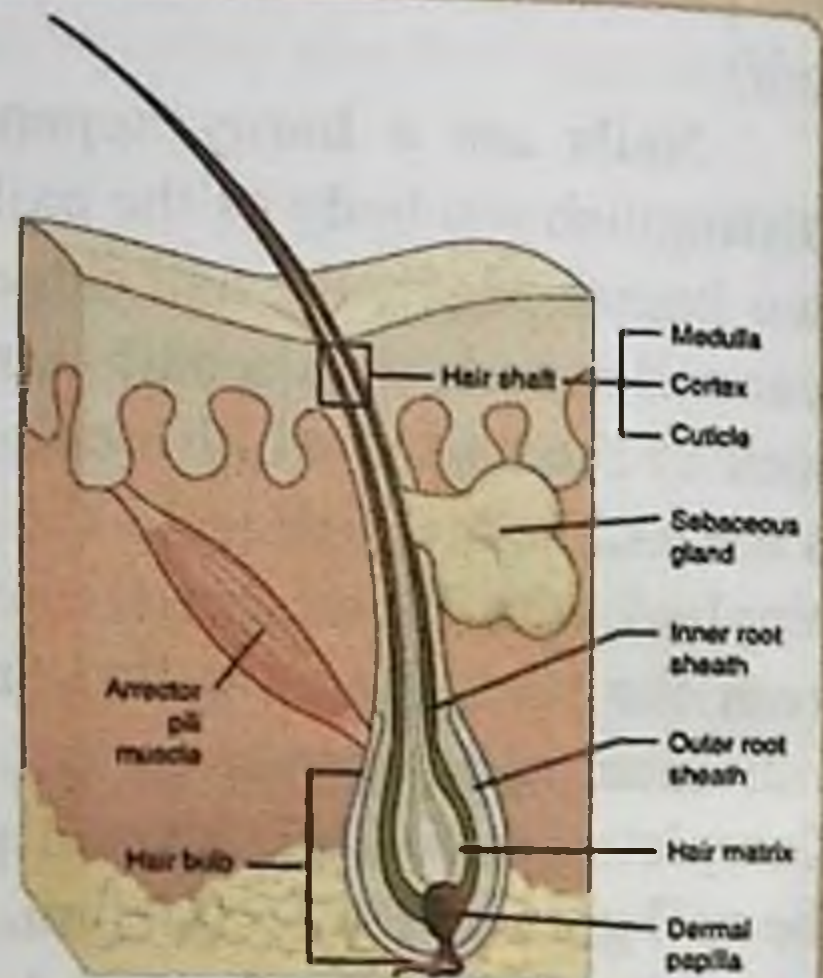
the period of transition from one to another is called catagen (1% of hair).

Nails are a horny appendage of the skin of a plate-like shape. Distinguish the body of the nail, the free front edge, the rear (root) edge, two lateral edges, the nail ridges surround the nail from three sides. The rear roller ends with a nail skin tightly soldered to the nail plate. At the back of the nail, a whitish colored lunula is visible. Under the nail plate is the nail bed, which lacks the papillae of the dermis, but which is richly supplied with blood vessels and nerves. The growth of the nail comes from the root, the so-called "nail matrix". The growth rate of nails is individual and depends on age, general condition, peripheral circulation. Complete renewal of the nail plate occurs within 3-4 months; per day, the nail grows by 0.1 - 0.2 mm.

The deep dermal arterial plexus departs from the main vessels, is located on the border of the dermis proper and subcutaneous fat parallel to the skin surface and nourishes the sweat glands, hair follicles, subcutaneous tissue, Vater-Pacini nerve bodies. Vessels depart perpendicularly upward from the deep arterial plexus and form a superficial vascular network in the papillary layer, which is also parallel to the surface of the skin. They nourish the sebaceous glands, the excretory ducts of the sweat glands, the upper part of the hair follicles. The capillaries departing from it penetrate into the papillae, where the blood supply to the skin ends, form loops and return back in the form of venous capillaries, forming four venous networks.

The superficial venous network is located near the base of the papillae, the second venous network is located slightly deeper than the first, but both are located above the subpapillary arterial network. The third venous network is located between the deep and superficial arterial networks. The fourth venous network is located at the level of the deep arterial network.

# Skin Appendage



**Pic.2 Skin additions Vascular system of the skin:**

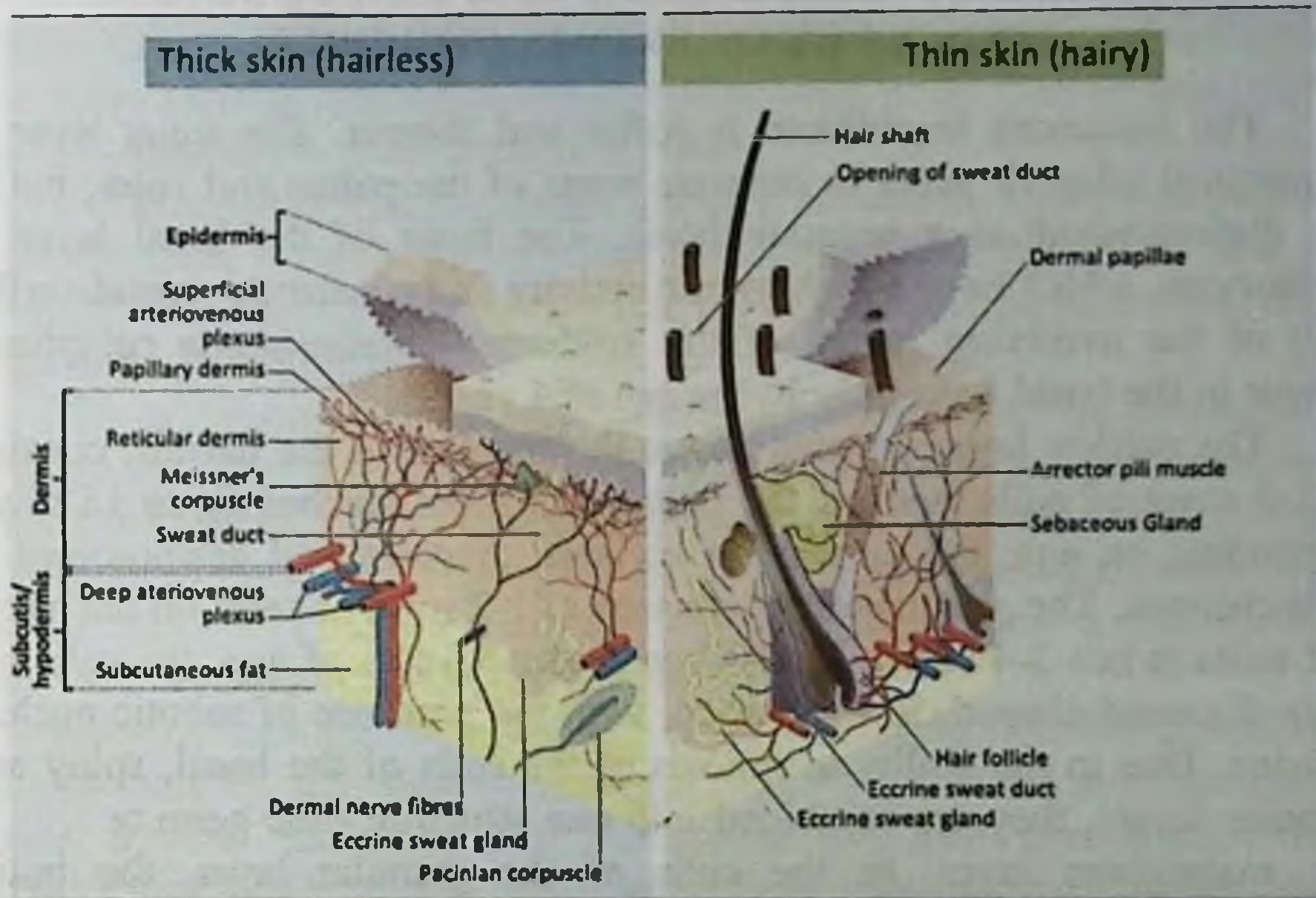
Lymphatic vessels begin in the center of the papillae and form a superficial network in the subpapillary layer. In the lower part of the dermis there is a second network, in the vessels of which valves appear. Nervous system of the skin: The skin is a large receptor field that perceives exogenous and endogenous stimuli and plays the role of a sensory organ. The nervous apparatus consists of nerve fibers and endings, which are located most of all in the epidermis and dermis. Taurus Vater

- Pacini, Golgi - Mazzoni perceive a feeling of deep pressure. There are many of them on the palms and soles, localized in the deep layers of the dermis.

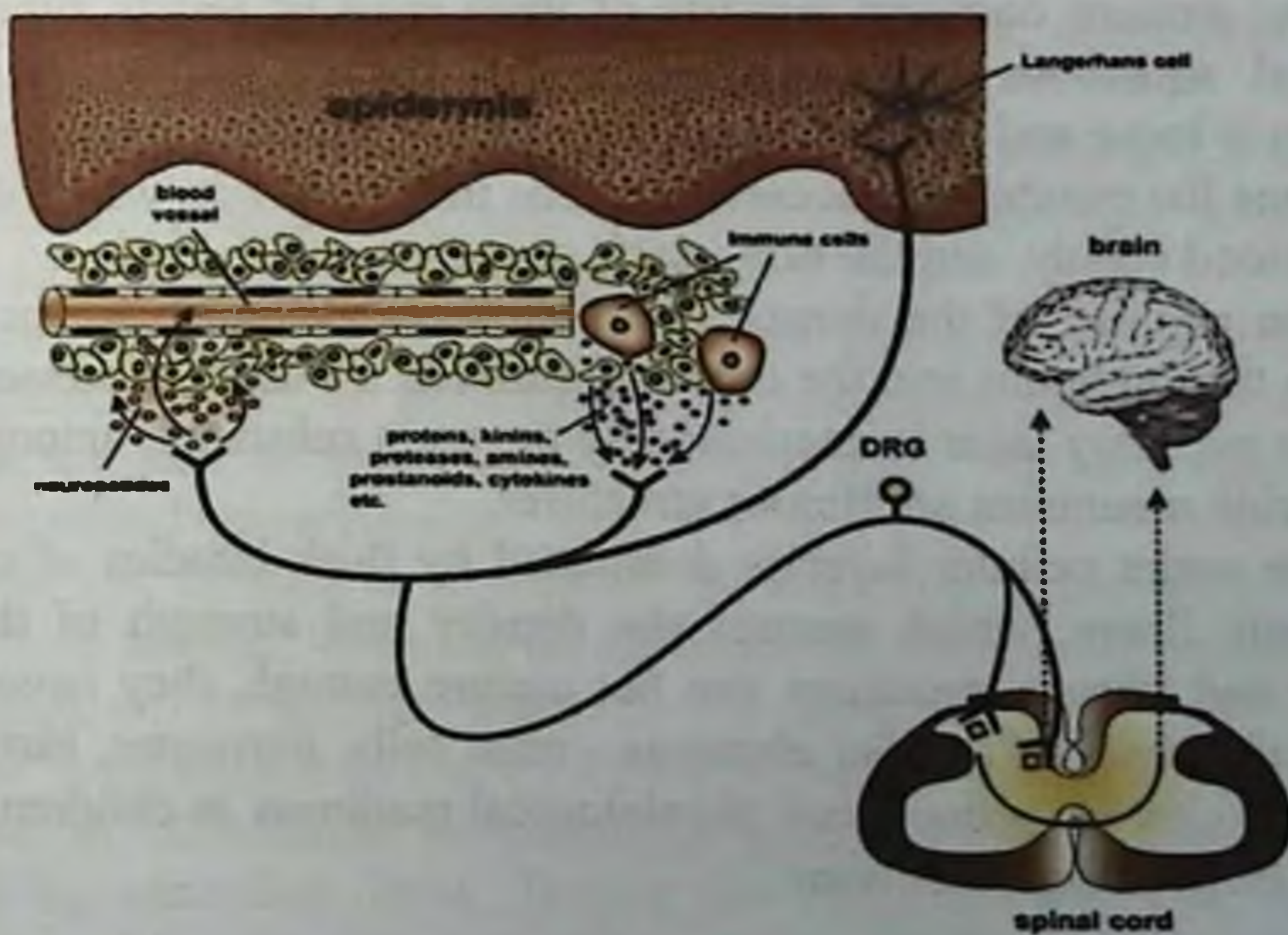
Meissner's bodies are found in the papillae of the skin, especially many of them on the palmar surface of the index fingers, perceive tactile sensitivity.

Ruffini's bodies serve to perceive the feeling of heat, they are found on the border of the dermis and subcutaneous tissue.

Krause cones are used to perceive the feeling of cold. They are localized in the upper layers of the skin itself, there are many of them in the clitoris, the glans penis, and in the skin of the eyelids.



**Pic.3 Vascular system of the skin**



**Pic.4 Features of anatomical and histological structure of skin in children**



**FEATURES OF ANATOMICAL AND HISTOLOGICAL  
STRUCTURE OF SKIN IN CHILDREN**

The epidermis in children is softer and thinner. The shiny layer is determined after 12 years in separate areas of the palms and soles, but is not distinguished as a separate layer. The basis of the basal layer is keratocytes, which have a high mitotic activity and constantly reproduce the cells of the overlying layers of the epidermis. Melanosome complexes appear in the basal cells only by the age of 4 years.

The prickly layer, located above the papillae of the dermis, consists of 2-3 rows of cells, and on the palms and soles reaches up to 15 rows. Depending on age, the number of melanin granules and desmosomes in cells changes. The granular layer consists of 1-2 rows of cells, on the palms and soles it has 3-4 rows. In children under 5 years of age, the cells are more diamond-shaped, less flattened, with the presence of mitotic nuclear division. Due to the ability to mitosis of the cells of the basal, spiny and granular layers, they are combined into one structure - the germ or

malpighian layer. In the cells of the granular layer, the initial processes of keratinization are noted.

The stratum corneum consists of three rows of tightly fitting non-nucleated squamous keratinized cells, the upper part of the stratum corneum is loose and easily desquamated. The basement membrane creates conditions for metabolic processes between the epidermis, which does not have a blood supply, and the skin itself.

The papillae of the dermis in children are flattened, so the border between the epidermis and the dermis appears as a weakly expressed wavy line. The papillary layer is dominated by the main substance, among which the chlorine mountains are fibrous structures.

The entire cellular layer is dominated by thick bundles of collagen and elastic fibers, which ensures the density and strength of the skin. Cellular and fibrous structures are not mature enough, they have a high biological activity of cellular elements - mast cells, fibrocytes, histiocytes, which explains the pronounced physiological readiness in children for the occurrence of allergic reactions.

The hypodermis is characterized by friability and an abundance of fat lobules. Fat cells up to 10 years of age contain a large amount of refractory fatty acids (stearic and palmitic) and less oleic acid. Due to this, chills appear in children in open areas of the skin.

The circulatory and lymphatic systems are labile, with an abundance of anastomoses between each other. The abundance of vessels that are constantly in a state of dilation explains the hyperemia and pink-pearl color of the skin of newborns.

The sebaceous glands are formed by 3-4 months of intrauterine development, they function intensively before birth, due to which the skin of the fetus is abundantly covered with sebaceous lubrication. In children, the sebaceous glands are most in the face, perineum, back, and scalp. With age, the intensity of secretion decreases, and on the extensor surfaces of the upper and lower extremities, the glands atrophy.

Sweat glands are formed at 4 - 5 months of fetal development and begin to function, although not enough, before birth. Eccrine sweat glands secrete without damaging the membrane and cell cytoplasm. Their excretory ducts end in the basal layer, then continue in the form of a corkscrew-shaped convoluted gap, open on the surface of the skin with a sweat pore. They are abundantly supplied with palms, soles, skin of the forehead, chest, and abdomen.

Apocrine sweat glands appear in the skin of the fetus at 2-3 months. Their excretory ducts open into hair follicles. Functional activity is manifested only during puberty. In the process of

secretion, the top of the gland is rejected. Localized in the armpits, in the anogenital region, at the nipple of the mammary gland, around the navel, in the skin of the external auditory canal. Apocrine glands are secondary sexual characteristics.

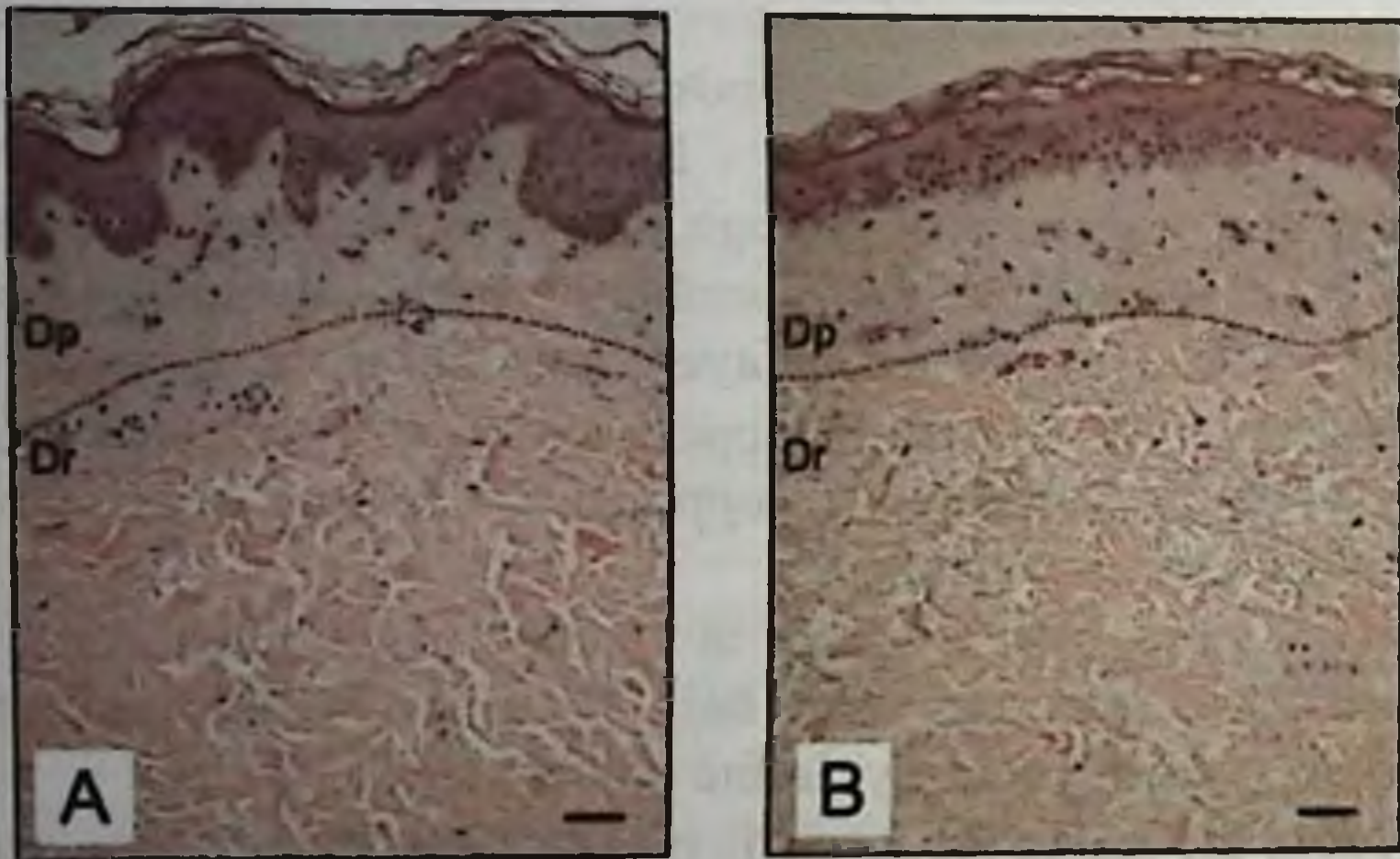
Nails are formed at 3 months of fetal life, grow very slowly, especially on the legs. The nails on the hands are completely replaced after 90-110 days, and on the feet - after 115-130 days.

Hair in children is laid at 2 - 3 months and their formation ends at 4 - 6 months of intrauterine development. These primary hairs are later replaced by secondary hairs. During the day, the length of the hair increases by 0.3 - 0.5 mm, in spring and summer they grow faster, have

great hydrophilicity, elasticity and a large amount of soft keratin. This can explain the frequent damage to hair in children by pathogenic fungi.

The muscles of the skin are poorly developed. A muscle is formed that raises the hair, which contributes to the release of sebaceous secretion. The skin of the scrotum, anus, nipples of the mammary gland, and armpits are abundantly supplied with bundles of smooth muscle cells.

Neuro-receptor apparatus of the skin. In the deep layers of the subcutaneous fat, the main nerve plexus is laid, from here the nerves of the skin originate. They innervate the sebaceous, sweat glands, hair follicles and blood vessels; in the lower part of the papillary layer they form a superficial nerve plexus, from which the nerve branches are sent to the papillae, vessels, appendages, and epidermis.



**Pic.5 Physiology of the skin**

physiology of the skin: The skin is of great importance in the life of the body, it performs a number of vital functions, the main of which are barrier-protective, which are carried out due to its biological properties. Protection against microbes is carried out due to the integrity of the skin, dense stratum corneum, exfoliation, acid reaction of the skin, water-lipid

membrane with pH - 4.5- 5.5, etc. Mechanical protection is due to the stratum corneum, especially the skin of the palms and soles, fibrous structure, subcutaneous fat. The resistance of the skin to UV rays increases due to the thickening of the epidermis, the accumulation of melanin and

urocanic acid. A strong tan increases the skin's resistance to UV rays by about 10 times. Pigmentation and thickening of the layers of the epidermis increase the radiation resistance by 40 times. Protection from exposure to chemicals is carried out mainly due to the structure of the horny and shiny layers of the epidermis.

The thermoregulatory function of the skin is carried out as a result of the expansion or narrowing of blood vessels, the action of sweat glands, the state of the central and peripheral nervous systems.

The resorption (absorption) function of the skin is used for therapeutic purposes when prescribing salicylic acid, tar, boric acid, and other drugs.

The secretory function is performed by the sweat and sebaceous glands, which secrete sodium and potassium, urea, fats and fatty acids, cholesterol, etc.

The metabolic function of the skin is carried out in nitrogen, carbohydrate, vitamin and other exchanges.

Respiratory function contributes to the release of water vapor 2 - 3 times more than through the lungs.

The skin due to tactile, pain, temperature and other types of sensitivity performs the function of the sense organ.

Langerhans cells, keratinocytes, melanocytes, as well as immunological structures that are involved in various skin reactions carry out the immunological function of the skin. Vascular skin reactions: Skin vessels are innervated by the sympathetic and parasympathetic nervous systems. Vasoconstrictor nerves (vasoconstrictors) are sympathetic, adrenergic, since the transmission of excitation occurs with the help of norepinephrine. The walls of the vessels are in a state of tonic tension. Vasodilating (vasodilators) nerves - parasympathetic, promote the expansion of blood vessels.

Dermographism is a response of skin vessels to mechanical irritation. There are white, red and mixed dermographism. Red is accepted as the norm, which is explained by the prevalence of the parasympathetic nervous system. White dermographism is manifested due to the prevalence of the sympathetic nervous system and is an auxiliary criterion for the diagnosis

of neurodermatitis, pruritus and other skin diseases. the skin in children is

For the classical definition of dermatographism, it is advisable to use the dermatograph proposed by Academician O. N. Podvysotskaya, based on dosed pressure on the skin with a force of 1 kg., 0.5 kg. and 0.25 kg. per cm<sup>2</sup>. skin. However, in practice, dermatologists most often use blunt objects (pens, spatula, etc.) to determine dermatographism.

Physiological features of children's skin: The protective function of

### Effects of Aging on Skin Components

Aging results in many changes to the skin besides wrinkle formation.

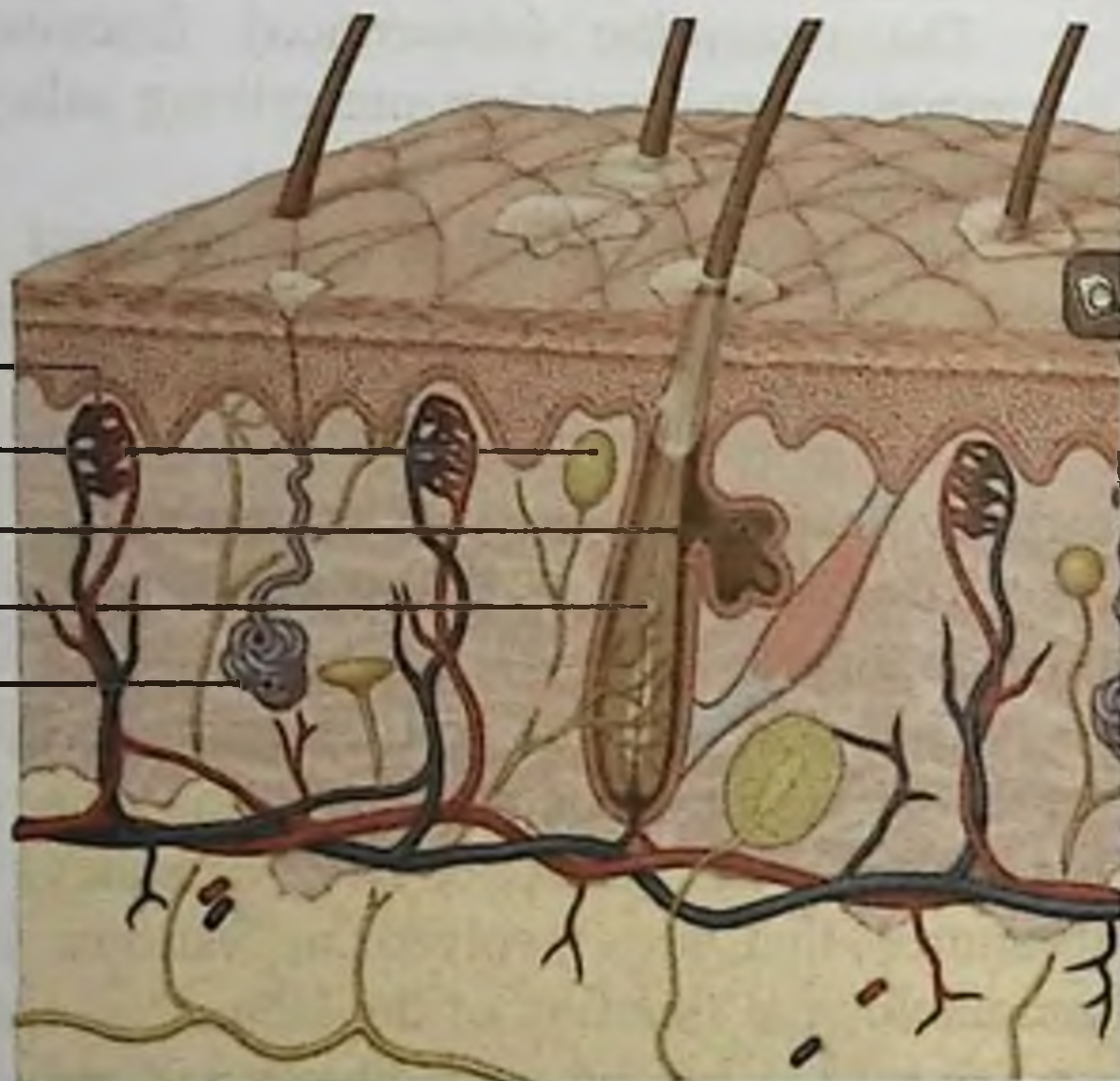
It affects several components of the skin, including:

- Fibroblasts
- Langerhans cells
- Melanocytes
- Blood vessels
- Sensory receptors
- Sebaceous glands
- Hair follicles
- Sweat glands

#### Aging on the cellular level

Select the icons for information on the effects of aging on different skin components.

Additional information can be found in the Side note.



**Pic.6 Pathohistological changes of the skin**

imperfect. Due to the inferiority of the fibrous structure, the skin is subject to mechanical, thermal, chemical and radiation damage. Due to the friability of the stratum corneum, high humidity and temperature, the transition of the pH of the skin to a neutral or slightly alkaline environment, especially in infants, pathogenic bacteria, viruses, fungi develop, as a result of which they often develop pustular and fungal diseases. Children's skin is very sensitive to ultraviolet rays due to insufficient melanosomes and weak activity of the tyrosinase enzyme.

The thermoregulatory function of the skin in newborns and toddlers is imperfect. A high degree of heat transfer at this age occurs due to the physiological expansion of blood and lymphatic vessels, increased secretion of sweat glands.

The secretory function of the skin is diverse. In addition to keratin, epidermal cells secrete a fat-like substance squalene, which is part of the water-lipid mantle. The sweat glands produce calcium and phosphorus.

Excretory function is provided by the secretion of the sebaceous and sweat glands. With sweat, urea, ammonia, uric acid, sodium, potassium, phosphates, etc. are excreted. Bromine, iodine, sulfur, salicylates are excreted with sebum.

The resorption capacity of the skin is carried out through the sebaceous glands, hair follicles. Fat-soluble powdered substances, sulfur, boric and salicylic acids, iodine, mercury, chloroform, tar are well absorbed.

Respiratory function is carried out through gas exchange.

The receptor functions of the skin are carried out by nerve analyzers. Due to the immaturity of peripheral analyzers and the central nervous system, children are often in a state of transcendental inhibition. In this regard, infants need a long sleep, and in children of primary school age, inadequate irritation reactions are noted.

#### Pathohistological Changes Of The Skin

In connection with the peculiarities of the anatomical and histological structure of the epidermis, three main types of disorders are distinguished in it.

Violation of keratinization processes:

Hyperkeratosis - excessive keratinization, leading to thickening of the stratum corneum (ichthyosis, calluses, rubromycosis).

Hypokeratosis - thinning of the stratum corneum (with atrophic skin processes).

Parakeratosis - defective keratinization, in which altered nuclei of the cells of the stratum corneum remain in the sloughing scales, the

disappearance of the shiny and granular layers of the epidermis is noted, there is no adhesive substance of the stratum corneum (psoriasis).

**Dyskeratosis** - abnormal keratinization, characterized by premature keratinization of the spinous layer (Darier's disease). Inflammatory or exudative processes:

**Intracellular edema or vacuolar degeneration** is a change in the cells of the spinous layer, in which exudate accumulates inside the cells, the protoplasm becomes cloudy, the cell nucleus is pushed to the periphery, the boundaries between the cells become fuzzy.

**Acantholysis** is the melting of intercellular bonds (desmosomes) between the cells of the spiny layer. Exudate accumulates between them, which leads to the formation of a bubble. The cells of the prickly layer are rounded, their nucleus is large - acantholytic cells of Tzank (pemphigus).

**Spongiosis**, or intercellular edema, is the accumulation of exudate between the cells of the prickly layer, resulting in the formation of vesicles (eczema).

**Ballooning degeneration** - a combination of the phenomena of spongiosis with necrobiosis of cells, resulting in the formation of bubbles, single-chamber bubbles

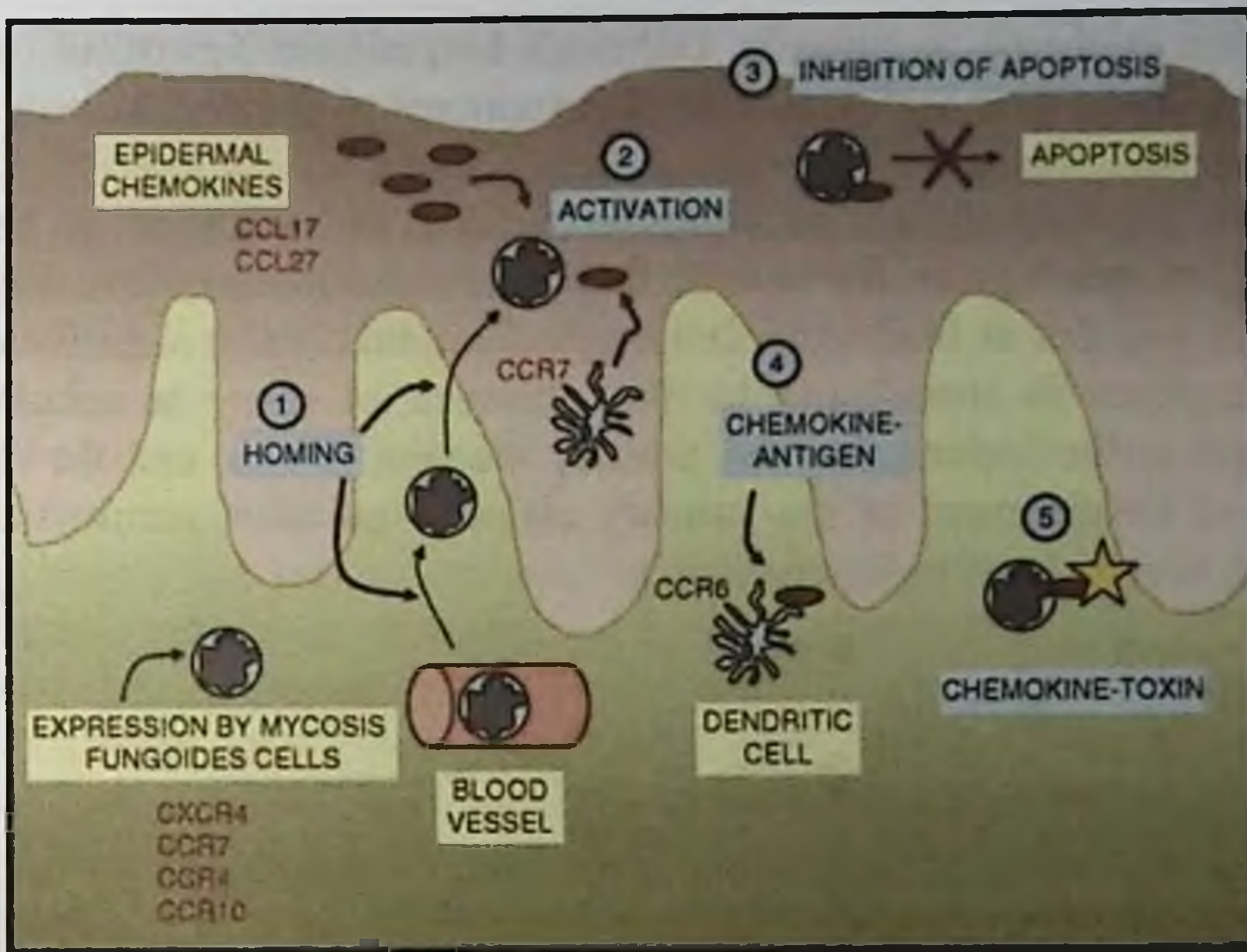
(herpes, chicken pox).

**Proliferative processes:**

**Granulosis** - thickening of the granular layer due to an increase in the number of cells (normally 1 - 2 rows). Due to the uneven thickening of the granular layer, a Wickham "net" is formed, which is characteristic of lichen planus.

**Acanthosis** is a thickening of the malpighian layer of the epidermis, mainly due to an increase in the number of rows of the spinous layer (up to 20), which leads to an increase in the distance between the papillae of the dermis, resulting in a symptom of "blood dew" or "spot bleeding" in psoriasis.

**Papillomatosis** is the growth of the papillae of the dermis, as a result of which they lengthen and reach the stratum corneum (vulgar warts).



**Pic.7 Clinical and morphological characteristics of the elements of the skin rash**  
 clinical and morphological characteristics of the elements of the skin rash

Diagnosis of skin diseases, in addition to complaints, anamnesis of life and illness, is based mainly on the morphological elements of skin rashes. Therefore, their knowledge is fundamental in the practice of a dermatovenereologist.

Morphological elements are divided into primary, arising on unchanged skin, and secondary, formed in the process of evolution of primary elements.

Primary morphological elements are divided into infiltrative - spot, papule, tubercle, node and exudative - vesicle, bladder, abscess, blister.

Rashes are monomorphic, when there are some primary morphological elements of the same type in the lesions (papules in psoriasis, tubercles in lupus erythematosus, blisters in pemphigus vulgaris).

Polymorphic rashes are characterized by the presence on the skin of several primary elements of different types at the same time (with eczema,



exudative erythema multiforme, Dühring's herpetiform dermatitis - spots, vesicles, blisters). In addition, there is the concept of true and false polymorphism.

True polymorphism is characterized by the presence of several primary morphological elements in the lesions at the same time (blisters, vesicles, papules or blisters in Dühring's dermatitis). False or evolutionary polymorphism is manifested by the presence of many morphological elements in the lesions, but the primary element is one, and the rest as stages of development of this primary element (pustules, purulent crusts, erosion, ulcers, scars in furunculosis).

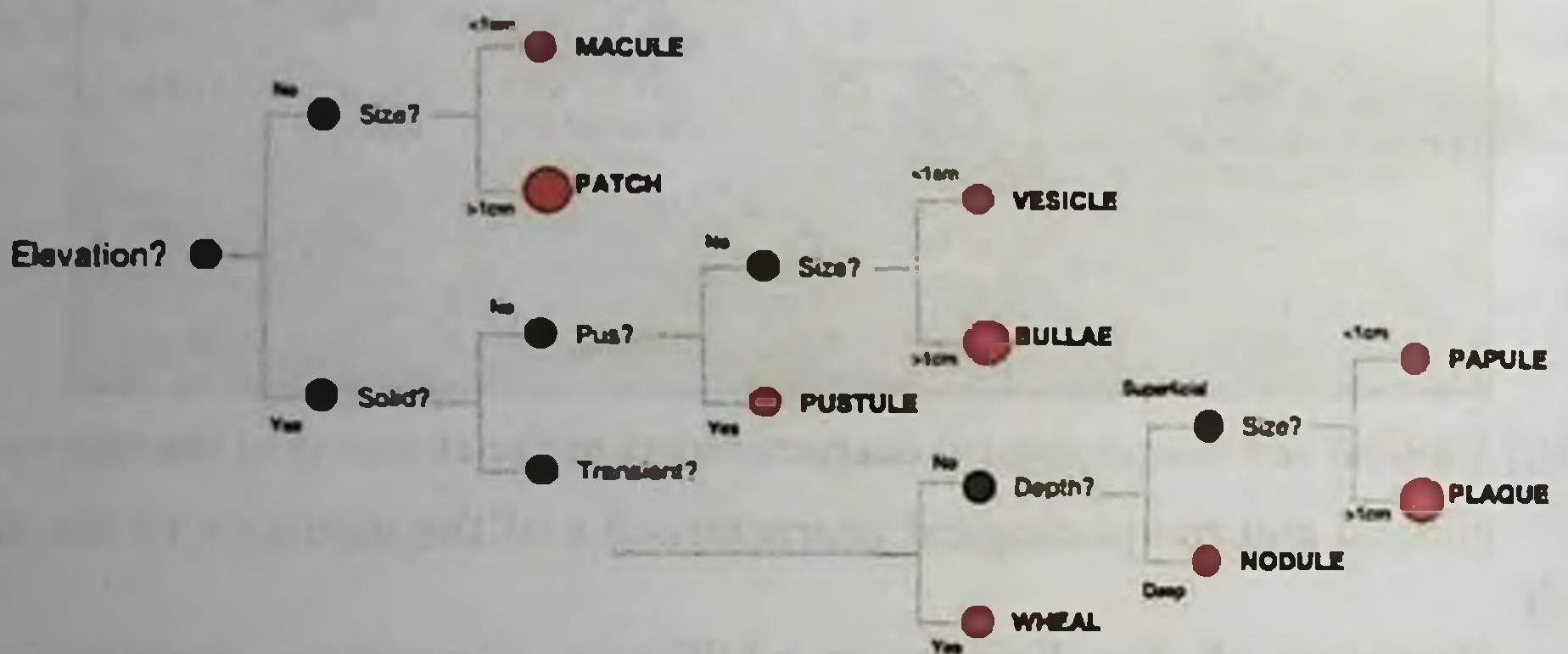


Figure 1. Primary morphology of the undifferentiated rash

**Pic.8 Secondary morphological elements**

Primary cavity elements: Bubble (vesicula) is formed as a result of spongiosis or vacuolar and ballooning degeneration, comes from the epidermis, up to 5 mm in diameter. At autopsy, erosion is formed, which becomes covered with a crust, leaves pigmentation after itself or disappears without a trace (eczema, simple vesicular lichen, herpes zoster, etc.).

Bubble - (bulla) - the size is more than 5 mm in diameter, hemispherical or flat in shape, the contents may be hemorrhagic, cloudy or serous. Localization - intraepidermal (with pemphigus vulgaris), sub-epidermal (Dühring's dermatitis).

Abscess (pustula) can be located in all layers of the skin. Epidermal pustules after opening form erosions, which are covered with purulent crusts, do not leave a scar after themselves (streptoderma). Pustules emanating from the skin itself or subcutaneous fat, after opening, form ulcers that leave scars (furuncle, carbuncle, hydradenitis).

Follicular pustules are associated with the hair follicle and are pierced in the center by a hair (furuncle). With streptococcal lesions, the primary elements of the rash - conflicts (flaccid blisters) are not associated with hair follicles.

Non-column primary morphological elements:

Spot (macula) is characterized by a change in skin color. There are vascular and pigmented spots.

Vascular spots come from the papillary layer of the dermis, are formed due to vasodilation (roseola, erythema, telangiectasia), disappear with pressure (toxicoderma, eczema, dermatitis, syphilis) or violation of the integrity of the vascular wall (hemorrhage) - petechiae, purpura, ecchymosis, vibices (linear hemorrhages), hematoma. These spots do not disappear when pressed, they are resolved without a trace. Vascular nevi also belong to vascular spots.

Pigment spots are formed as a result of a violation of pigment formation, come from the epidermis (pigmented nevi, freckles, melasma, pellagra, Addison's disease).

Artificial spots occur when dyes are injected into the skin (tattoo).

A papule, or nodule (papula) occurs as a result of the accumulation of cellular infiltrate, or due to the growth of skin tissues, or the deposition of metabolic products (cholesterol) in it. There are epidermal papules formed due to acanthosis (juvenile warts), dermal - due to cellular infiltration in the papillary dermis (syphilitic papule).

Epidermal - dermal papule is formed as a result of acanthosis in the epidermis and cellular infiltrate in the papillary layer (lichen planus, psoriasis). The largest are miliary (poppy seed), lenticular (the size of a lentil), nummular (reminiscent of the shape of a coin). Large papules are called plaques. The shape distinguishes between hemispherical (molluscum

contagiosum, secondary syphilis), cone-shaped (lichenoid tuberculosis of the skin) and flat (lichen planus). After the resolution of the papules, secondary spots remain, subsequently disappearing, they do not leave scars (with the exception of papulo - necrotic tuberculosis of the skin).

The tubercle (tuberculum) occurs in the dermis due to limited productive inflammation - granulomas, rises above the level of the skin, dense, doughy or soft consistency. The element can necroticize or resolve, but always leaves scars or cicatricial atrophy (skin tuberculosis, tertiary syphilis, leprosy).

Knot (nodus) - a large spherical formation located in the deep layers of the dermis and subcutaneous tissue, is formed as a result of the formation of a cellular infiltrate (infectious

granuloma). There are nodes of an inflammatory nature (tuberculosis, leprosy, leishmaniasis, syphilis, erythema nodosum) and tumor-like, non-inflammatory (fibroma, lipoma, neoplasms). With the disintegration of the nodes, ulcers are formed, healing with a scar.

A blister (urtica) is an acute inflammatory, exudative, cavityless element located in the papillary layer of the dermis, formed due to limited swelling of the papillary layer. Rose-red to violet-white color, pea-sized to palm-sized, resolves without trace. Blisters manifest urticaria, toxicoderma, Dühring's dermatitis.

Papules, vesicles, pustules, blisters, age spots come from the epidermis. From the skin itself come papules, tubercles, vascular spots, blisters, pustules, from subcutaneous tissue-deep pustules, nodes.

Secondary morphological elements: A spot (macula) occurs at the site of resolved papules, after vesicles, blisters, epidermal pustules. Hypopigmented spots are formed due to a decrease in the content of melanin in the skin.

Scale (squama) - a rejected cell of the stratum corneum, is most often formed as a result of parakeratosis (psoriasis). In size, the scales are flour-like, pityriasis, finely and large-lamellar, and can also form with hyperkeratosis (discoid lupus erythematosus).

A crust (crusta) is formed when the exudate dries up in place of vesicles, pustules, blisters, as well as detachable ulcers, erosions, cracks, excoriations, tubercles, gums. Crusts are serous, purulent, serous-purulent, bloody.

Erosion (erosio) - a defect in the skin within the epidermis after the opening of vesicles, blisters, superficial pustules. After healing, it does not leave scars.

An ulcer (ulcus) is a skin defect within the skin itself, subcutaneous tissue and deep tissues. It occurs when the tubercles, nodes disintegrate and always leaves a scar behind.

Scar (ciatrix) - a connective tissue formation at the site of a deep skin defect. There are scars flat, hypertrophic, or keloid, and atrophic. After themselves, the scars leave tubercles, nodes, deep pustules (syphilis, skin tuberculosis, furuncle, carbuncle).

Excoriation, or abrasion, is formed as a result of scratching with scabies, itchy dermatosis, Dühring's dermatosis, eczema and other skin diseases. Superficial excoriations heal without a trace, deep excoriations leave scars.

A crack (rhagades) is usually formed in the folds of the skin in the inguinal and axillary cavities, in the corners of the mouth, under the mammary glands with inflammatory infiltration, dryness, hyperkeratosis. Superficial cracks heal without a trace, deep ones leave scars.

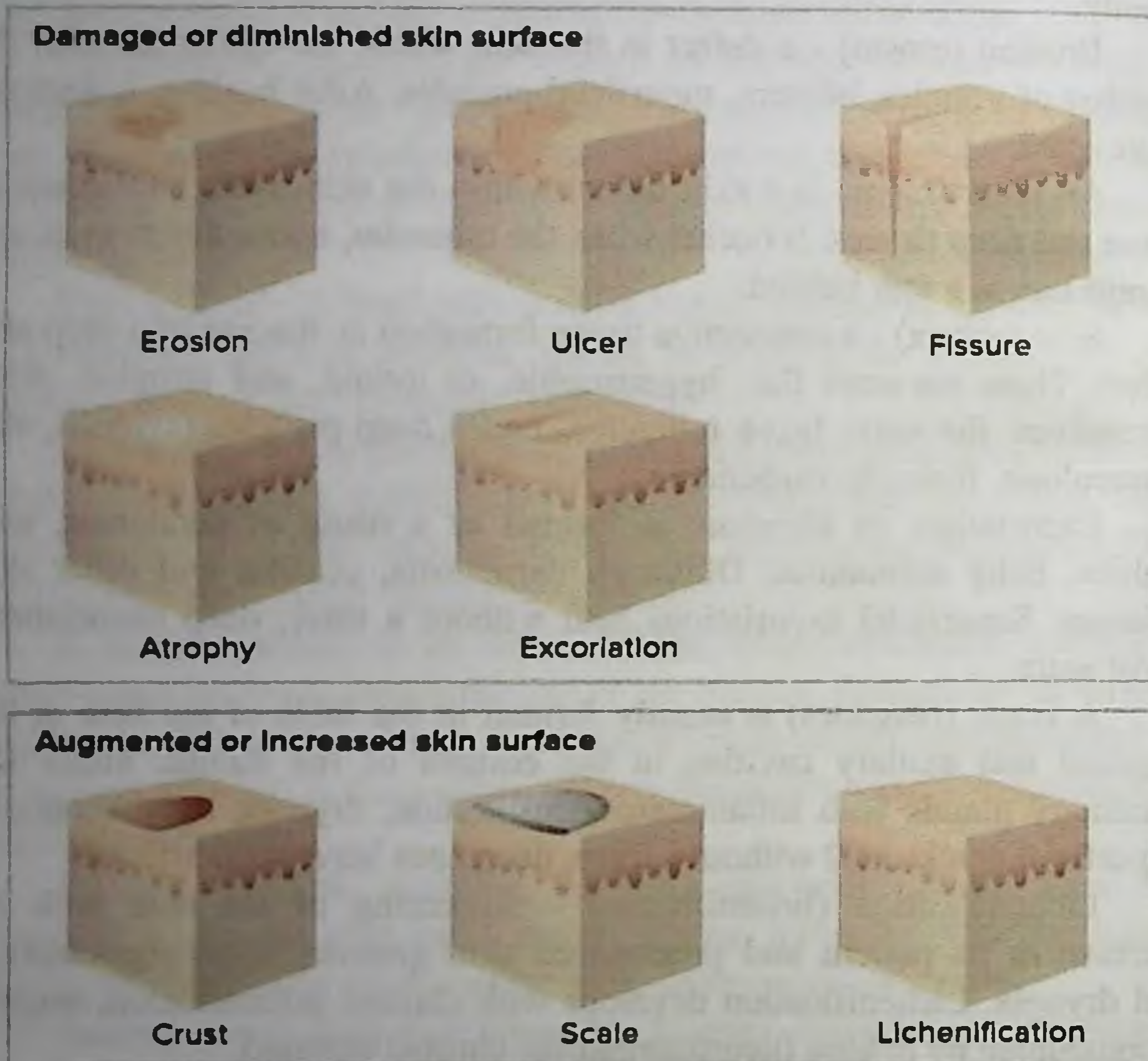
Lichenification (lichenificatio) - thickening of the skin with an increase in its pattern and pronounced skin grooves, hyperpigmentation and dryness. Lichenification develops with chronic inflammation, usually accompanied by itching (neurodermatitis, chronic eczema).

Vegetation (vegetatio) - proliferation of papillae of the dermis and epidermis, leading to the emergence of papillomatous formations (vegetative pemphigus, genital warts, with ulcerative processes). Basics of treatment of skin diseases: When treating skin diseases, it must be remembered that they are not only pathological processes in the skin, but more often reflect changes in the skin

that occur in the internal organs, nervous system, and metabolism, substances, homeostasis, etc. In this regard, in case of skin

diseases, it is necessary to prescribe a general treatment aimed at eliminating or correcting the etiopathogenetic factors of the disease

Secondary lesions (modification of original appearance)



The most widely used sedative therapy: tranquilizers, neuroleptics, ganglionic blockers. Hyposensitizing therapy is carried out with calcium preparations, sodium thiosulfate. Antihistamines are widely used: diazolin, ketotifen, claritin, zaditen, pipolfen, tavegil, fenkarol, etc. For many skin diseases, vitamin therapy is prescribed, more often B vitamins: B1, B6, B12, B2, vitamin PP (nicotinic acid), vitamins A, E, S.

Hormonal preparations of the adrenal cortex are used in dermatology for the treatment of acute skin processes, with severe, life-threatening

diseases (pemphigus, connective tissue diseases, eczema, neurodermatitis, and others).

Glucocorticoids have anti-inflammatory, desensitizing, anti-allergic effects.

Most often, in general treatment, prednisolone, dexamethasone, triamcinolone (kenalog, polcortolone, berlicort), betamethasone, methylprednisolone (metipred, medrol, urbazone) are prescribed in the form of tablets.

For intramuscular administration, short-acting preparations are used: solutions of prednisolone hydrochloride, methylprednisolone sodium succinate, dexamethasone sodium phosphate, betamethasone. Long-acting glucocorticoid drugs are widely used: metipred-depot, kenalog, tricort, celeston, diprospan and others.

It must be remembered that glucocorticoids are far from safe drugs. Their long-term administration may be accompanied by undesirable and severe side reactions: a decrease in body resistance, exacerbation of latent infection, steroid peptic ulcers, diabetes mellitus, hypertensive crisis, hypokalemia, sodium and water retention, osteoporosis and other complications.

To reduce side effects during treatment, it is necessary to constantly monitor blood pressure, blood sugar, diuresis, body weight, blood clotting, blood biochemical parameters. Patients' food should be rich in complete proteins, vitamins, and potassium. It is necessary to limit the intake of table salt.

For external treatment, glucocorticoid ointments and creams are used: sinaflan, sinalar, flucinar, prednisolone, lorinden, celestoderm, deperzolon, ultralan, elocom, adventil, oxycort, dermozolon, polcortolon, triderm, diprogent and others.

For the treatment of dermatosis, nonspecific active stimulating immunotherapy is widely

prescribed: lipopolysaccharides - prodigiosan, pyrogenal; synthetic substances - thymogen, leadadin, levomisole, sodium nucleinate, methyluracil and others, as well as means of adaptive stimulating non-specific immunotherapy - thymalin, taktivin, vilozen, timoptin and others.

In the treatment of patients with infectious dermatoses, antibiotics are used: a) short-term natural penicillins - benzylpenicillin sodium salt and potassium salt; b) natural penicillins of prolonged action: medium prolongation (novocaine salt of penicillin, procaine penicillin, bicillin

- 3 and bicilli - 5); large prolongation (benzathine benzylpenicillin preparations: bicillin-1, retarpen, extencillin, tardocillin, etc.); c) semi-synthetic penicillins - oxacillin sodium salt, ampicillin trihydrate, ampicillin sodium salt, ampiox and others. Cephalosporins - klaforan, cefobid, mirocef, etc .; macrolides - erythromycin, oleandomycin, sumamed, macrofoams; tetracyclines - tetracycline, metacycline hydrochloride (rondomycin), doxycycline (vibromycin), oletethrin, erycycine, etc.

When prescribing tetracycline drugs, it is necessary to remember about its side effects on the gastrointestinal tract, liver, kidneys, blood system, the development of candidiasis, skin sensitization to UFL, defeat of tooth enamel and others. In this regard, the use of tetracycline is prohibited for pregnant women, children under 12 years of age, with impaired liver and kidney function, leukopenia. In addition to the above drugs, other antimicrobial agents are also used.

A large number of drugs are used to treat fungal diseases. For candidal lesions, it is recommended:

polyene antibiotics (amphotericin B, nystatin, levorin, pimafucin, etc.);

imidazole derivatives (ketoconazole, nizoral, miconozol, dactorin, econazole, clotrimazole, etc.)

derivatives of triazoles (fluconazole-diflucan, triflucan; itraconazole - sporanox, orungal).

With fungal lesions of the skin and its appendages, the following are widely prescribed: griseofulvin (tablets, liniment), lamisil (tablets, ointment, cream), pimafucort (ointment, cream), clotrimazole (ointment, cream), travogen, travocort (ointment, cream), ointments mycosolone, mycospor, zincundan, undecin, mykoseptin, orungal (tablets, ointment) and others.

Physiotherapeutic methods are widely used for the treatment of dermatoses. Ultraviolet rays are indicated for the treatment of psoriasis, eczema, neurodermatitis, pruritus, acne, etc. Recently, photochemotherapy

(PUVA - therapy) occupies an important place in dermatological practice, which is indicated for the treatment of psoriasis, parapsoriasis, lichen planus, vitiligo,

neurodermatitis, baldness, etc.

To activate metabolic processes in the skin, improve microcirculation, accelerate wound healing, laser therapy is widely used (for neurodermatitis, lichen planus, baldness, herpes, ulcers, scleroderma and other dermatosis)

Ultrasound therapy is used in the treatment of chronic urticaria, eczema, neurodermatitis, scleroderma, lichen planus, psoriasis, trophic ulcers, keloids, etc.

Magnetotherapy is widely used to treat eczema, neurodermatitis, psoriatic arthritis, scleroderma, skin vasculitis, etc.

Electrotreatment in the form of galvanization and drug electrophoresis is indicated for itching dermatoses, keloid scars, scleroderma, skin vasculitis.

For the treatment of skin diseases accompanied by pain, diadynamic Bernard currents are used (shingles, itchy dermatoses). Darsonvalization has an analgesic, antipruritic, anti-inflammatory effect and is indicated for the treatment of neurodermatitis, baldness, skin itching, trophic ulcers, acne, seborrhea.

UHF therapy is indicated for the treatment of purulent inflammatory skin diseases (boils, phlegmon, abscesses, hydradenitis), vasculitis, herpes zoster, trophic ulcers, etc.

Psychotherapy is widely used in the treatment of skin diseases. Psychotherapy is a complex of positive mental factors influencing a dermatological patient to achieve optimism in him regarding a successful outcome of the disease, to enhance participation in treatment, to eliminate incorrect, harmful views on the disease, to ensure rehabilitation and social readaptation, as well as iatrogenic.

Psychotherapy is based on the premise that any human disease is a disease not only of the body, but also of the individual, hence the need for mental care for the patient.



In everyday practice, elements of small psychotherapy are more often used - suggestion (verbal suggestion in the waking state), rational psychotherapy and autogenic training.

Suggestive therapy aims to weaken or remove negative thoughts and emotions from the patient and instill in him the confidence and effectiveness of the treatment methods used and the successful outcome of the disease. This method of treatment will be effective if the doctor manages to gain the patient's trust and disposition, enters his inner world, the world of anxieties and experiences.

The effectiveness of suggestive therapy increases if it is combined with self-hypnosis, which is better manifested in purposeful and strong-willed patients. The content of the suggestive

influence is determined after careful observation of the patient, conversations with him, from which the weak links in his emotions are revealed.

Rational psychotherapy aims to influence the mind of the patient, resorting to the help of logical justification and reasoned persuasion, because, in many dermatovenerological patients, the control of the cerebral cortex over the subcortex is weakened, as a result of which the role of the rational factor decreases and the role of the emotional factor increases. This leads to a negative change in the assessment of one's condition, individual manifestations of the disease, the will is paralyzed and the desire to actively fight for one's recovery.

At the same time, under the influence of rational psychotherapy on the patient, he more objectively and consciously evaluates his illness, mobilizes his mind and physical abilities in the fight against the disease. In the process of rational psychotherapy, it is advisable to tell the patient about the cure of many patients with the same diseases, to emphasize that this is facilitated by the patient's endurance and patience. Rational psychotherapy is easier to carry out with sanguine and phlegmatic than with choleric and melancholic. In the latter, even in full health, the control of the cortex over the subcortex is weak.

Rational psychotherapy should convince the patient of the importance of any disturbances in the body in the development of his skin pathology,

which allows an objective and, most importantly, conscious assessment of the causes of its development,

to activate the participation of the patient together with the doctor in the fight against the disease and in recovery.

In the treatment of dermatovenereological diseases with sleep disorders, phobias, neuroses, autogenic training or treatment with relaxation can be used, combining elements of self-hypnosis, the practice of ancient Indian yogas and hypnosis.

This method of psychotherapy is implemented with the help of mental orders, inner speech. A background of emotional calm and muscle relaxation is created. Self-hypnosis is a factor of great power, with its help the patient can influence thoughts and feelings, overcome suffering, subjective sensations. It is advisable to carry out autogenic training before bedtime or immediately after sleep, when suggestibility and autosuggestibility increase.

In children's practice, family psychotherapy should be used, that is, the impact on the parents and next of kin of the child. The union of the doctor and parents should be throughout the entire period of rehabilitation. Parents should encourage and console the child, remove the feeling of fear, apathy, insecurity. For this purpose, it is advisable to use aesthetic therapy - reading fiction and music. This complements magic therapy, i.e. reproduction in the patient's imagination of such an artistic image that helps him mobilize mental and physical strength

A good effect on children who are in a depressed state of mind is melotherapy - quiet and slow music. On excited patients, it is recommended to use music at a brisk pace.

Psychotherapy becomes effective if it is built thoughtfully, systematically and consistently. Its various methods must be skillfully combined with medicinal psychotherapeutic agents.

Local treatment of skin diseases is an integral element of complex treatment, aimed at removing the cause of the disease (etiologic therapy) and protecting the affected area of the skin from the influence of external stimuli, which creates favorable conditions for a faster recovery (pathogenetic therapy). Local therapy should be carried out individually for each patient.

The choice of dosage form and the concentration of medicinal substances in it is determined by the localization and condition of the skin lesion. At each stage of the disease, different medicines and forms are needed. In the acute and subacute form of the inflammatory process, lotions, agitated suspensions, powders and pastes should be used. In chronic processes, ointments, compresses are indicated. In the acute stage of the disease, sparing, non-irritating local therapy is necessary.

In this regard, starting treatment, small concentrations of medicinal substances should be used, and as the process subsides, they should be gradually increased. In the chronic stage of the disease with the presence of infiltration, it is advisable to use potent local drugs (scabies, rubromycosis, limited neurodermatitis, stationary stage of psoriasis, etc.).

When choosing forms of local treatment and medicines, it is necessary to take into account the localization of the skin process. The skin of the back, scalp, extensor surface of the extremities is less susceptible to local effects. At the same time, the skin of the abdomen, axillary and inguinal regions, neck, and genital organs is more delicate and sensitive to irritating medicinal substances. The age of the patient must also be taken into account. The skin of older people needs oily forms more than degreasing ones.

Children's skin is more sensitive to drugs, which requires their use in low concentrations and in mild forms that do not irritate the skin. When choosing a dosage form and method of using the drug, it is necessary to take into account the nature and localization of the lesion. So, the paste should not be applied to the scalp, as it glues the hair and prevents drugs from having an effect on the skin. In this case, it is better to use ointments or oil solutions.

In outpatient treatment, it is not advisable to prescribe bad-smelling and soiling linen products.

With the effectiveness of the prescribed remedy, there is no need to rush to replace it with another. Proper local treatment of skin diseases is based on knowledge of the types of drugs, their therapeutic properties, forms of application of external agents.

Powders (powders) have an adsorbing, cooling and anti-inflammatory effect. Indicated for use in acute and subacute inflammation of the skin, in

infants - to protect against friction, maceration, exposure to sweat in the folds of the skin. Powders should not be prescribed for wet and dry skin, and starch powder for children, because it is a good nutrient medium for the development of microflora.

Solutions in the form of lotions have a cooling effect associated with evaporation and reflex vasoconstriction of the skin, leading to a decrease in blood flow to this area. Due to this, there is a cessation of weeping and a decrease in inflammation. For lotion, 4-5 layers of gauze are taken in size according to the lesion, which is wetted with a cold solution, slightly squeezed and applied to the lesion. As it warms up and dries, it is wetted with a cold solution. This procedure is done for 1-1.5 hours, then a break is made to prevent vascular paresis. If necessary, the lotion can be repeated after 1.5-2 hours. Lotions are indicated for weeping, swelling and acute inflammation of a limited area of the skin. Not prescribed for infants and persons over 60 years of age, with pustular skin lesions. More often, lotions are used with a 0.25% - 0.5% solution of silver nitrate, 5% tannin solution, 2% resorcinol solution, 2% - 5% boric acid solution (not recommended for children).

The ointment consists of an ointment base and powdered substances. It prevents the evaporation of water from the surface of the skin, reduces heat transfer, which leads to vasodilation and blood flow to this area, promotes deep penetration of medicinal substances into the skin. The use of ointment in subacute and chronic processes is shown. It is not used for acute inflammation and weeping (with the exception of hormonal ointments).

The paste consists of powdered substances and an ointment base. The paste applied to the skin dries and cools it, reduces inflammation, promotes the permeability of medicinal substances into the skin. The paste is indicated for sub-acute inflammation. You should not assign it to the foci of weeping and hairy areas of the skin.

Shaken suspensions (talkers) consist of 30% powdery substances and 70% liquid (water, glycerin, alcohol). Glycerin fixes powdered substances on the skin. Suspensions have a cooling effect, due to which reflex vasoconstriction occurs. Shown in acute inflammation without the phenomenon of weeping.

The cream consists of a fatty base, powders and water. This dosage form is close to a skin lubricant and is well tolerated by the skin. Softens the stratum corneum, enhances the permeability of medicinal substances. It is indicated for acute and subacute inflammation, contraindicated for getting wet.

According to the nature of the action, drugs for local treatment are divided into antimicrobial - aniline dyes (methylene blue, brilliant green, Castellani paint, etc.), 3% hydrogen peroxide, boric acid up to 5%, dermatol, xeroform up to 10%, antibiotics, sulfur 5%-10% and others.

Antiparasitic - 10-20% benzyl benzoate, 10% -20% tar, 3% sulfur mercury ointment, 10% -33% sulfur and others.

Fungicidal - griseofulvin, lamisil, orungal, nizoral, nystatin, pimafucin, pimafukort, tar up to 20%, sulfur up to 30%, mycosolone, mycoseptin, miconazole, oronazole, travogen, travocort, clotrimazole, mycospor, batrafen and others.

Keratoplastic (reducing) agents - tar 1% -3%, naftalan 5% - 10%, sulfur 3% -5%, ichthyol 3% - 5%, dermatol 5%, salicylic acid up to 5% concentration and others.

Keratolytic agents - salicylic, lactic, benzoic acids, resorcinol in a concentration of over 5%, potassium iodide 50%, etc.

Antipruritics - 0.5% thymol, 1% carbolic acid, 0.5% - 1% menthol, 1% - 2% diphenhydramine, 0.5% acetic acid, 5% - 10% anestezin, corticosteroid ointments and others.

Photoprotective agents - salol, quinine, tannin, para-aminobenzoic acid 5% - 10%, anestezin 1%

5%, photoprotective cream "Luch", "Shield", etc.

Photosensitizing agents - meladinin 1% - 2%, beroxan 0.5%, psoralen 0.1%, ammifurin 1% -

2%, psoboran 0.1% and others.

Nutrition in a number of dermatoses can influence the development and course of the pathological process, which must be taken into account in the treatment of skin diseases caused by hypersensitivity to various nutrients. "Chemization" in industry and agriculture plays an important role in this. Many foods and chemicals added to them can cause or exacerbate allergic skin diseases not only in adults but also in children.

There is no single prescription for all patients, as there is an individual intolerance to various foods. Juices, fruit purees from green apples, pears, bananas are more often recommended; vegetable puree from zucchini, white and cauliflower, swede, pumpkin. Potatoes should be peeled and soaked in cold water for 12-18 hours; porridge from oatmeal, buckwheat, rice, pearl barley. Cereals should be soaked in water for 12-18 hours. Recommended beef, lean pork, rabbit

meat, turkey, chicken. It is advisable to subject the meat to double digestion. To this end, it is poured with cold water, boiled for 30 minutes, then the water is drained, and the meat is again poured with cold water and brought to readiness. Useful vegetable oils, old fat.

Patients with allergic skin diseases are not recommended: chocolate, coffee, cocoa, mushrooms, nuts, honey, fish, caramel, marmalade, jam, ice cream, fruit water, cow's milk, eggs. It is advisable to avoid eating orange or red berries, fruits and vegetables (strawberries, raspberries, apricots, peaches, citrus fruits, tomatoes, etc.). It is best to use vegetables and fruits grown without the use of mineral fertilizers, and meat products obtained from animals from individual farms.

Methods and techniques: Examinations of patients with skin and venereal diseases:

For successful treatment of the patient, a correct diagnosis of the disease is necessary. However, the diagnosis of the disease is the most difficult process. An important role in the diagnosis is played by experience, the ability to conduct differential diagnostics, to use diagnostic methods and techniques that help to establish the correct diagnosis.

We present some of the most common and used in everyday practice methods and techniques for examining skin and venereal patients, which may well be used in their practice by nurses with higher education.

Allergic drip tests. They are used to identify the allergen more often in occupational skin diseases. To put them on the healthy skin of the anterior surface of the forearm or epigastric region, a weak concentration of an aqueous or alcoholic solution of the test substance is applied with a pipette. For control, solvent drops are applied. The reaction is taken into account after 24, 48, 72 hours. With a positive reaction at the site of application of the sample, erythema, papule, vesicles, and a bubble appear.

Allergic compress tests (patchwork, application). A gauze napkin with an area of 1 cm<sup>2</sup> is moistened with a weak solution of the test substance, applied to the skin of the anterior surface of the forearm, covered with cellophane on top and fixed with adhesive tape. The reaction is taken into account after 24, 48, 72 hours. A test is considered positive when erythema (redness) occurs at the site of contact (+); erythema, edema, papule

(++); pronounced inflammation against which papules and vesicles appear (+++); blisters and necrosis (++++).

Identification of scabies. The affected area of the skin is lubricated with a 3-5% solution of iodine or aniline dye. The paint enters the linear slit and is observed as a colored line.

Two-glass Thompson test. It is used for topical diagnosis of lesions of the urethra. Before the test, the patient does not urinate for 4-6 hours. Urine is collected in two glasses: in the first - 50- 60 ml, in the second - the rest. If the urine in the first glass is cloudy, and the second is transparent, then the process is localized in the anterior part of the urethra. The presence of turbidity in both glasses indicates a total lesion of the urethra.

Dermographism allows you to determine the state of the autonomic nervous system. With a dermatograph, the blunt end of a stick or the edge of a spatula, a strip is drawn along the anterior surface of the chest. A white or red line appears at the pressure site.

Diagnosis of molluscum contagiosum. When the papule is squeezed with two fingers or tweezers, a mushy mass is released.

Diagnostic triad in psoriasis. When scraping psoriatic papules, the peeling increases and the scales resemble a drop of pounded stearin (the "stearin spot" phenomenon). With further scraping, the scales are removed and a wet pink film is exposed (the phenomenon of the "terminal" or "psoriatic" film). Droplets of blood appear on the surface of the film. "spot bleeding" or "blood dew").

Diagnostic reception for condylomas. Genital warts (of viral origin) have a thin "leg" at their base. With wide (secondary syphilis) - the base of the elements is wide. With sticks, with cotton wool wound around their ends, they push the warts apart and inspect their base.

Study of tactile sensitivity. A lump of cotton wool is touched to a certain area of the skin. In leprosy, the patient does not feel touch.

Luminescent diagnostics of microsporia. A Wood's lamp is used - glass impregnated (impregnated) with nickel salts, through which ultraviolet rays are passed. With microsporia, a bright green glow is noted in the lesions; lighting is carried out in a dark room.

Inspection of the genital organs in women is carried out in the position of the patient on the back in the gynecological chair. First, they examine the labia majora, the skin of the perineum, the anal area, pay attention to the color, the presence of rashes and secretions. Then the vestibule of the vagina, the mouth of the excretory ducts of the large glands of the vestibule are examined, palpating them with the thumb and forefinger. Examine the external opening of the urethra, pay attention to the color, swelling, discharge. Palpate the canal with the index finger.

With the mirrors of Cuzco examine the vagina, determine the size, shape of the cervix, the opening of the canal, color, swelling, erosion, discharge. For microscopic examination, a grooved probe or a Volkmann spoon is used to take secretions from the cervical canal.

Examination of the genital organs in men. The patient does not urinate for 4-6 hours. The skin of the lower abdomen, inner thighs, inguinal and femoral lymph nodes is examined. Then the penis, the outer and inner layers of the foreskin, the head, the lips of the external opening of the urethra are examined. If erosions or ulcers are found, they are palpated, and the discharge is examined for the presence of a pale spirochete.

If there is discharge from the urethra, the first drop is removed with sterile cotton wool, several smears are made, which are sent to the laboratory for research on gonococci or other flora. Then examine the scrotum, testicles, their appendages, spermatic cords. After inspection, a two-glass Thompson test is performed.

Palpation of hard chancre. To identify the compaction, a hard chancre is squeezed at the base with two fingers and pulled up.

Balzer test. It is used to diagnose pityriasis (varicolored) lichen. Spots are smeared with 5% iodine solution. Due to the loosening of the stratum



comeum, the iodine solution is absorbed and the stain becomes more intense than healthy skin.

The reaction of Yarish - Herksheimer - Lukashevich. The reaction of "exacerbation" develops with secondary fresh syphilis. After the introduction of antibiotics (more often after the third and fourth injections), the temperature rises to 38-39°C, the rashes become bright, new rashes may appear. The reaction develops due to the death of a large number of spirochetes and the entry of endotoxin into the blood.

Wickham's grid, a symptom of lichen planus. After lubrication of the papules with some oil, whitish-opal dots in the form of a grid are visible. This phenomenon is formed due to uneven thickening of the granular layer of the epidermis.

Visor symptom in syphilis. When pulling the foreskin, a cartilaginous seal in the form of a dense visor is determined. The seal resembles an inverted eyelid.

Symptom P.V. Nikolsky. The first option: when sipping on scraps of the bladder cover, detachment of the upper layers of the epidermis is observed within the apparently healthy skin. The second option: when healthy-looking skin is rubbed between the blisters, the epidermis detaches. The third option: when apparently healthy skin is rubbed in areas remote from the blisters, the epidermis detaches.

Nikolsky's symptom can be positive in true pemphigus, with bullous pemphigoid, Lyell's syndrome, and familial pemphigus. When pressing with a finger on the whole bubble, its area increases due to the detachment of the tire along the periphery. This phenomenon is called the

Asbo-Hansen symptom.

Symptom of Pospelov probe failure. With lupus erythematosus, as a result of the destruction of collagen and elastic fibers, the tubercles acquire a soft texture. When pressing on the tubercle with a buttoned probe (match head), an indentation remains, which disappears very slowly.

The symptom of ladies' heels is used to diagnose discoid lupus erythematosus. When removing scales - crusts in the lesion, the patient feels pain (sign of Besnier - Meshchersky), and on the inner surface of the crust a spine is visible, which is formed due to follicular hyperkeratosis.

Symptom of "apple jelly". It is characteristic of lupus erythematosus and sarcoidosis. With strong pressure on the lesion with a glass slide, blood is squeezed out from the dilated vessels of the tubercle and a brownish-yellow color appears, resembling the color of apple jelly (the color of lupoma).

The Koebner phenomenon (isomorphic reaction) is characteristic of psoriasis and lichen planus in the progressive stage of the disease. At the site of application to the skin of any scratches, burns, cuts, papules appear, characteristic of this disease. In a clinical setting, for diagnostic purposes, the Koebner phenomenon is tested by irradiating limited areas of the skin with suberythematous doses of quartz. On average, the reaction develops in one to two weeks.

The phenomenon of "honeycombs". In patients with infiltrative-suppurative trichophytosis, when pressing on the inflammatory infiltrate (Kerion Celsus), droplets of pus appear, resembling honeycombs.

**CHAPTER 2 DERMATITIS, ALLERGODERMATOSIS,  
SEBORRHEA, ECZEMA, URTICARIA. DESCRIPTION.  
ETIOLOGY, PATHOGENESIS, CLINIC, CLINICAL FORMS,  
BASIS OF DIAGNOSIS AND TREATMENT**

**Allergic Vasculitis**

Allergic vasculitis develops as a result of allergic processes, hormonal disorders, under the influence of infectious, fungal, viral factors, with intolerance to certain drugs, vaccines and serums, foods, as well as hypoavitaminosis, injuries and other factors. Skin vascular lesions are considered as autoimmune and autoallergic processes.

Vasculitis is divided into superficial and deep, and downstream into acute and chronic. Superficial vasculitis is more often localized on the skin of the lower extremities, less often on the arms and trunk. Patients may complain of itching or burning of the skin, pain in the affected area. Eruptions appear as petechial, erythematous, nodular elements, vesicles or blisters with hemorrhagic contents, superficial necrosis and ulceration. The color of the rash at the beginning of the disease is bright, then it becomes bluish and brown. In place of the elements of the rash, pigmentation or scars may remain.

Ruiter's allergic skin vasculitis and Shenlein-Genoch's hemorrhagic vasculitis are the most common in children.

Ruiter's allergic vasculitis of the skin is characterized by a polymorphism of rashes and a chronic relapsing course. There are the following clinical variants of the disease. Hemorrhagic spotted, manifested by erythematous - edematous spots with peeling. The polymorphic-nodular variant is characterized by the presence of hemorrhagic spots, nodules, vesiculo-bullous and blistering elements. The cavity elements contain serous-hemorrhagic exudate, dry up into crusts, under which there are erosions and ulcers. The rashes are symmetrical in nature, localized on the skin of the trunk, buttocks, and lower extremities.

The nodular-necrotic variant is manifested by the presence of dense reddish-yellow papules with finely lamellar peeling. In the center of the

nodules, necrosis develops, ulcers form, which heal with smallpox-like scars. All forms of the disease are accompanied by weakness, malaise, pain in the abdomen, in the joints. Blood tests showed leukocytosis, elevated levels of C-reactive protein.

Hemorrhagic vasculitis Shenlein - Henoch is the result of the interaction of infectious - toxic and autoimmune reactions. In childhood, a lightning-fast, necrotic form occurs, which begins suddenly with the appearance of hemorrhagic spots, papules, vesicles, blisters, pustules on the

skin and mucous membranes of the oral cavity and genitals. Ulcerative and necrotic lesions develop. Internal organs are involved in the process, pains appear in the joints, muscles, in the abdomen, bleeding.

The disease is usually fatal. There are also more benign forms.

Rheumatic purpura is manifested by swelling, hyperemia and pain in the area of large joints with hemorrhagic rashes on the skin. Abdominal purpura is characterized by damage to the gastrointestinal tract and kidneys, the presence of hemorrhagic elements of a spotted, papulo-vesicular, bullous and urticarial nature on the skin and mucous membranes. The clinical picture may resemble erythema multiforme exudative.

Deep vasculitis is accompanied by damage to the vessels of the deep layers of the dermis and hypodermis, more often on the skin they appear as acute and chronic erythema nodosum.

Acute erythema nodosum usually appears in childhood and adolescence in the cool and damp season (autumn, spring). Skin rashes are preceded by prodromal phenomena in the form of fever, weakness, pain in the joints and muscles. Then, on symmetrical areas of the anterior and outer surfaces of the legs, thighs, less often the buttocks and forearms, dense and painful nodes appear with bright red inflamed skin above them. Subsequently, the skin over the lesions becomes cyanotic, brownish and yellow-green. The nodes flatten and dissolve over time, leaving behind pigmentation.

Chronic erythema nodosum (Montgomery nodosum vasculitis) is characterized by the appearance of densely elastic nodes located deep in

the skin and subcutaneous tissue. The skin over the nodes is bluish-pink. The nodes gradually dissolve without scarring. The disease is prone to relapse. Women at the age of 20 - 40 years are more often ill, seasonality (autumn, spring) is noted. The clinical variant of chronic erythema nodosum is Befverstedt's erythema nodosum migrans. It is characterized by a long course and frequent relapses, the appearance of deep single nodes on the legs, feet, torso, forearms, in the center of which depressions appear.

Vilanova-Pinola subacute migratory hypodermatitis, a clinical form of chronic erythema nodosum, occurs in adult women. In the subcutaneous fatty tissue of the anterior - outer surface of the legs, the lower third of the thighs, several spots are formed, dense painless nodes are determined by palpation, which increase along the periphery, forming flat infiltrates without clear boundaries. The skin under them is hyperemic, sometimes with manifestations of hyperkeratosis. After a few months, the infiltrate resolves, leaving behind pigmentation and peeling.

Treatment of vasculitis consists in the use of antibiotics, antihistamines, calcium preparations,

vitamin C, rutin. With a persistent course, the use of corticosteroid hormones is justified. External treatment is carried out with warming compresses with ichthyol, Vishnevsky ointment, dry heat is applied.

Prevention of vasculitis is aimed at rehabilitating foci of chronic infection, reducing physical activity on the lower extremities.

It is advisable to exclude work in cold and damp rooms, smoking and alcohol.

### **Dermatitis**

Dermatitis is an acute inflammation of the epidermis and dermis, caused by exposure to exogenous or endogenous factors.

Classification: a) simple contact dermatitis, b) allergic dermatitis, c) toxicoderma.

Simple contact dermatitis. The causes of simple contact dermatitis can be mechanical irritants due to mechanical pressure, friction (tight shoes, bandages, plaster casts, etc.); physical irritants - high and low temperatures (burns, frostbite, solar dermatitis); chemicals - strong acids

and alkalis, salts of alkali metals and mineral acids that affect the body both in domestic and industrial conditions; biological factors - primrose, ranunculus, meadow grasses, etc.

Clinic: Erythema, edema with clear boundaries, vesicular-bullous elements, and erosion immediately appear at the site of exposure to the irritant. The rash is accompanied by burning and itching. The course is acute, there is no tendency to spread and disappears when the irritation is eliminated. Such patients do not need general treatment, it is enough to stop exposure to the irritant and apply external treatment in the form of pastes, agitated suspensions, hormonal ointments.

Allergic dermatitis occurs against the background of sensitization of the body. Allergens can be a variety of chemicals, including drugs - novocaine, antibiotics, mercury compounds, resorcinol, iodine, analgin, diphenhydramine, etc. Allergic dermatitis can be caused by synthetic fabrics, various perfumes and cosmetics, phenol-formaldehyde resins, in addition, allergens can be chemicals contained in plants: primrose, chrysanthemum, tulips, daffodils, snowdrops, dandelions, jasmine, poplar, citrus fruits, garlic, radishes, carrots. An allergic reaction develops more easily in individuals with a hereditary predisposition, after neuropsychic shocks, in those with foci of chronic infection. The disease develops during the first three months of contact.

The clinical picture is characterized by true polymorphism, which develops not immediately after exposure to the stimulus, but after a certain period of time. Rashes are localized not only at the site of exposure to the irritant, but also on distant areas of the skin and are called allergies. Against the background of edematous erythema, microvesicles, papules, weeping, erosion appear. After the exposure to the allergen is eliminated, the process disappears, however, upon re-encountering with irritants, relapses of the disease are possible. Skin rashes are accompanied by itching and burning.

Treatment consists in the appointment of a general hyposensitizing therapy with calcium preparations, antihistamines, adsorbents. At the same time, the exposure to the allergen must be eliminated. External treatment is carried out with agitated suspensions, pastes, glucocorticoid ointments.



**Plc.9 Allergic dermatitis**

### **Toxicoderma**

Toxicoderma is a toxic-allergic reaction of the body in response to the ingestion of an allergen through the gastrointestinal tract, respiratory organs and other ways.

Exogenous causes are most often drugs, foods, chemicals that enter the body through the digestive tract and respiratory tract. In addition, drugs can cause toxicoderma when administered intravenously, intramuscularly, subcutaneously or intradermally and when applied topically.

Endogenous causes - autointoxication by metabolic products resulting from dysfunction of the liver, kidneys, gastrointestinal tract. Allergic toxicoderma is caused by the formation of antibodies in the blood. Contributes to the sensitization of past and existing allergic diseases,

hereditary predisposition, immune reactivity of the body. The causes of toxicoderma are often drugs - sulfonamides, antibiotics, barbiturates, amidopyrine, vitamins B1, B6, B12, PP, folic acid, antihistamines (diphenhydramine) and even corticosteroids.

Clinic. Erythematous, papular, vesicular, bullous rashes appear on the skin. The general condition of the body suffers: the temperature rises, headache, malaise, changes in the gastrointestinal tract appear. After taking sulfa drugs, a peculiar reaction of the skin and mucous membranes

develops. Erythematous spots appear on the skin of the hands and forearms, penis, oral mucosa, then blisters. These are manifestations of the so-called sulfanilamide or fixed erythema. Such patients should no longer take sulfa drugs. With prolonged use of bromine preparations, some individuals may develop bromide acne. When taking iodine preparations, iodine acne or tuberous iododerma appear on the skin in the form of hemispherical tumors of a dark red color, when pressed on them, a purulent discharge appears. The course of toxicodermia caused by exogenous causes is acute. As the allergen is excreted from the body, the skin rash resolves. Endogenous toxicoderma occurs chronically.

**Treatment.** It is necessary to quickly eliminate the effect of the allergen, prescribe detoxification therapy, laxatives and diuretics, adsorbents, hyposensitizing and antihistamines. Shaken suspensions, pastes, hormonal ointments are used locally.



**Plc.10 Toxicoderma**

**Toxic epidermal necrolysis / lyell syndrome /:** The causes of the development of the disease can be various drugs (sulfonamides, antihistamines, analgesics, serums, etc.), chemicals and spoiled food (sausages, fish, etc.).

In the pathogenesis of the disease, the leading role is played by an allergic reaction, which is second only to anaphylactic shock in its severity. Chronic infection, tonsillitis, cholecystitis matters. A combination of allergic, toxic and infectious factors is possible.



**Clinic.** The disease begins suddenly with an increase in body temperature to 38.0 - 41.0°C and rashes on the skin of blistering or erythematous - bullous elements. A positive symptom of Nikolsky is determined.



There is a detachment of the epidermis, which is easily rejected with the formation of extensive bleeding and sharply painful erosions. The skin resembles the appearance of scalded with boiling water. Extremely severe general condition: high fever, headache, drowsiness, prostration, symptoms of dehydration, circulatory disorders, kidney function, cardiac activity and other disorders appear. The outcome of the disease is usually fatal.

It is advisable to carry out treatment in the intensive care unit. High doses of glucocorticoid hormones are prescribed (often prednisolone up to 80-150 mg or more per day), hemosorption, gemodez, unitiol, sodium thiosulfate, antihistamines and other drugs aimed at maintaining water, electrolyte and protein metabolism, to strengthen the general condition of the body.

Careful care is needed for such patients in order to prevent the addition of a secondary infection. For this purpose, aerosols containing steroids and antibiotics (panthenol, oxycort) are prescribed, which are used to irrigate the entire affected skin surface several times a day.

External treatment of such patients is carried out similarly to the treatment of burn patients. Prevention. Do not prescribe drugs, the intolerance of which is indicated in the patient's history! Immediate

hospitalization of patients with toxicoderma, accompanied by a violation of the general condition, fever.

### Seborrhea

Seborrhea is manifested by increased secretion of sebum due to hyperfunction of the sebaceous glands mainly in seborrheic zones - on the scalp, face, chest, interscapular region. There are oily (liquid), dry (thick) and mixed seborrhea.

In the development of oily seborrhea, the leading role is played by functional disorders of the autonomic nervous system. There is an increase in the amount of secreted sebum with an increase in free higher fatty acids in it. In the pathogenesis of thick (dry) seborrhea, dysfunction of the gonads plays a leading role.

Sebum is low in free fatty acids, but high in bound fatty acids and cholesterol. There is an increased keratinization in the region of the mouths of the hair follicles, which leads to the formation of comedones.

A certain role in the development of the disease is played by streptococci, staphylococci and other microbial flora. Seborrhea is more severe and persistent in diseases of the gastrointestinal tract (gastritis, peptic ulcer disease of the stomach and in the body, colitis) hypovitaminosis, non-compliance with skin hygiene.

With oily seborrhea with increased function of androgens, in the presence of a chronic focal infection in the nose, cheeks, forehead, the excretory ducts of the sebaceous glands are dilated, the skin is greasy, shiny. Hair becomes greasy, shiny, sticks together in strands, there is increased loss, which can lead to thinning or baldness. Against the background of oily seborrhea, seborrheic eczema, acne, atheromas, and baldness can develop.

Dry, or thick seborrhea, usually manifests itself at the age of 16-20 years and is expressed in increased sebum secretion, but to a lesser extent than with oily seborrhea. The skin of the face is thickened, with a pronounced skin pattern, the mouths of the hair follicles and excretory ducts of the sebaceous glands are dilated and gape.

Sebum has a paste-like consistency and is secreted in the form of a thick lubricant. After washing with hot water and soap, the fat-free area

looks dry and slightly flaky for several hours. In some patients, seborrheic areas of the skin remain dry, thickened, with symptoms of follicular hyperkeratosis. Patients often develop true and false whiteheads. False whiteheads are superficial cysts of the sebaceous glands, localized on the face, back, chest, contain a curdled mass of sebum and keratinized cells. As a result of mechanical pressure during washing, they are spontaneously emptied. A frequent complication of dry seborrhea is atheromas - inflammation of deep cysts of the sebaceous glands. In an acute inflammatory process, abscesses form at the site of atheromas; after separation of pus, they heal with the formation of a scar.

As a complication of seborrhea, comedones are often found, which represent the initial stage of development of common acne.

Comedo, or blackhead, consists of keratinized cells of the epidermis with a black top - cork. Comedones clog the enlarged mouths of the follicles, which, when pressed, release a pasty mass of a whitish color. They occur not only on the skin of the face, but also on the skin of the chest, back, back of the neck, auricles and behind the ear folds, shoulders, lateral surfaces of the body,

in the temporal regions and the occipital region of the scalp. Small comedones can often transform into papular or pustular acne. Inflammatory processes around large comedones usually end with the formation of atrophic scars.

Mixed seborrhea is a transitional form between oily and dry seborrhea. The disease begins as oily seborrhea at the age of 12-14 years and is localized only on the skin of the face. Gradually, the amount of acne on the skin increases, comedones and atheromas appear, the lesion spreads to all seborrheic zones. Usually the disease occurs until 26-28 years of age. The condition of the skin process improves in the summer, under the influence of ultraviolet radiation. Mixed seborrhea is often complicated by pustular diseases, baldness, rosacea.

Treatment consists in prescribing large doses of vitamin A, E and C. Iron preparations, general strengthening agents are shown. In nutrition

it is advisable to limit carbohydrates, salt, fats, spicy foods and seasonings. Local treatment consists in the use of sulfur preparations, salicylic acid, resorcinol and other agents.



**Plc.11 Seborrhea**

### **Eczema**

Eczema is a chronic relapsing inflammation of the superficial layers of the skin. In the development of the disease, functional, neurotrophic or organic changes in the central and peripheral nervous system, endocrine disorders, diseases of the liver, stomach, metabolic disorders, hypo- and beriberi.

With eczema, polyvalent sensitization develops due to contact with various irritants, as a result of

which an allergic restructuring of the body occurs. A certain role is played by the microbial factor (pyococci, pathogenic fungi), which contribute to skin sensitization both to pathogens and to their metabolic products.

**Classification.** According to clinical manifestations, true, microbial, professional, seborrheic and childhood eczema are distinguished, along the course - acute, subacute and chronic.

True eczema is characterized by the appearance of microvesicular and micropapular elements against the background of hyperemic and edematous skin. In the future, the bubbles open with the formation of crusts, under which epithelialization occurs. True eczema is characterized by polyvalent sensitization, symmetry of lesions, fuzzy boundaries of lesions, gradually turning into apparently healthy skin, true and evolutionary polymorphism, frequent localization on the upper limbs, face.

There may be rashes distant from the main focus, which are called eczematids.

Chronic eczema is characterized by a less pronounced inflammatory process, lichenification in the lesions.

Microbial eczema develops in individuals against the background of sensitization of the body to the microbial factor or its metabolic products. There are nummular eczema, which manifests itself in the form of rounded spots, with clear boundaries; varicose - against the background of a varicose symptom complex, paratraumatic - at the site of injury, wound, operation. Localization of microbial eczema is more often on the lower and upper extremities, in places subjected to constant friction.

Clinic. The lesions are rounded, with clear boundaries, the skin is hyperemic, with a bluish tinge, edematous, infiltrated. There are microvesicles, lamellar peeling, yellowish crusts, there is a tendency to peripheral growth, an asymmetric location at the onset of the disease. On apparently healthy skin, there may be screenings - separate pustules, around which eczematous foci form.

Seborrheic eczema is localized on the skin of the scalp, face, chest, interscapular region. The clinical picture is characterized by hyperemia and peeling. The scales are yellow, the lesions are clear, there may be weeping, more often behind the auricles, subjectively itching.

Children's eczema most often occurs in infancy, especially in children who are bottle-fed or suffering from any disease of the gastrointestinal tract. The process is mainly localized on the skin of the face, scalp, behind the auricles. Against the background of erythematous spots, bubbles, erosion, weeping, yellow crusts appear.

Kaposi's eczema herpetiformis, or vaccinal pustulosis, occurs as a result of contact of a child with eczema, neurodermatitis or burns, with patients with simple vesicular deprivation.

Incubation period is an average of a week. The disease begins with an increase in body temperature up to 40 ° C, proceeds severely with symptoms of severe intoxication. On the inflamed and edematous skin, multiple grouped vesiculo-pustular elements appear with an umbilical depression in the center. The mucous membranes of the external genital organs and the oral cavity may be affected. In addition, regional

lymphadenitis, stomatitis, keratoconjunctivitis are noted, meningeal phenomena and encephalitis, pneumonia, gastrointestinal disorders, and secondary infection are possible. In weakened children, when internal organs and the nervous system are involved in the process, death is possible as a result of shock.

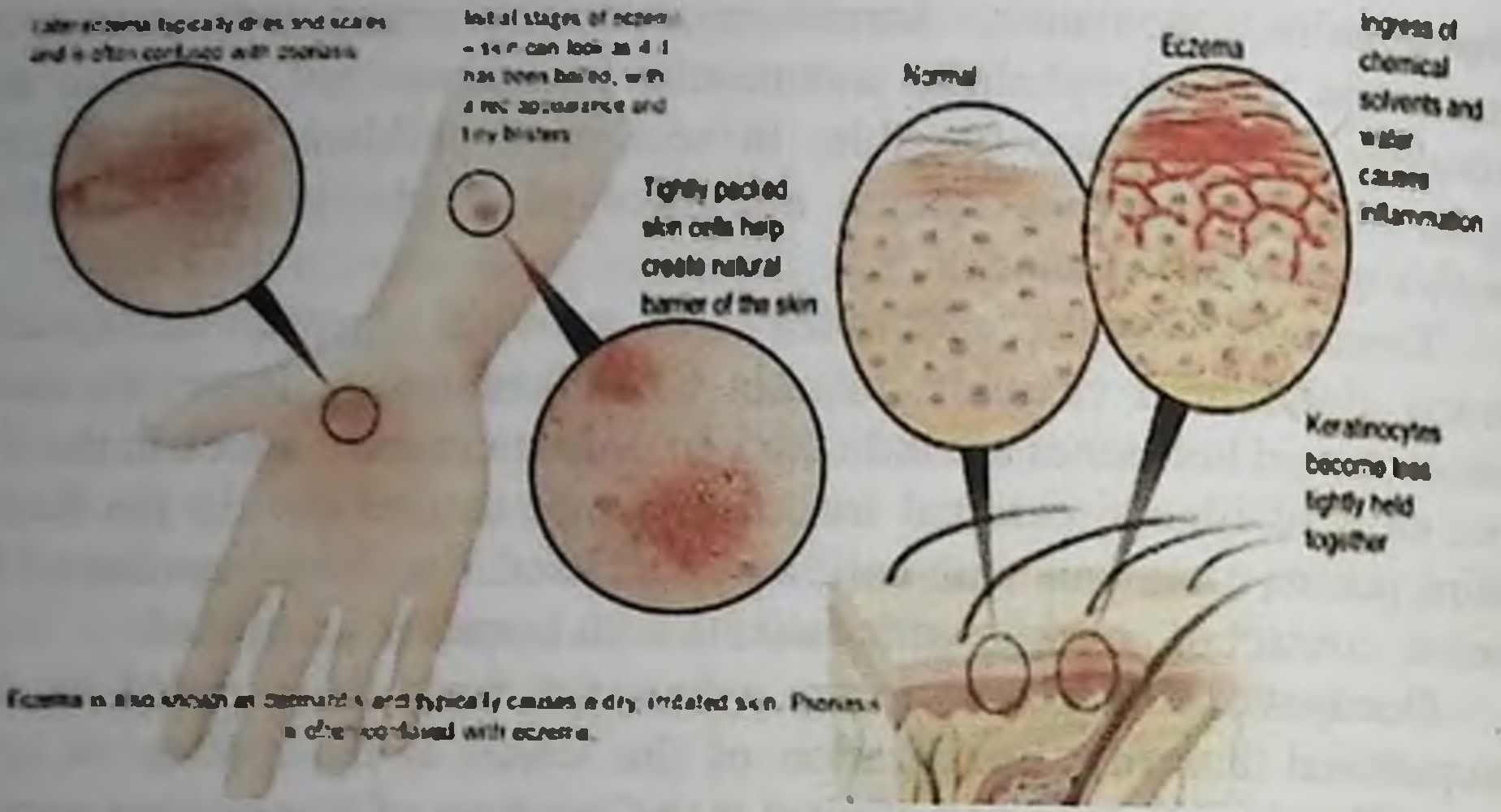
Treatment. Apply antibiotics and antiviral agents, anti-measles gamma globulin, B vitamins, vitamin C, antihistamines. In severe cases, glucocorticoid hormones are indicated. In order to prevent shock in the first three days of illness, external treatment is not carried out. In the future, aniline paints, ointments with antibiotics are used. For the prevention of the disease, contact of children with patients with herpes is prohibited.

Occupational eczema occurs when the body is exposed to any occupational hazards. Localization of the lesion is most often on open areas of the skin. Itching and clinical manifestations of true eczema appear. Diagnosis of occupational eczema is based on sanitary- technical characteristics of working conditions, anamnesis, which takes into account the place of work, experience in this technological process, the duration of the disease and the presence of other workers employed in this area of work with a similar skin lesion, improvement of the skin process during weekends, vacations, etc.

It is necessary to carry out setting skin tests with suspected allergens (compress, scarification, drop, intradermal tests).

Treatment of patients with eczema consists in prescribing hyposensitizing agents (calcium preparations, in severe cases, glucocorticosteroids), antihistamines, vitamins of groups B, C, PP. From physiotherapeutic methods, inductothermy, acupuncture can be used.

Local treatment depends on the stage of the skin process - lotions, pastes, ointments, creams. Seasonings, salty, smoked, fatty, concentrated broths, coffee, cocoa and other spicy dishes should be excluded from the diet. Recommended spa treatment with the use of hydrogen sulfide and radon baths.



**Pic.12 Eczema**

**CHAPTER 3 ATOPIC DERMATITIS, NEURODERMITIS,  
CHILDREN'S ITCH. DESCRIPTION. ETIOLOGY,  
PATHOGENESIS, CLINIC, CLINICAL FORMS, BASIS OF  
DIAGNOSIS AND TREATMENT**

**NEURODERMITIS**

*/ Atopic Dermatitis /*

In the development of neurodermatitis, neuroendocrine, metabolic disorders, the state of various parts of the nervous system, and hereditary predisposition play an important role. In childhood, the disease often develops against the background of exudative diathesis, allergic reactivity.

Unfavorable environmental factors can aggravate the course of the disease. Deterioration of the skin process is noted more often in the autumn or spring periods of the year. The main complaint is intense itching, disturbing patients at any time of the day.

The primary morphological element is a papule, initially indistinguishable from the color of normal skin, and then brownish-pink. Merging with each other, papules form foci of lichenification. The skin of patients with neurodermatitis is dry, gray, pigmented, with a pronounced pilomotor reflex and white dermographism due to the predominance of the sympathetic nervous system. Patients are irritable, sleep poorly, respond inadequately to various stimuli.

Limited neurodermatitis is localized on the back and side surfaces of the neck, in the back of the head, elbow and popliteal folds, inner thighs, in the ano-genital region. In the central zone of the lesions, infiltration and lichenification of the skin are observed, in the middle zone - shiny papules, and along the periphery of the lesions - pigmentation.

Diffuse neurodermatitis is characterized by a widespread lesion of the skin of the extremities, face and other parts of the body and is manifested by polygonal papules, infiltration, lichenification, and scratching.



Atopic dermatitis usually occurs in children and manifests itself as exudative diathesis or childhood eczema, subsequently turning into neurodermatitis. The disease is based on a hereditarily altered immunological response to the action of an allergen, i.e. congenital predisposition to allergies. Sometimes the disease is combined with bronchial asthma, helminthiases, eosinophilia.

Treatment of neurodermatitis should be complex, taking into account the individual characteristics of the body. It must be remembered that many foods and chemicals added to them can cause or exacerbate the course of the disease. Therefore, in the treatment and prevention of their great importance is proper nutrition.

Chocolate, coffee, cocoa, mushrooms, honey, berries and fruits, orange and red vegetables, marmalade, jam, caramels, cow's milk, eggs are not recommended, carbohydrates and salt should be limited. Peeled potatoes, cereals should be soaked in water for 12-18 hours. Meat products (beef, lean pork, rabbit meat, turkey, chicken) are subjected to double digestion.

To this end, pour cold water and boil for 30 minutes, then drain the water, and pour the meat with hot water and bring to readiness. Shown are vegetable oils, old fat, vegetable purees from zucchini, white and cauliflower, rutabaga, pumpkins, turnips, fruit purees from green apples, pears, bananas.

Nonspecific hyposensitization of the body is carried out - antihistamines, immunomodulators. Medications affecting the sympathetic nervous system, ganglionic blockers, nicotinic acid preparations are prescribed. Vitamin therapy of group B is shown, from physiotherapeutic treatment - UVI, diathermy, electrosleep, reflexology, inductotherapy.

External treatment is carried out with antipruritic ointments and creams. Shown sanatorium - resort treatment in a dry and hot climate. Do not wear synthetic and wool underwear. Patients should be under dispensary observation with a frequency of 2-4 times a year, examined by a therapist, neuropathologist, ENT, dentist.



Plc.12 Neurodermitis

### URTICARIA

Urticaria refers to diseases of a toxic-allergic nature. The causes of the disease can be both internal and external factors. Most often, the development of the disease is influenced by diseases of the gastrointestinal tract, intestinal parasites (worms, Giardia), disorders of the nervous system, food, drugs, contact with synthetic fabrics, with some plants, cosmetics, smells of flowers, insect bites, exposure to cold, heat, insolation, etc.

In children, the most common cause of urticaria is hypersensitivity to foods such as eggs, cow's milk, chocolate, citrus fruits, strawberries, mushrooms, smoked meats, etc.

Due to irritation of mast cells, histamine and other biologically active substances are released into the bloodstream, which, in turn, act on the vascular wall, increasing its permeability, which contributes to the release of the liquid part of the blood. As a result, there is a limited edema of the papillary dermis, resulting in the formation of a primary cavity-less exudative morphological element, the clinical sign of urticaria is a blister.

There are acute and chronic recurrent urticaria.

Acute urticaria is manifested by a sudden rash of blisters on any part of the skin, which disappear without a trace after a few minutes or hours. The size of individual elements can be very large - giant urticaria or acute limited Quincke's edema. It is manifested by limited swelling of the skin and subcutaneous tissue, most often on the face or genitals, densely elastic consistency and porcelain-white color.

After a few hours or days, the swelling disappears. The appearance of urticaria is always accompanied by itching and burning. There may be a fleeting rash, when the blisters quickly disappear without treatment. In acute urticaria, red dermographism is noted. At the same time, the disease can last more than a month and become chronic.

Chronic recurrent urticaria proceeds for a long time, accompanied by severe itching, sleep disturbance, scratching, lichenification and bloody crusts on the skin. May be complicated by secondary infection. In addition to the skin, the mucous membranes of the nose, oral cavity, and larynx are also affected, in severe cases leading to suffocation. Attacks of the disease can be accompanied by chills, fever, malaise, a feeling of weakness, joint pain, intestinal disorders.

One of the varieties of urticaria is artificial urticaria, when blisters form in response to mechanical irritation of the skin (when determining dermographism).

**Treatment.** First of all, it is advisable to find out the causes of the disease. If an allergen enters

through the gastrointestinal tract (depending on the timing of the ingestion), it is necessary to cleanse the intestines, take a laxative, diuretic.

Antihistamines (except diphenhydramine, which can cause urticaria), intravenously 10% calcium chloride solution, intramuscularly 10% calcium gluconate solution, 30% sodium thiosulfate solution intravenously.

With swelling of the larynx, 0.5 - 1.0 ml of a 1: 1000 adrenaline solution is immediately injected subcutaneously. In severe cases, the introduction of glucocorticoid hormones is necessary.

Nutrition is of great importance in the treatment of chronic urticaria. It is necessary to avoid taking spicy foods, canned food, sweets, alcoholic beverages, to monitor the proper functioning of the intestines.



Plc. 12 Urticaria

### SKIN ITCH

There are primary itching, which occurs in patients with jaundice, diabetes mellitus, blood diseases, cancerous tumors, with lesions of the liver, kidneys, gastrointestinal tract, pancreas, with disorders of the central nervous system and other conditions, and secondary itching, which accompanies almost all skin diseases.

There may be senile itching associated with atherosclerotic changes in blood vessels and internal organs, disorders of cholesterol and nitrogen metabolism, etc.

The primary morphological elements of a skin rash with skin itching are not determined, but traces of scratching, hemorrhagic crusts are usually observed against the background of apparently healthy skin.

By distribution, itching is divided into universal, or generalized, and limited, or localized. Most often, localized itching occurs in the vulva and anus. The most common causes of localized

itching are inflammatory diseases of the genital organs, trichomoniasis, candidiasis, diseases of the gastrointestinal tract, hemorrhoids, diseases of the urinary tract, helminthiases, more often pinworms, prostatitis, the use of contraceptives and others. With a long-

term itching, the lesions infiltrate, thicken. At the site of scratching, a secondary infection joins.

Treatment. It is necessary to find out the cause of itching with its subsequent elimination. In addition, antihistamines and hyposensitizing agents and tranquilizers are prescribed. Locally applied corticosteroid ointments, antipruritic agitated suspensions, creams, pastes.

## **SHEETS**

Children's pruritus (children's urticaria, children's papular urticaria, strophulus) occurs only in children, usually begins in infancy, sometimes at 3-4 years. An important role in the occurrence of the disease is played by hypersensitivity to cow's milk, citrus fruits, egg white, strawberries, strawberries, poor nutrition of the child and his mother, functional disorders of the gastrointestinal tract, helminths, hereditary factors, etc.

The disease is manifested by blistering elements on the skin of the trunk, extensor surface of the upper limbs, buttocks. In the center of the blisters are papules.

Papules are characteristic, at the top of which there are vesicles (papulo-vesicles) or small blisters with serous contents. Skin lesions are accompanied by severe itching, resulting in scratching, erosion, hemorrhagic crusts. After themselves, the rashes leave age spots and whitish scars. The general condition is disturbed, regional lymph nodes increase, a secondary infection joins. In patients, as a rule, white dermographism is determined. With age, children's pruritus can transform into adult pruritus, into limited or diffuse neurodermatitis.

Treatment should begin with the elimination of factors contributing to the development or exacerbation of the disease. A balanced diet is recommended correction of disturbed functions of the gastrointestinal tract. Antihistamines, calcium preparations, vitamins A, B2, B3, B5, B6, B15, histaglobulin are shown. Antipruritic pastes and creams, corticosteroid ointments are applied externally. Useful starch baths, general UVI.

Adult pruritus, or temporary pruritus, occurs more frequently in women between the ages of 20 and 40.

In its occurrence, a certain role is played by dysfunctions of the gastrointestinal tract, neuropsychiatric disorders, nutritional errors, autointoxication, the state of the endocrine glands, etc. Mostly on the extensor surfaces of the upper and lower extremities, buttocks, and the trunk of patients, intense itching and papulo rashes disturb - vesicular elements, blisters.

Due to scratching, hemorrhagic or serous crusts, whitish scars or age spots are formed on the surface of the papules. Relapses of the disease are observed more often in spring and autumn, with climate change.

Treatment of pruritus in adults must begin with a balanced diet and removal of the causes that support the disease. In addition, antihistamines, hyposensitizing agents are recommended. Antipruritic creams and ointments are applied locally.

Gaida's knotty pruritus occurs as a result of endocrine system disorders, intoxication of endogenous origin, neuropsychiatric disorders, etc. Women are more likely to get sick. There is a strong itching of the skin of the extremities, then papules and nodes pour out, sometimes blisters. The size of the papules reaches several centimeters in diameter, warty growths appear on their surface. The elements of the rash do not merge and do not group, they resolve over time, leaving behind depigmented scars.

Treatment of nodular pruritus is difficult. In addition to hyposensitizing and antihistamine therapy, diathermocoagulation, laser therapy, chipping of elements with a hydrocortisone suspension, cryotherapy with liquid nitrogen, and chlorethyl irrigation are used.

**CHAPTER 4 VITILIGO, LEISHMANIASIS, LEPROA.  
DESCRIPTION. ETIOLOGY, PATHOGENESIS, CLINIC,  
CLINICAL FORMS, BASIS OF DIAGNOSIS AND TREATMENT**

**Leprosy**

Leprosy, or leprosy, is a chronic infectious disease caused by the mycobacterium leprosy, discovered by Hansen in 1871. There are epidemic foci of leprosy in Central Asia, the Baltic States and other regions. Rare, isolated cases are registered in our republic.

The skin, mucous membrane, peripheral nervous system, internal organs, bones, organs of vision are affected. The source of infection is a sick person. Infection can occur through close and prolonged contact with the patient, less often through household items (dishes, linen), and the airborne route of infection is also possible. Hypothermia, alcoholism, mental trauma, pregnancy and childbirth, and other factors contribute to infection.

The incubation period ranges from 2 - 3 months to 10 - 20 years or more. There are lepromatous, tuberculoid and undifferentiated types of leprosy.

The lepromatous type is the most severe and contagious, as it occurs against the background of a decrease or absence of the body's defenses. Skin lesions are predominantly localized on the face, back of the hands, forearms, shins, thighs and buttocks and are manifested by the formation of limited infiltrates, tubercles, nodes. The skin above them is red-brown with telangiectasias.

Located in the region of the superciliary arches, nose, neck, chin, infiltrates or lepromas give the face the appearance of a "lion's muzzle". In place of leprosy, there is increased sebum secretion, hair loss, there is no temperature, pain and tactile sensitivity due to damage to the peripheral nervous system.

In the future, lepromas can ulcerate, leaving cicatricial atrophy. The mucous membranes of the nose, soft and hard palate, lips, tongue, larynx and pharynx are affected. Speech is disturbed, hoarseness of voice, aphonia

appears. There are changes in the organs of vision in the form of keratitis, iridocyclitis.

Lesions of the central and peripheral nervous system are manifested by neurotic reactions, psychoses, neuritis and polyneuritis. In the future, trophic and motor disorders develop, a violation of sensitivity, first temperature, and then tactile, pigmentation, mutilation (rejection) of the hands and feet is possible.

Tuberculoid type - a favorable form of leprosy, proceeds against the background of good body resistance. The skin is affected, rarely the nerves. Red spots or plaques appear from small red-

cyanotic papules that merge with each other, forming various shapes. Along the periphery of the plaques, there is a pronounced ridge with clear boundaries, and atrophy in the center.

Damage to the peripheral nervous system is manifested by a violation of pain, temperature and tactile sensitivity. Peripheral nerves are thickened in the form of strands or bundles. In the foci there is no hair growth and sweating.

The undifferentiated type is manifested by erythematous, hypochromic spots with clear boundaries in the trunk area. Vellus hair falls out in the foci. Temperature disappears, and later pain and tactile sensitivity, there is no sweating. As a result of damage to the peripheral nervous system, mono- and polyneuritis develop, atrophy of the small muscles of the hands, thenar and hypothenar, forearms, feet, and legs.

The face acquires a mask-like expression (the face of "Saint Anthony"). Along the peroneal, ulnar, and large ear nerves, painful cord-like thickenings appear, neuralgic pains occur, contractures of the joints of the hands, feet, paresis and paralysis of the limbs, mutilation of the phalanges of the fingers or resorption of small bones on the hands and feet occur.

With the weakening of the protective forces of the patient's body, the undifferentiated type can be transformed into lepromatous or tuberculoid with the appearance on the skin of rashes corresponding to these types.



The WHO Expert Committee on Leprosy recommends that the Madrid Ridley-Jopling classification based on the immunological concept be used in addition to the Madrid classification for better familiarization with it by health care professionals. In this classification, the following forms are distinguished:

Undifferentiated lesions of the first stage. A small amount of *Mycobacterium leprosy* does not cause a response and the disease does not develop. If the immune system of the patient is strong, then the disease will never develop.

With a slight immune deficiency, *mycobacterium leprosy* in the body multiply to the extent that they can already be detected. But since there are few of them, and hypersensitivity has not yet developed, the response will be weak and, from the point of view of classification, undifferentiated.

This lesion disappears without treatment. If there are large violations of immunity, then the causative agent of leprosy will multiply further and the disease is disseminated. Multiple lesions always indicate a low degree of immunity. Undifferentiated lesions of the second stage. The pathological process can be characterized clinically based on the size and spread of the lesions, the degree of erythema, and other changes. At this stage, the lymphocyte transformation test and the lepromine test are positive.

Polar lepromatosis (LL or LLp) corresponds to the lepromatous form (L) in the Madrid classification. Histologically, a granuloma without epithelioid cells is determined, the subepidermal zone is free from *mycobacteria*. Bacterioscopic examination gives sharply positive results. This type is immunologically stable - the lepromine test is always negative.

Polar tuberculoid (TT) corresponds to tuberculoid leprosy. Histologically, the granuloma contains a large number of lymphocytes, giant cells of all kinds. This form is immunologically stable; positivity

for lepromin 3+. border form. There are three forms of borderline leprosy, depending on the nerve damage.

Borderline tuberculoid (BT). It is characterized by a small symmetrically located skin lesion. Nerves are involved in the pathological process, functional disorders develop slowly. Reaction to lepromin 2/1+.

Border form (BB) Plaque-like rashes are numerous with a slightly raised surface, the nerves are relatively little involved in the process. The reaction to lepromin is negative or slightly positive.

Borderline lepromatosis (BL). Skin lesions are numerous, shiny. The nerve trunks are enlarged. The reaction to lepromin was negative.

Diagnosis of leprosy is based on the epidemiological history, clinical manifestations of the disease. It is necessary to check the temperature, pain and tactile sensitivity in lesions suspicious for leprosy. A test with nicotinic acid is carried out, for this purpose 5 ml is injected intravenously. 1% aqueous solution of nicotinic acid.

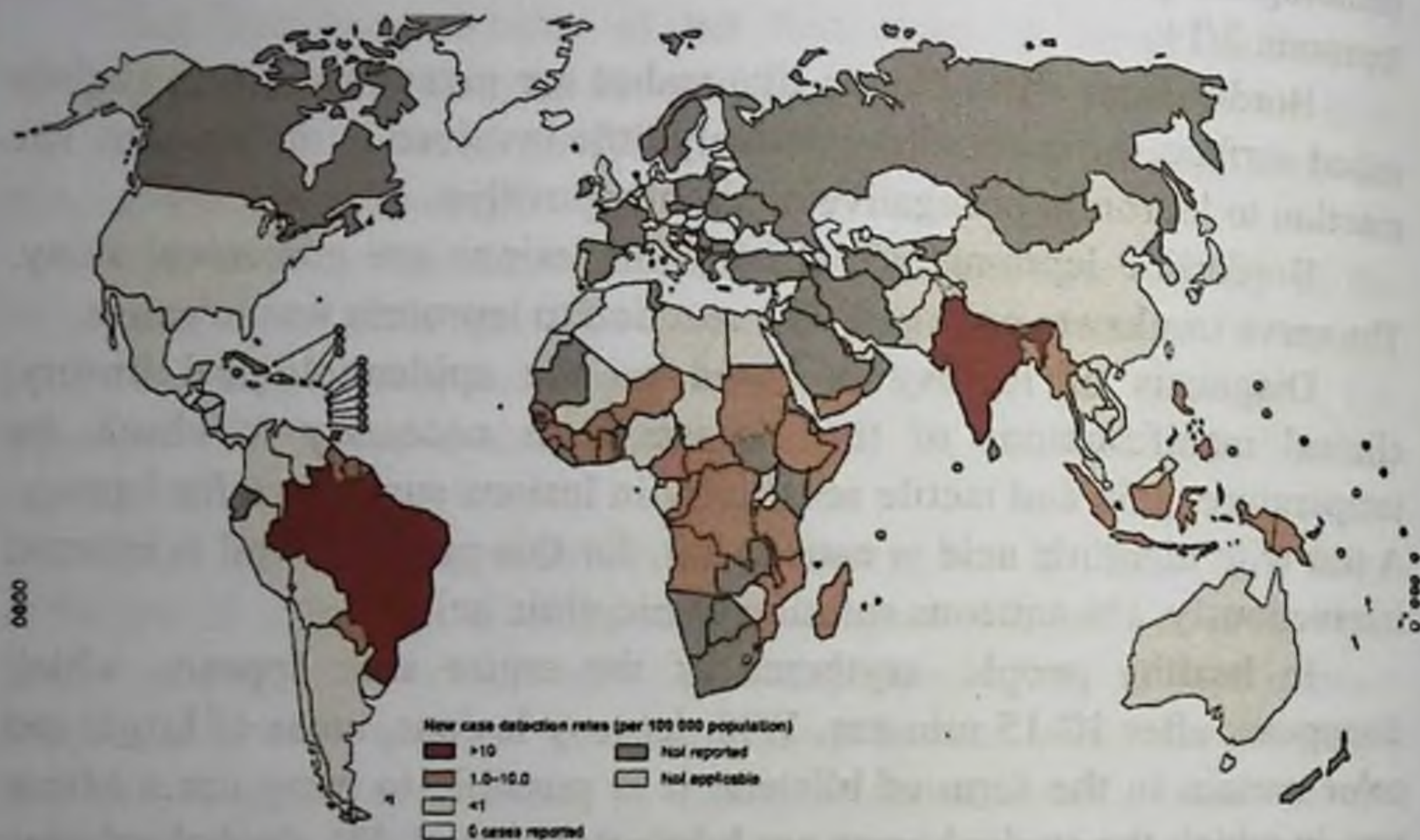
In healthy people, erythema of the entire skin appears, which disappears after 10-15 minutes. With leprosy lesions, areas of bright red color remain in the form of blisters. It is possible to carry out a Minor test, in which the studied areas are lubricated with 2-5% alcohol solution of iodine and after it dries, the foci are sprinkled with starch.

After increased sweating, the skin in leprosy foci does not change color, but in healthy ones, due to normal sweating, starch turns blue.

To confirm the diagnosis of leprosy, it is necessary to search for the pathogen. For this purpose, a scraping of the mucosa from 2 nasal passages and in tissue juice from the lesions is carried out. A histological examination of biopsy specimens of affected skin areas is shown.

Treatment of leprosy is carried out with drugs of the sulfonic series - DDS, diaminodiphenyl sulfone, dimocyfon, diucifon, avlosulfone, dapson and others. In complex therapy, biostimulants, immunomodulators, vitamin therapy and other non-specific agents are used. Prevention consists in the early detection and isolation of patients

in the leper colony. It is necessary to regularly examine family and household contacts, carry out medical examinations of the population and conduct sanitary and educational work in endemic areas. If leprosy is found or suspected, the local health authorities should be notified immediately.



**Pic.14 Leprosy**

**Borovsky's Disease / Leishmaniasis /**

Cutaneous leishmaniasis (pendine ulcer, yearling, oriental ulcer, etc.)

an infectious disease found in countries with a tropical climate, in Central Asia, Transcaucasia. The causative agent is Borovsky's bodies (*Leishmania tropica*).

There are two types of skin leishmaniasis: rural, zoonotic or acute necrotic and urban, anthroponotic, or late ulceration. The source of infection for the rural type are wild rodents: ground squirrels, gerbils, dogs, hedgehogs, humans; for the urban type - a person. The carrier of the disease is mosquitoes.

The rural, or zoonotic type, is characterized by a short incubation period, from several days to 2 months, and a rapid course, up to 6 months. After the incubation period, large tubercles appear at the site of the bite, which, after 1-2 weeks, necrotic with the formation of painful ulcers with

undermined edges, with an uneven bottom, covered with granular granulations resembling "fish caviar" or warty growths. Complete scarring occurs within 6 months.

Urban, or anthroponotic type, ulcerating late, is observed in urban residents. The incubation period is from 2 months to a year or more. A tubercle appears at the site of the bite, gradually increasing in size. After 3-4 months, erosion appears in the center of the element, turning into an ulcer with raised edges of a brownish-red color. The bottom of the ulcer is covered with granulations and the process ends with the formation of a scar (Print of Cain).

The diagnosis of cutaneous leishmaniasis is established on the basis of the patient's stay in the endemic zone, the results of bacterioscopic and bacteriological studies (detection of leishmania). The differential diagnosis is from tertiary syphilis, tuberculous lupus, furuncle, skin cancer, Beck's sarcoid.

Treatment. Monomycin is prescribed at 0.25 intramuscularly after 8 hours for 2 weeks, metacycline 0.3 2 times a day for 2 weeks, doxycycline 0.2 per day for 2 weeks, 20% solusurmin solution at the rate of 0.35 ml / kg body weight (7-8 ml) intravenously daily for 20-30 days. If the disease recurs after 2 months, a second course of treatment is carried out.

Prevention is aimed at the destruction of carriers of infection (mosquitoes), protection from them and the elimination of reservoirs of infection.



**Pic.15 Leishmaniasis**

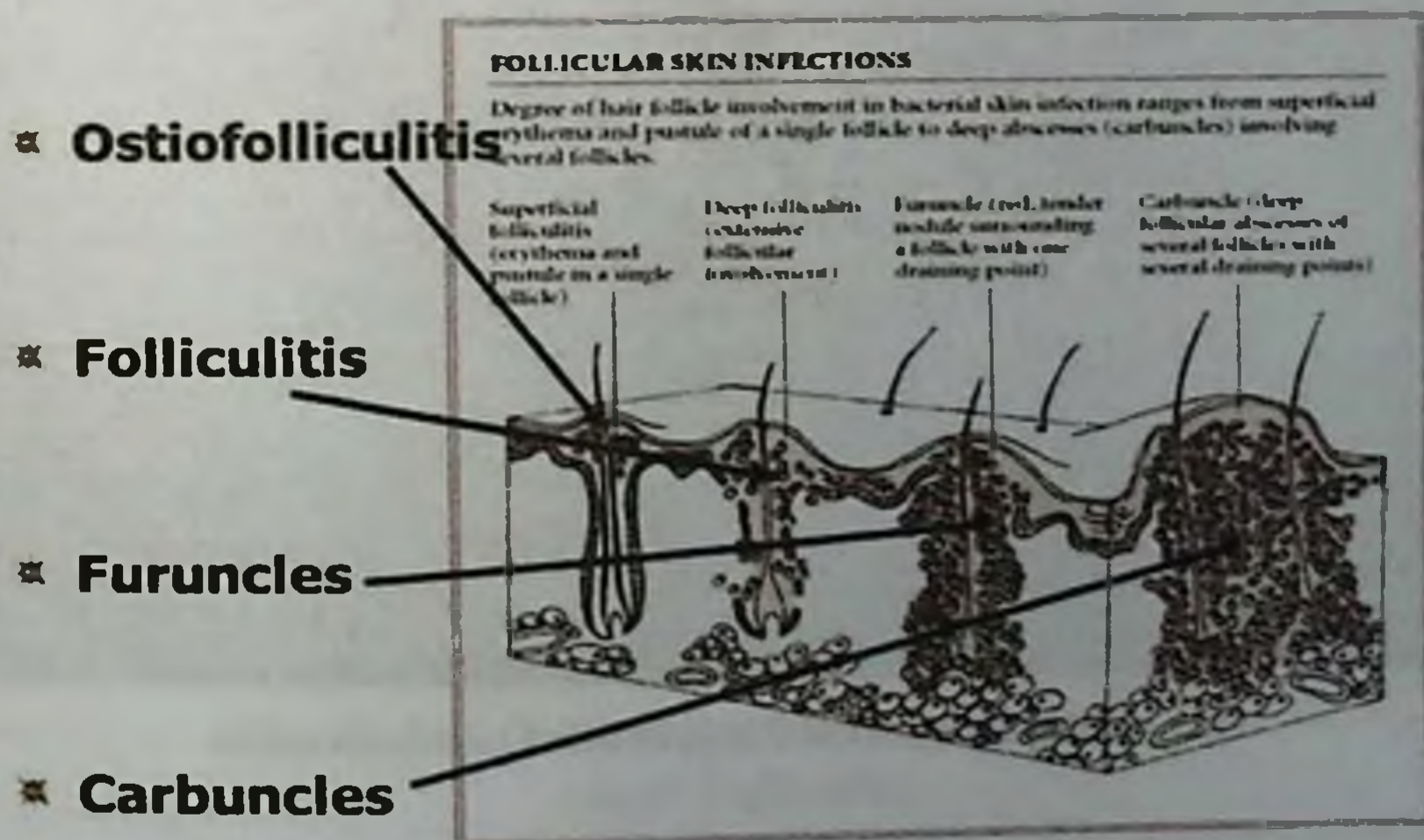
## CHAPTER 5 PYODERMA. ACNE. DESCRIPTION. ETIOLOGY, PATHOGENESIS, CLINIC, CLINICAL FORMS, BASIS OF DIAGNOSIS AND TREATMENT

### Pustular skin diseases

In the occurrence of the disease, pyogenic cocci - staphylo and streptococci play an important role. A number of endogenous and exogenous factors contribute to the development of the disease. Among exogenous factors, it is necessary to note traumatization of the skin, excessive sweating, pollution, overheating or hypothermia of the body.

Endogenous factors are a violation of carbohydrate metabolism in diabetes mellitus, endocrine disorders, thyroid diseases, insufficient activity of the pituitary-adrenal system, weakening of immune mechanisms, and vegetative neurosis. Malnutrition also plays a role - protein deficiency, carbohydrate abuse, hypovitaminosis. In children, the development of pyodermatitis is facilitated by the lack of physiological barriers, loose epidermis, high absorption skin ability. It must be remembered that pustular skin diseases, especially its severe forms, can be a manifestation of AIDS.

## LOCAL INFECTIONS



**Classification.** Depending on the ethological factor, pyoderma is divided into staphylococcal, streptococcal and mixed, according to the depth of the lesion - superficial and deep, along the course - acute and chronic.

**Staphylococcal piodermitis.** The pathological process develops in the deep layers of the skin, mainly in the area of hair follicles, in the sebaceous and sweat glands. There are the following types of staphylococcal lesions: ostiofolliculitis, sycosis vulgaris, folliculitis, furuncle, carbuncle, hydradenitis, epidemic pemphigus of newborns.

**Ostiofolliculitis.** The pustule is located at the mouth of the hair follicle, penetrated by hair in the center and surrounded by a narrow, pink border. Localized on the skin of the face, neck, forearms, thighs, legs. Occurs after mechanical irritation of the skin, as a result of sweating, with scabies. Individual elements can grow up to 1 cm (staphylococcal impetigo Bockhardt).

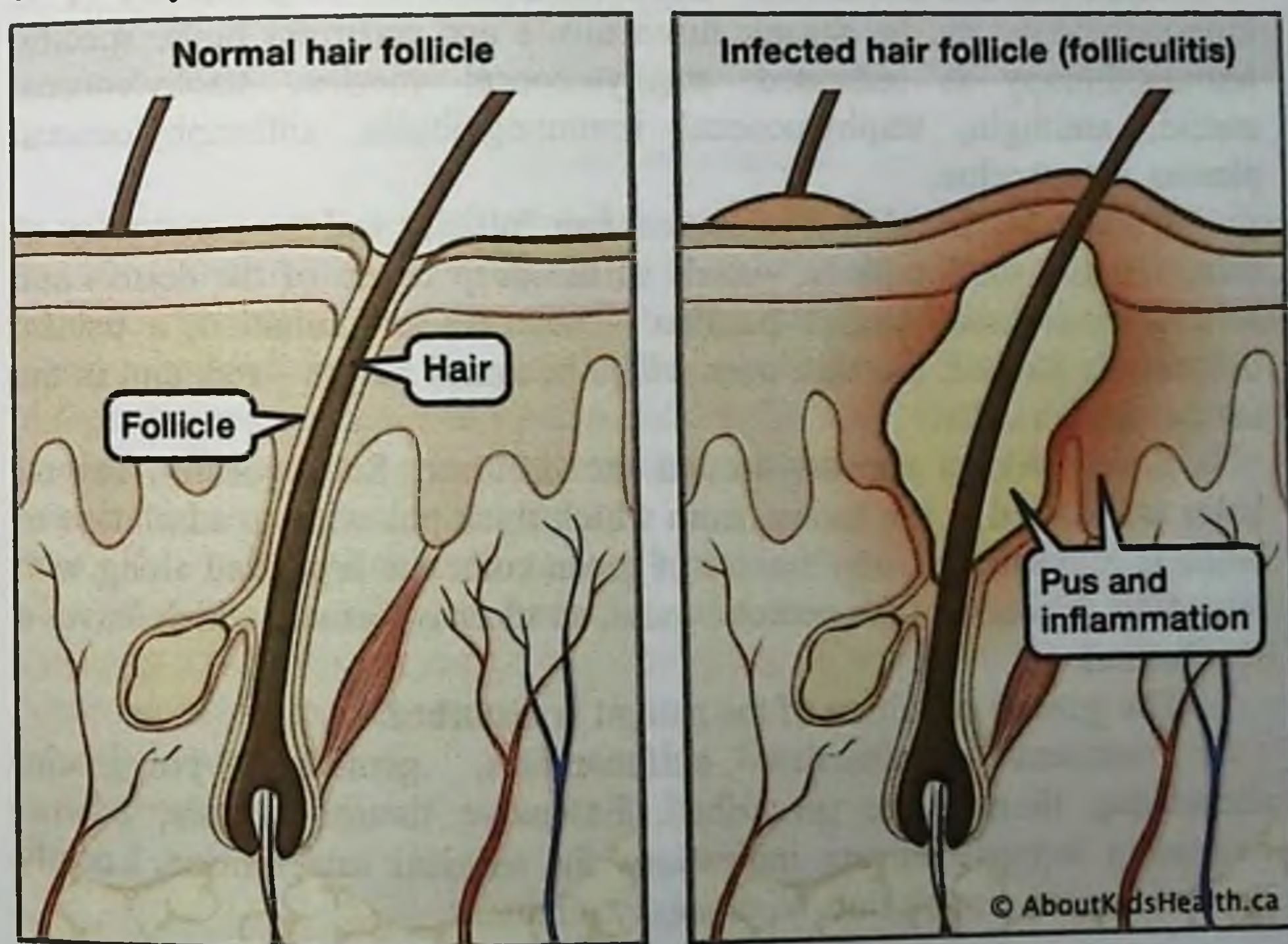
Treatment consists in repeated lubrication of the foci with solutions of aniline dyes, followed by the use of antimicrobial ointments.



**Pic. 16 Staphylococcal Piodermitis Ostiofolliculitis**

**Folliculitis.** As the infection penetrates deep into the follicle, an infiltrate appears around the pustule, dense and slightly painful on palpation. The localization of the lesion is varied. After healing, a dotted scar remains.

**Treatment.** Lubrication of foci with solutions of aniline dyes, ichthyol. **Furuncle.** The process involves not only the connective tissue of the follicle, but also the surrounding tissue, subcutaneous fat. A pronounced edema and hyperemia develops around the pustule, a deep-seated inflammatory infiltrate with necrosis in the center, painful on palpation. The general condition of the patient is disturbed. In its development, the furuncle goes through the stage of maturation (dense and painful infiltrate), the stage of resolution (necrosis with rejection of the necrotic rod), the stage of healing - scarring. The development cycle of a boil takes 8 to 10 days.



**Pic.17 Folliculitis**



It is necessary to be very attentive to patients with localization of boils on the skin of the face and, in particular, located above the corners of the mouth. The danger lies in the development of purulent thrombophlebitis of the facial veins with the possible development of meningitis, sepsis, which can lead to the death of the patient. With recurrence or their presence in large numbers, they speak of furunculosis.

**Treatment.** At the stage of maturation, it is recommended to apply topical dressings with ichthyol, dry heat, wiping the skin around the focus with alcohol solutions of salicylic or boric acid. After opening the boil, a hypertonic solution, hydrogen peroxide, Vishnevsky ointment are used. Washing in a bath or shower is contraindicated. Do not apply warm compresses due to the possible spread of infection. Surgical treatment is indicated for abscessing boils.

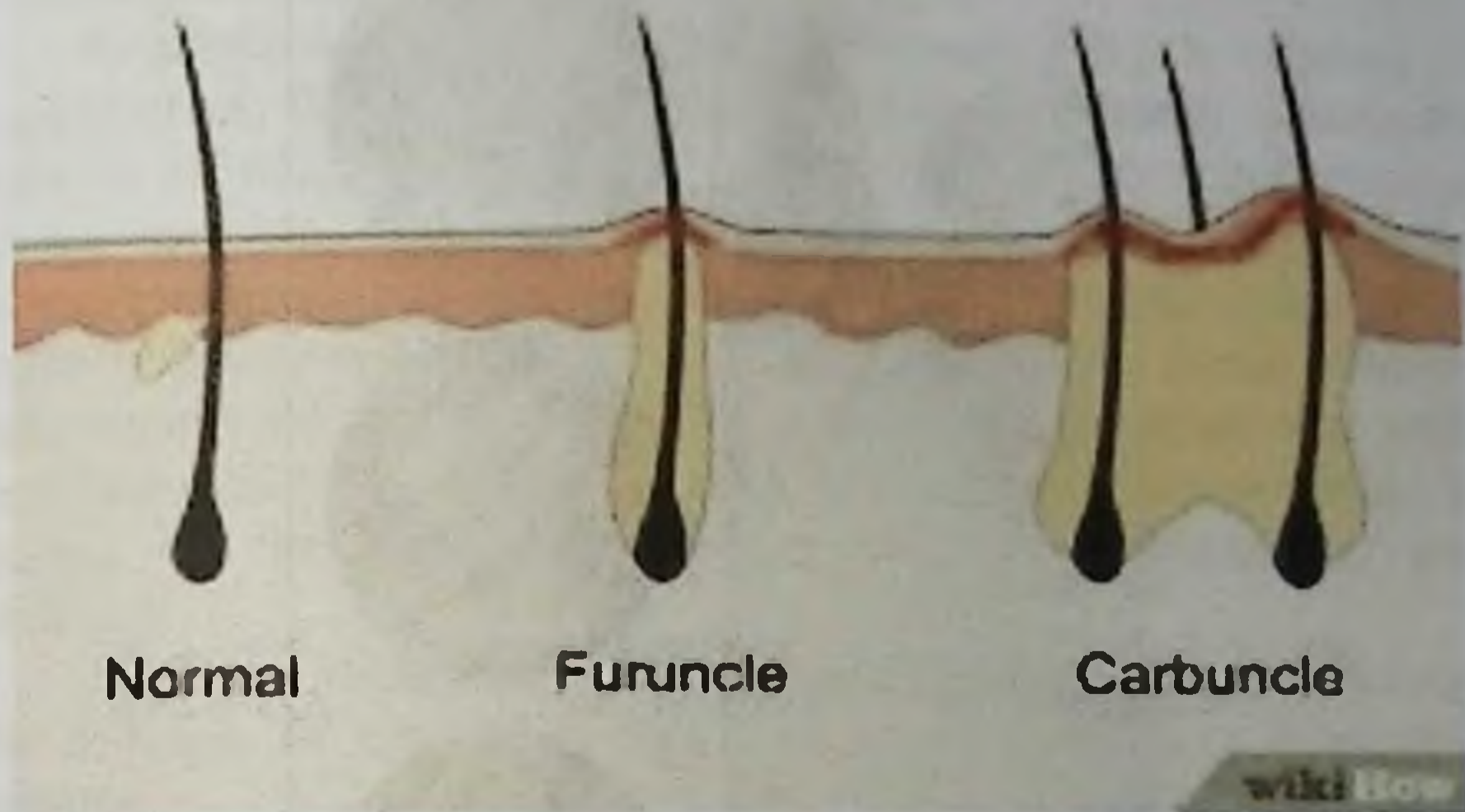
**Application** Shown inside antibiotics, vitamins of groups B, C, A, immunomodulators. In chronic furunculosis and recurrent boils, specific immunotherapy is indicated: staphylococcal vaccine, staphylococcal toxoid, antifagin, staphylococcal immunoglobulin, antistaphylococcal plasma, autovaccine.

**Carbuncle.** The defeat of several hair follicles and the penetration of infection into the lymphatic vessels of the deep layers of the dermis and subcutaneous tissue causes purulent - necrotic inflammation, a painful infiltrate is formed, the skin over which becomes purple - red, and in the center - bluish color.

Severe edema appears around the infiltrate. Subsequently, several holes are formed in the lesion, from which thick pus with an admixture of blood is released, necrotic masses of green color are separated along with pus. After rejection of the necrotic mass, an ulcer is formed, which leaves a scar behind.

The general condition of the patient is disturbed.

**Treatment.** Antibiotics, sulfonamides, gemodez, polyglucin, stimulating therapy are prescribed. Extensive tissue necrosis, edema, increasing intoxication are indications for surgical intervention. Locally applied hypertonic solution, Vishnevsky ointment.

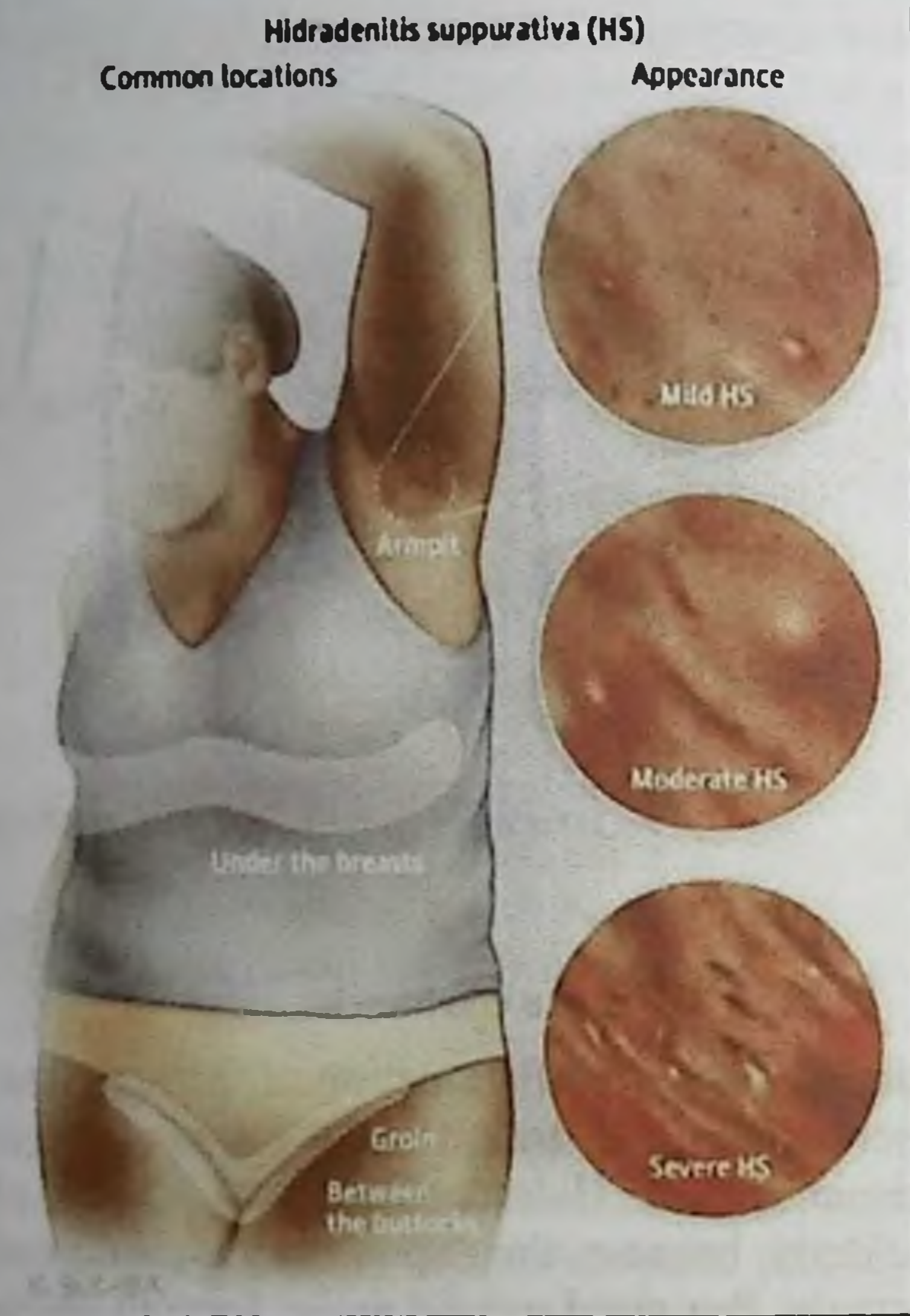


Plc.18 Carbuncle.

Hidradenitis is a purulent inflammation of the apocrine sweat glands. It is localized more often in the armpits, in the area of the external genital organs, the perianal region. Hidradenitis never affects children before puberty and the elderly, because their apocrine glands do not function. The disease begins acutely. Pea-sized painful nodes form in the thickness of the skin, rapidly increasing in size and protruding above the level of the skin, which takes on a purple-red color.

The nodes soften and open, releasing a large amount of creamy pus. The process ends with the formation of a scar. With multiple nodes, the resulting abscesses can merge into one cavity. The disease quite often takes a chronic relapsing character.

Treatment is the same as for furunculosis. In severe cases, radiotherapy is used



**Plc.19 Hidradenitis**

**Vesiculopustulosis (perioritis)** - a staphylococcal disease of newborns appears by the end of the first week of life. The mouths of the eccrine sweat glands are affected. On the scalp, in the folds of the trunk and limbs, small pustules appear, surrounded by an inflammatory corolla. Against the background of existing single elements, fresh pustules may appear.

The general condition of the child is disturbed, the temperature rises. The disease lasts up to 10 days with an uncomplicated course and proper treatment. It is possible to spread the infection over the surface and into the depths of the skin with the development of abscesses or phlegmon.

Weakened children may develop septicopyemia with damage to internal organs and systems, pneumonia, otitis, anemia. The prognosis for uncomplicated forms is favorable.

Pseudofurunculosis (multiple abscesses). It is caused by staphylococci, the ducts of the sweat glands are affected, inflammation captures the entire eccrine gland. More often sick children in the neonatal period, less often under the age of 1 year. In the region of the occiput, back of the neck, limbs, buttocks and torso, nodes appear in size from a pea to a hazelnut, purple-red in color. The nodes can open with the release of yellow-green purulent discharge. The necrotic core is absent. The general condition is disturbed, weakness, fever, diarrhea, malnutrition appear. The process can be complicated by lymphangitis, lymphadenitis, septic condition.

Treatment should be aimed at combating the pathogen, increasing the defenses of the child's body. Good care and proper nutrition are essential.

Mandatory prescription of antibiotics, taking into account the sensitivity of staphylococci to them. Use gamma - globulin, antistaphylococcal plasma, vitamin therapy. External treatment consists in the use of alcohol solutions of aniline dyes, if necessary, opening of abscesses is indicated.



**Pic.20 Pseudofurunculosis (multiple abscesses)**

Ritter's exfoliative dermatitis is the most severe form of neonatal staphylococcal disease. Pathogenic *Staphylococcus aureus* is sown from the lesions and blood of patients. The disease is especially severe when it occurs on the 2nd - 6th day after birth. The lesion usually begins with hyperemia and maceration of the skin in the navel or around the mouth.

Then flaccid blisters appear on various parts of the skin, exudate accumulates under the epidermis, it detaches with the formation of erosions. Within a week, the entire skin of the child is affected, manifested by hyperemia with large erosive surfaces. The epidermis exfoliates in large areas and hangs down in the form of loose pieces and ribbons. Actually the skin is naked, bluish-red, bleeding.

The clinical picture resembles a second degree burn. Positive sign of Nikolsky. The general condition of the child is very serious, the body temperature reaches 41.0 C, a toxic-septic condition develops, and then sepsis. Complications may develop: pyelonephritis, candidiasis, pneumonia, phlegmon and abscesses, otitis media. Possible death. Perhaps a milder and more benign course of the disease in the form of an "abortive" form with lamellar peeling and slight flushing of the skin, without erosion.

Staphylococcal scalded skin syndrome (SSSS) develops in children under the age of five. It has been established that SSSS is associated with the penetration of *staphylococcus aureus* into the child's body, which produces a special toxin that causes detachment of the epidermis under the granular layer. The clinical picture corresponds to Ritter's disease. The face of a sick child acquires a "wailing" expression, impetiginous crusts accumulate around the natural openings. Epithelialization occurs within a week.

For the appointment of rational therapy, it is necessary to timely differential diagnosis between toxic epidermal Lyell's necrolysis and SSSS. For this purpose, a histological examination is used to determine the depth of the lesion of the epidermis.

With Lyell's epidermal necrolysis, it reaches the basal layer, and with SSSS it is limited to granular. In addition, a cytological examination of the affected cells is carried out. SSSS is characterized by acantholytic keratinocytes.

Treatment is aimed at combating the pathogen, increasing the body's defenses, correcting metabolic disorders and functional disorders. Rational care and nutrition is required. With SSSS, semi-synthetic penicillins, gamma globulin, antistaphylococcal plasma, detoxification therapy are prescribed. Local treatment consists in the use of alcohol or aqueous solutions of aniline dyes, creams with antibiotics.

Epidemic pemphigus of the newborn. Newborns get sick in the first 7-10 days of life. The disease is caused by highly toxic *Staphylococcus aureus*. The source of infection is medical personnel or a mother who is ill or has recently had some kind of staphylococcal skin lesion.

The disease is characterized by high contagiousness, which leads to epidemic outbreaks in maternity wards. Clinic. Against the background of hyperemic or apparently unchanged skin of the upper extremities, the abdomen, blisters appear, filled with serous contents, surrounded by a narrow halo of hyperemia.

Rapidly increasing in size, they become flat with a sluggish tire, their contents are cloudy. When opened, erosions are formed, along the periphery of which there are fragments of the bladder cover, there may be detachment of the epidermis and beyond the erosion.

In severe cases, there is a high temperature, septicopyemia develops, and death is possible. It is necessary to differentiate this disease from syphilitic pemphigus. Epidemiological measures consist in the immediate isolation of the child from other children, medical examination of medical personnel for the presence of staphylococcal and other infectious skin diseases, removal of sick personnel from work. It is necessary to carry out disinfection of premises, sterilization of linen.

Treatment. Antibiotic therapy, vitamins of group B and C. Solutions of aniline dyes, ointments with antibiotics are applied locally.

Prevention consists in the daily examination of medical personnel for the presence of pustular diseases, the removal of patients from work, a thorough examination for the presence of pustular diseases in women in labor.

Streptococcal Piodermatitis: The disease affects mainly the superficial layers of smooth skin, the primary element is a flaccid bubble - conflict, prone to peripheral growth. The disease does not affect the appendages of

the skin, it is contagious, and therefore, it is necessary to isolate sick children from children's groups.

**Streptococcal impetigo.** Sources of infection are patients with streptococcal lesions. Infection occurs through toys, clothing, towels, infected hands, insects. Children often get sick with a violation of the immunological reactivity of the body, skin lesions with itchy dermatosis, with otitis media, and a runny nose.

The disease begins on the skin of the face, hands with the appearance of a pink-red spot against which, after a few hours, a flaccid bubble (conflict) appears with serous or serous-purulent contents, which shrinks into honey-yellow crusts.

Against the background of old elements, fresh ones appear. As a result of the tendency to group and merge, the precipitations form polycyclic figures. In the center of the elements, healing may occur, and growth is noted along the periphery, as a result of which ring-shaped forms of impetigo are formed.

Depending on the localization of the lesion, several clinical varieties of the disease are distinguished.

**Bullous (vesical) impetigo.** It is localized more often on the lower extremities, the rear of the hands. Flaccid, sometimes tense blisters ranging in size from a hazelnut to an egg or more appear, filled with serous-turbid contents and surrounded by an inflammatory corolla. When opened, erosions are formed, covered with leaf-shaped crusts.



**Pic.21 Bullous (vesical) impetigo.**

Zayeda, or slit-like impetigo, is localized in the corners of the mouth. The conflict is quickly opened, erosion or cracks are formed with fragments of the epidermis along the periphery. Covered with honey-yellowish crusts.

Tourniol (superficial felon) is characterized by the appearance around the nail plates of one or more fingers of the conflict on the inflamed skin with serous, and then purulent contents. After they are opened, erosion forms around the nail fold. The nail phalanx is edematous, painful, the nail plate can be rejected.

The general condition is disturbed: the temperature rises, chills, malaise, the elbow lymph nodes increase.

Simple deprive is observed more often in children. On the skin of the face, it appears as light pink spots covered with small scales. Usually, under the influence of UV light, spots do not tan, and therefore, the skin acquires a variegated color.

Treatment of impetigo consists in the local application of solutions of aniline dyes, ointments with antibiotics.

Prevention. Employees of children's institutions who suffer from streptococcal impetigo are suspended from work. All items that the patients have come into contact with (toys, towels, etc.) must be disinfected.

Ecthyma vulgaris begins with the appearance of a bubble or deep pustule on the inflammatory infiltrate. After 2 - 3 days, the pustule dries up, forming a purulent-bloody crust, after removal of which, an easily bleeding ulcer with steep edges, covered with a dirty gray coating, is found.

The ulcer heals slowly, leaving behind a superficial scar. Lesions are localized more often on the skin of the legs, thighs, buttocks, lower back, less often on the upper limbs.

Treatment. Fortifying agents, biogenic stimulants, immunomodulators. Locally - antimicrobial ointments.

Vulgar impetigo. The disease belongs to the mixed form of pyoderma and is caused by pathogenic staphylococci, streptococci and other microorganisms. Occurs in persons with weak protective power against the background of severe sensitization to the microbial flora.





**Plc.22 Ecthyma vulgaris**

Rashes are usually preceded by fever, burning at the sites of future rashes. On slightly edematous and hyperemic skin, a conflict appears with cloudy contents, which dries up into a layered yellow-honey crust.

Treatment is the same as for ecthyma vulgaris.

Prevention of pustular skin diseases begins with personal hygiene.

Compliance with the cleanliness of the skin, nails, underwear, overalls helps to reduce the number of pustular diseases. To this end, sanitary and hygienic measures should be taken, consisting in the organization of the constant operation of showers at enterprises, the timely replacement of overalls, hardening of the body, limiting the intake of carbohydrates.

Sanitary - technical measures provide for the improvement of production processes in order to eliminate or reduce the impact of harmful factors: dust, hypothermia, overheating, microtraumatism.

Mandatory use of overalls, treatment of microtraumas with an alcohol solution of aniline dyes, iodine. For this purpose, first-aid kits containing the above funds should be available in the workshops. Health education of the population on the prevention of pyoderma should be the focus of medical workers.

### Acne

Finally, the etiology and pathogenesis of acne have not been elucidated. Increased secretion of sebum, an increase in free fatty acids, alkalization of the environment, follicular hyperkeratosis lead to increased reproduction of microflora. Staphylococci, corynebacteria and other flora cause inflammation of the ducts of the sebaceous gland, resulting in the development of acne.

In the occurrence of acne, a large role is played by dysfunctions of the gastrointestinal tract, the endocrine system, and an excess of androgens.

Acne vulgaris appears at the onset of puberty and reaches its peak by the age of 16-18 and disappears after 30 years and later. Acne is usually localized on the skin of the face, chest, back, shoulder girdle. They present with papular and pustular lesions. A papule appears, in the center of which a pustule forms. The process may result in the formation of a scar.



**Plc.23 Acne vulgaris**

Phlegmonous acne is formed as a result of an acute inflammatory process in the hypodermis, resulting in small abscesses with signs of fluctuation. Acne merges into purple-red nodes, opens with several holes, from which a purulent discharge with an admixture of blood is released.

Conglobate, or spherical acne, often develop in patients with dry (thick) seborrhea, localized on the face, neck, chest, back. As a result of blockage by comedones or the death of a significant part of the sebaceous glands, numerous nodes appear located in the dermis or in the upper part of the subcutaneous tissue.

Gradually, the nodes soften, the skin over them acquires a bluish-pink color, fistulous passages appear, from which a purulent discharge is released. In places of acne conglobata, scars that disfigure the skin remain.

Whiteheads, or milium, are small, white, spherical dense formations. Formed as a result of blockage and accumulation of secretion in the sebaceous - hair follicle. Localized on the face, eyelids, scrotum.

Treatment. Antibiotic therapy is prescribed taking into account the sensitivity of the microflora, vitamins of group B, aevit, ascorbic acid.

Currently, retinoids are widely used, which include natural forms and synthetic analogues of vitamin A, aromatic retinoids (tigazon, etretinate, motretinide).

Shown specific immunotherapy, UVI, UHF. For local treatment, 2% solutions of salicylic acid,

resorcinol, ichthyol ointment, acne gel, retin A, atrederm, panoxyl and others are used.

Rosacea is a common facial skin disease caused by angioedema due to functional insufficiency of peripheral blood supply. The development of the disease is promoted by gastrointestinal diseases, hypothermia, insolation, intake of alcohol, spicy foods.

Often, Demodex folliculorum mites, located in the sebaceous glands, are a supporting factor in the disease.

Women aged 40 - 50 years are more often ill. A typical localization of the process is the skin of the nose, the middle part of the forehead, cheeks, and beard.

The disease begins with redness and swelling, against which acne-like elements, nodules, pustules and telangiectasias appear.

Depending on the nature of the morphological manifestations, four clinical forms of the disease are distinguished: erythematous - persistent

hyperemia with superficial telangiectasias, the skin is thickened, oily, with enlarged sebaceous glands; erythematous - papular - the presence of follicular papules of a reddish color; papulo - pustular; pustular - knotty, or rhinophyma (cone-shaped nose) - bumpy, purple, soft consistency, tumor-like formations, pustules, telangiectasias, scars.

Treatment of rosacea presents a certain difficulty. It is necessary to eliminate the factors contributing to the development of the disease. Inside, B vitamins, hyposensitizing agents, tetracycline antibiotics, metronidazole 1-1.5 g per day for 4-6 weeks are prescribed.

Outwardly, glucocorticoid ointments with antibiotics are used (with the exception of fluorinated corticosteroids). With rhinophyma - surgical treatment. With demodicosis, treatment with Wilkinson's ointment, polysulfide liniment with dimexide and trichopolium, metrogil cream, intravenous drip of metrogil solution give a good effect.

## CHAPTER 6 HEREDITARY SKIN DISEASES. DESCRIPTION, ETIOLOGY, PATHOGENESIS, CLINIC, CLINICAL FORMS, BASIS OF DIAGNOSIS AND TREATMENT

Genodermatoses, or hereditary skin diseases, are genetically determined lesions and abnormalities of the skin and its appendages. There are diseases caused by autosomal dominant and autosomal recessive inheritance.

### **Ichthyosis**

Congenital disease with a pronounced violation of the process of keratinization. The following types of ichthyosis are distinguished: autosomal dominant, autosomal recessive and x-chromosomal recessive.

The most common is vulgar (common) ichthyosis with an autosomal dominant type of inheritance. Already in the first months of a child's life, the skin on the extensor surface of the upper limbs, thighs, and lateral surfaces of the body becomes dry, flaky, and grayish-dirty in color. The skin of the folds of the palms and soles is not changed.

There are several clinical forms of ichthyosis vulgaris. In patients, the protective function of the skin decreases, due to this, pyoderma joins, inflammation increases. Usually the skin process becomes aggravated in the autumn-winter period and improves in the spring-summer. After puberty, the disease may spontaneously resolve. Treatment. The use of vitamins A and E is recommended. Children over the age of 2 are prescribed oxerophthol palmitate 1/2 teaspoon 3 times a day after meals for a month. For children over 5 years old, an oily solution of vitamin A is recommended, 3-5 drops 2 times a day on a crust of white bread for a month with a break between courses of treatment of 1-2 months. You can also prescribe aevit 1 drop per day in cycles of 20 days with 3-week breaks.

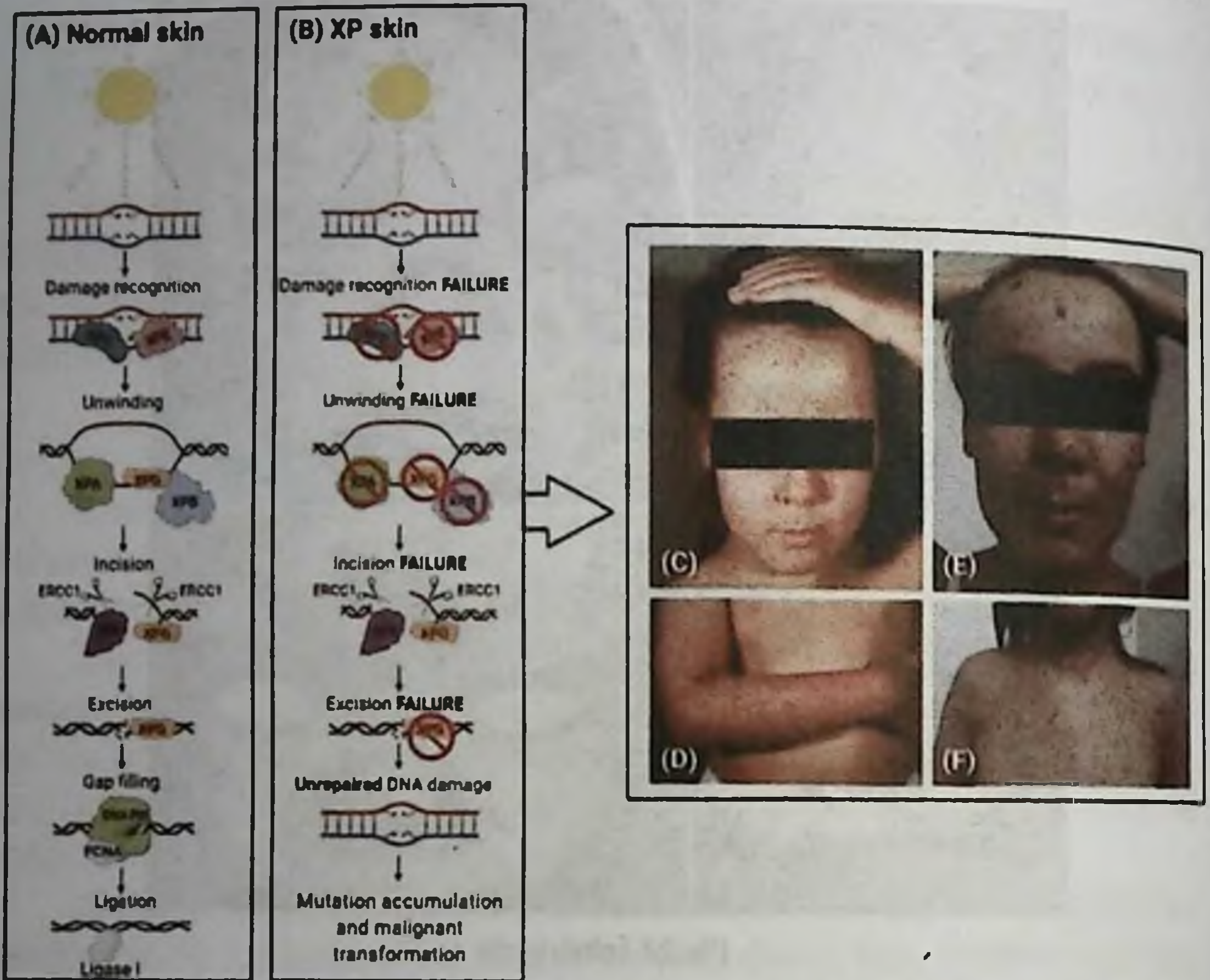


**Plc.24 Ichthyosis**

The appointment of aromatic retinoids, iron preparations, anabolic hormones, vitamins of group B is shown. treatment up to 20 injections. Useful warm baths with sea salt, emollient creams and ointments. Sex-linked ichthyosis vulgaris or X - recessive ichthyosis, or blackening ichthyosis. In patients with X-linked ichthyosis, there was a deficiency of steroid sulfatase in skin fibroblasts, high electrophoretic mobility of low density lipoproteins. In 50% of patients, eye damage is detected in the form of small opacities, dots on the posterior capsule of the Descemet's membrane, but patients do not notice visual impairment.

The manifestation of the disease begins in the first weeks or 4-6 months after birth, reaching a maximum by 10 years of age. The skin of the lower leg, thighs, torso, neck, face is affected.

The process involves the flexion surfaces of the limbs, the skin near the folds. Scales are large, thick, dark in color (blackening ichthyosis).



**Pic.25 Xeroderma**

Along with such scales, there is scaly peeling, light, small and thin scales. The skin process improves in the summer.

Additional signs of the disease are described in the form of dark papillomatous hyperkeratosis in the navel and nipples; fine wrinkling of the skin on the lateral surfaces of the trunk, hips, shoulders; lichenification of the skin in places of protrusion of the bones without itching. With this disease, there is no follicular keratosis, changes in the skin of the palms and soles, and inflammatory lesions.

Congenital ichthyosis is inherited in an autosomal recessive manner. In severe form, the child is born prematurely, the skin with erythematous areas covered with horny layers. Natural holes are filled with massive scales - crusts.

Due to malnutrition and breathing, children die soon after birth. In a mild form, diffuse erythema is observed with thickening of large skin folds, keratoderma of the palms and soles, eversion of the eyelids and deformation of the auricles.

Congenital ichthyosis leads to disability from childhood.

Broca's hereditary ichthyosiform erythroderma is a type of congenital ichthyosis. There are dry and bullous forms of the disease. A characteristic symptom of the disease is erythroderma, expressed in large folds, on the face and neck. On the skin of the trunk, extremities, in the folds, the phenomena of hyperkeratosis are expressed. The skin of the face becomes red, tense, covered with scaly scales.

Severe forms of the disease are characterized by universal erythroderma with massive horny layers, with cracks and bloody discharge already at birth (Harlequin fetus). Death occurs a few days after birth.

The bullous form is considered as a transition from ichthyosis to bullous epidermolysis. Against the background of erythroderma, blisters appear with a pronounced detachment of the epidermis, hyperkeratosis of the palms and soles. Skin lesions usually resolve by 3-4 years of age, and in 20% of patients disappear after puberty.

**Treatment.** The best results are observed in patients whose treatment begins in the first days after birth. The method of complex treatment consists in the daily administration of glucocorticoids at the rate of 1-1.5mg of prednisolone per 1 kg of body weight per day for 1-2 months in combination with injections of gamma globulin, vitamins A and E.

In addition, if indicated, such patients are prescribed broad-spectrum antibiotics, ascorbic acid, anabolic agents, vitamins of group B. Externally, baths with starch, a decoction of string, sage, St. John's wort, ointments and creams containing glucocorticoid hormones are used.

Severe forms of congenital ichthyosiform erythroderma are fatal.

Treatment with glucocorticoid hormones, started 1 month after birth and later, is ineffective.

Congenital bullous epidermolysis or hereditary pemphigus. According to the course and clinical manifestations, simple and dystrophic forms are distinguished. The simple form is characterized by the



appearance of rashes of vesicles and blisters in early childhood after minor skin trauma, mainly in boys.



**Pic.26 Congenital bullous epidermolysis or hereditary pemphigus**

Blisters with serous, serous-purulent or hemorrhagic contents form on apparently unchanged skin. Nikolsky's symptom is negative.

Rashes are localized more often on the skin of the fingers, feet, hands, knees, elbows, buttocks. In infants, blisters appear around the mouth. After the disappearance of the bubbles, pigmentation remains in their place. The general condition of patients is not disturbed.

During puberty, in most cases, the disease resolves spontaneously.

In the dystrophic form (autosomal dominant type of inheritance), at birth or in the first days of a child's life, blisters with serous or hemorrhagic contents form on the skin of the hands, feet, elbow and knee joints, and other areas. Nikolsky's symptom is negative.

They leave scars behind. Sometimes the nail plates, mucous membranes of the mouth, genitals, conjunctiva are affected. Sometimes

there is an anomaly of the teeth, hair, hyperkeratosis of the palms and soles. Physical and mental development are not disturbed.

The polydysplastic form is inherited in an autosomal recessive manner, manifesting itself

immediately after birth. Blisters form on the skin, mucous membranes of the mouth, upper respiratory tract, esophagus, eyes, and genitals.

In addition, the disease is accompanied by anomalies in the development of bones, teeth, hair, the absence of nail plates, atrophy of the terminal phalanges of the fingers, general physical malaise and mental retardation. Nikolsky's symptom is positive. This form often causes the death of a child in infancy.

Treatment. Insignificant effect is given by corticosteroid preparations, vitamin D, E, A, C, calcium panganate, iron preparations, immunoglobulin. Outwardly, solutions of aniline dyes, ointments with antibiotics and corticosteroid drugs are used.

### **Albinism**

Albinism is a congenital disease. It is characterized by the absence of pigment in the skin, hair, eyes as a result of a hereditary defect in melanin metabolism. There are total, incomplete and partial albinism.

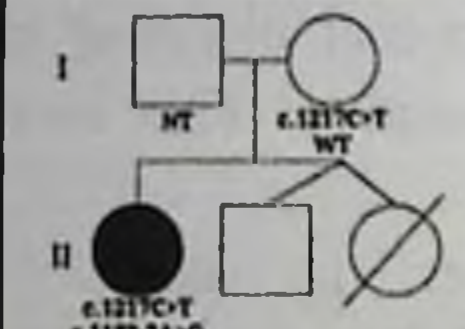




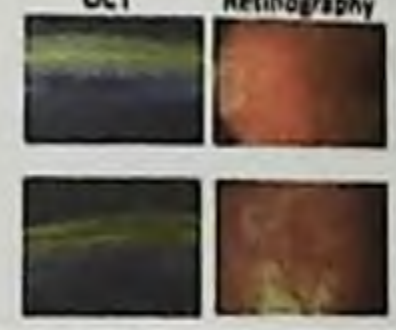
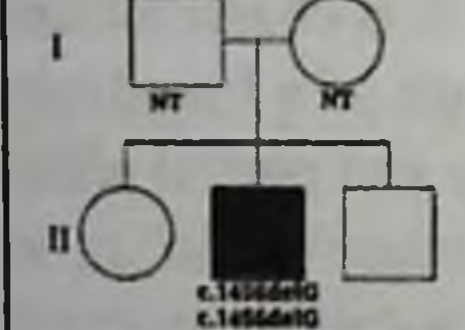


Total, or complete, albinism is inherited in an autosomal recessive manner and is often found in consanguineous marriages. Boys get sick more often. It is characterized by the absence of pigment in the skin and its appendages from the day of birth.

The skin is dry, the hair is white, visual acuity decreases sharply in the daytime (day blindness) due to the breakdown of the visual pigment - rhodopsin.

Albinos suffer from photophobia, increased photosensitivity, hypotrichosis, hyperkeratosis, and sometimes dementia.

Incomplete albinism is inherited in an autosomal dominant, less often in an autosomal recessive manner. There is less pigmentation of the skin, hair and iris than in healthy people. May be photophobia.

Partial albinism is inherited in an autosomal dominant manner. They appear as depigmented spots on the skin of the forehead, abdomen, knee joints. In these foci there may be islands of pigmentation. Albinism should be differentiated from vitiligo and secondary depigmentation, syphilitic leukoderma, white spot disease, leprosy. Treatment. There is no specific treatment. Decorative cosmetics, photoprotective glasses, photoprotective creams are used. The prognosis for recovery is poor.

<i>TYR</i> variant	Pedigree	Skin and hair pigmentations	OCT and retinography
<p><b>c.1217C&gt;T</b>  <b>c.1185-2A&gt;G</b>                      (HEP, affecting splicing                      CADD: 24.5)</p>		<p>C1</p>  <p>3 yo</p>	<p>Not performed</p>
<p><b>c.1037-7T&gt;A</b>  <b>c.389_391delAGA</b>                      (Methemoglobinemia causing                      HPT, mitochondrial damaging                      CADD: 17.89)</p>		<p>C5</p>  <p>16 yo</p> <p>C7</p>  <p>18 yo</p>	<p>OCT      Retinography</p> 
<p><b>c.1453delG</b>  <b>c.1453delG</b>                      (Methemoglobinemia causing                      HPT, mitochondrial damaging                      CADD: 25.1)</p>		<p>C5</p>  <p>14 yo</p>	<p>OCT      Retinography</p> 

**Plc.27 Albinism**

### Keratoderma

**Keratoderma** - diseases characterized by a violation of the process of keratinization - excessive horn formation, mainly in the area of the palms and soles.

There are two main types of keratoderma - diffuse, in which there is a continuous lesion of the skin of the palms and soles, and focal, in which areas of hyperkeratosis are located in the form of islands, linearly, pointwise, but do not affect the entire skin of the palms and soles.



**Plc 28 Keratoderma**

Diffuse keratoderma can be one of the manifestations in pityriasis versicolor, ichthyosis, Darier's disease. It includes Unna-Toast keratoderma (syn.: congenital ichthyosis of the palms and soles, congenital palmar-plantar keratoma, Unna-Toast syndrome), inherited in an autosomal dominant manner.

The disease is manifested by diffuse excessive keratinization of the skin of the palms and soles (sometimes only soles), which develops on the 1st - 2nd year of life. It begins with foci of thickening of the skin of the palms and soles, which are surrounded by a halo of hyperemia.

There is focal hyperhidrosis and the formation of deep cracks. Sometimes the lesion passes to the skin of the back surfaces of the fingers and wrist joints. An x-ray examination of the bones reveals atrophy of the phalanges, subluxations and deforming arthrosis of the interphalangeal joints of the hands and feet. Possible thickening of the nails. Diagnosis of keratoderma is based on clinical manifestations and symptoms of concomitant diseases. Differential diagnosis is carried out with calluses, palmar and plantar psoriasis, keratinizing eczema and ichthyosis.

The treatment is long. Vitamins A, E, C, B are used. Keratolytic ointments, phonophoresis with aevit, glucocorticosteroid creams and ointments are locally prescribed.

**CHAPTER 7 FUNGAL DISEASES OF THE SKIN. ALOPECIA.  
DESCRIPTION. ETIOLOGY, PATHOGENESIS, CLINIC,  
CLINICAL FORMS, BASIS OF DIAGNOSIS AND TREATMENT**

**Fungal Influences Of The Skin Of The Feet.**

This group of diseases includes epidermophytosis and rubromycosis.

The causative agent of epidermophytosis of the feet is *Trichophyton mentagrophytes*, interdigital - *Trichophyton interdigitalis* and inguinal - *Epydermophyton inquinae*.

The causative agent of rubromycosis is *Trichophyton rubrum*.

Infection with these diseases can occur when elementary sanitary and hygienic conditions are not observed in baths, showers, baths, swimming pools, on beaches and in gyms, when wearing someone else's shoes, family infection is possible.

Factors contributing to the development of the disease include increased sweating (hyperhidrosis), minor injuries to the skin of the feet, functional disorders of the vessels of the lower extremities, resulting in a violation of the microcirculation of the skin of the feet, flat feet, narrow interdigital spaces, prolonged wearing of rubber or tight shoes, dysfunction nervous and endocrine systems. The decrease in the immunological reactivity of the body is also of great importance.

**Epidermophytosis**

There are the most common clinical forms of the disease - squamous, intertriginous, dyshidrotic and epidermophytosis of the nails.

Squamous epidermophytosis is characterized by small-lamellar peeling on the skin of the soles and in 3, 4 interdigital folds without pronounced inflammatory phenomena, in the center of which cracks form, which is one of the conditions for the penetration of streptococcal infection.

On the periphery of the foci, a collar of the exfoliating stratum corneum is formed. This form may become dyshidrotic. Subjectively, patients report slight itching.

Intertriginous, or interdigital, epidermophytosis often occurs as an exacerbation of an erased or squamous form of the disease and is manifested by the appearance in 3–4 interdigital folds of hyperemia and maceration of the stratum corneum, vesicles, erosions, along the periphery of which there is a collar of macerated epithelium.

The process extends to the plantar surface of the fingers and the sole. When a secondary infection is attached, a pronounced edema and hyperemia of the skin of the fingers and the back surface of the feet, lymphangitis and regional lymphadenitis develop. The general condition of the patient is disturbed.

Dyshidrotic epidermophytosis is one of the severe forms of the disease. It is localized mainly on the inner arch of the soles, the outer and inner side surfaces and is manifested by rashes of bubble elements with a thick tire, with transparent or cloudy contents.

Vesicular elements can be multiple, grouped, merging, form large multi-chamber bubbles. When they are opened, extensive erosive surfaces appear with clear scalloped edges and collars of the exfoliating stratum corneum.

Over time, erosion epithelialize, covered with lamellar scales. It is possible to attach a secondary infection, the development of lymphangitis and lymphadenitis. The disease is accompanied by itching and general symptoms.

Due to the fact that dyshidrotic epidermophytosis develops against the background of sensitization of the body to fungi, with improper local treatment in such patients, rashes remote from the main focus, which are called epidermophytides or allergides, may appear. Most often they are localized on the skin of the palms in the area of the tenor and hypotenor, fingers. Given that this manifestation is allergic in nature, it is not advisable to search for the causative agent of the disease on the hands.

Epidermophytosis of the nails is observed only on the toes, and the nails of the 1st and 5th fingers are affected. This localization of the lesion develops as a result of constant traumatization and squeezing of these fingers and nails with tight shoes, which leads to disruption of microcirculation and nutrition, resulting in good conditions for the development of the fungus.

The nail plate is dull, yellowish-gray. The free edge is deformed, thickened, crumbled. Due to subungual keratosis, the nail bed thickens. An atrophic variant of nail damage (onycholysis) is also possible.

Epidermophytosis of large folds. The inguinal folds are predominantly affected, less often the axillary and under the mammary glands.

The causative agent is *Epidermophyton inquinale*. Inguinal epidermophytosis often occurs during puberty with increased activity of the eccrine and apocrine glands, a change in the pH of sweat to the alkaline or slightly acidic side, increased reactivity of the epidermis and dermis, and vegetovascular dystonia.

Infection occurs in baths, showers, when using common washcloths, towels, from patients through care and toilet items (linen, thermometers, bedpans, etc.).

Incubation period from 1-2 weeks to 2 months. On the inner surfaces of the thighs, itchy spots of

pink-red color appear, rounded in shape with small-plate peeling, the edges rise slightly above the skin in the form of a roller, on the surface of which there are small vesicles and pustules.

Growing along the periphery, the spots merge with each other, forming ring-shaped and garland-like figures, go beyond the folds.

The diagnosis is made on the basis of clinical manifestations and laboratory detection of fungal mycelial filaments.

Differential diagnosis is carried out with erythrasma, candidal lesion, limited neurodermatitis. Treatment of epidermophytosis of the feet consists in prescribing hyposensitizing agents (10% calcium chloride solution, 10% calcium gluconate solution, 30% sodium thiosulfate solution), more often with dyshidrotic and intertriginous forms of epidermophytosis, as well as vitamin B<sub>1</sub>, ascorbic acid.

When complicated by a secondary infection with the development of lymphangitis and lymphadenitis, antibiotics or sulfonamides are prescribed. Local treatment of epidermophytosis is carried out depending on the clinical form and stage of the disease. With a squamous form, the affected areas are lubricated with 3%-5% alcohol solutions of iodine, Castellani paint, iodine with salicylic alcohol, antifungal ointments are used

(amizol, undecin, mykoseptin, mycosolone, lamisil, viosept, mycospor, batrafen, travocort, travogen, etc.) .

With intertriginous and dyshydrotic forms, as well as with acute inflammation and weeping, it is advisable to start local treatment with the use of lotions of 0.25% - 0.5% silver nitrate solution, 5% boric acid solution, 1% -2% resorcinol solution, 5% solution tannin. After the cessation of weeping, antifungal solutions and ointments are prescribed.



**Fig. 29 Epidermophytosis of large folds**

### **Rubromycosis**

The disease is characterized by a chronic relapsing course and contagiousness. Pathogen *Trichophyton rubrum*, affects smooth skin, palms and soles, nails, vellus hair. The epidemiology of the disease is similar to epidermophytosis of the feet.

Rubromycosis of the palms and soles is manifested by dry skin, hyperkeratosis, and the appearance of cracks. The skin pattern in the lesions is pronounced, in the skin grooves there is a small pityriasis peeling, due to



which a white striation appears. As a rule, all interdigital folds on the feet are affected.

With the defeat of the smooth skin of the legs, buttocks, trunk, face and other areas, redness of the skin with peeling and follicular papular elements are observed. The foci may resemble ring-shaped, arcuate figures with clear, intermittent borders, with a raised ridge-like edge.

**Rubromycosis of nails.** All nail plates on the hands and feet are affected. The lesion begins with the formation of yellowish or grayish-white spots in the thickness of the nail. In the hypertrophic form, the nail thickens beyond due to subungual hyperkeratosis, becomes brittle, crumbles, often deformed.

With the atrophic type, the nail plate becomes thinner until it is destroyed or completely separated from the nail bed by the type of onycholysis.

With the normotrophic type, the nail retains its luster, its free or lateral edge is affected with the appearance of yellow-gray spots.

In the affected vellus hair, the elements of the fungus are located inside the hair. This causes a long-course and resistance to treatment.

Diagnosis of rubromycosis is based on the results of microscopic examination and inoculation of pathological material on Sabouraud's medium.

differential diagnosis is carried out with epidermophytosis, psoriasis, pink lichen, chronic trichophytosis of smooth skin, horny eczema.

Treatment rubromycosis presents a certain difficulty. With damage to the palms and soles, treatment begins with detachment of the stratum corneum with keratolytic ointments or varnishes. After a soda-soap bath (2 teaspoons of baking soda and 20 grams of soap per 1 liter of water), 20% - 30% salicylic ointment or Arieovich ointment (6% lactic and 12% salicylic acid or a collodion film, which includes includes lactic and salicylic acids, 10 g each). After two days, lubricate for a day with 5% - 10% salicylic ointment.

Then the patient takes a soda-soap bath, the horny masses are removed. After detachment, the lesions are lubricated with fungicidal solutions or ointments.

Usually, lubrication with ointments and solutions alternates after 3 days, i.e. solution in the morning, ointment at night, vice versa three days later. Baths for hands and feet are made once a week. Treatment of smooth skin lesions is carried out from the very beginning with fungicidal agents.

Treatment of fungal nail infections (onychomycosis). It is possible to recommend surgical removal of the affected nail plates, which is not always possible. Most often used keratolytic agents.

These include ureaplast containing 20% urea, an ointment with potassium iodide and lanolin in equal proportions (method of A.N. Arabian). In recent years, batrafen lacquer has been proposed for the treatment of onychomycosis, which is applied daily to the nail plates for 10 days, then a month - every other day, the next month - 2 times a week and then 1 time per week.

The method of removing nail plates with ureaplast and ointment with potassium iodide is laborious. After a soda-soap bath, the nail plates should be trimmed, removed, as far as possible, hyperkeratotic masses.

Then the skin around the nail plate is glued with an adhesive plaster so that the ointment does not get on it, and the softened ureaplast is smeared on the nail plate and strengthened with an adhesive plaster.

After 5-7 days, the ureaplast is removed, a soda-soap bath is made, and softened horny masses are removed with a scalpel. If the complete softening of the nail plate did not occur, then after a few days the detachment procedure repeat.

After removing the nail plate, the nail bed is treated with fungicidal agents - 5% alcohol solution of iodine, 3% - 5% salicylic alcohol iodine solution, antifungal ointments.

With lesions of the nails and smooth skin, in addition to local treatment, it is necessary to prescribe the antifungal antibiotic griseofulvin. Its daily dose depends on the age of the patient,

the effectiveness and tolerability of the drug. In addition to griseofulvin, nizoral, oronazole and other drugs are widely used, but they have a fungistatic effect and hepatotoxicity.

In recent years, for the general treatment of rubromycosis, the use of lamisil and orungal, which have a fungicidal effect, has been

recommended. Lamisil is prescribed at 0.25 once a day, it is advisable to take it up to 4 months, which will increase the cure rate for onychomycosis.

Orungal pulse therapy is widely used. One course of pulse therapy consists in daily intake of 2 capsules of orungal 2 times a day for one week. For the treatment of lesions of the nail plates on the hands, 2 courses are recommended, and for lesions of the nail plates on the feet, 3 courses of treatment are required. The interval between courses, when you do not need to use the drug, is three weeks. In addition to taking antifungal antibiotics, patients are prescribed vitamins B, A, C, nicotinic acid, hepatoprotectors (Lif-52, hepatofalk, etc.), vasodilators.

To prevent recurrence of the disease, it is necessary to disinfect linen, socks, mittens by boiling or ironing through wet gauze. In case of damage to the skin and nails of the feet, it is advisable to disinfect the shoes. At home, shoes can be treated with acetic essence (acetic acid). To do this, cotton wool moistened with acetic acid is placed inside the shoe, and then in a plastic bag tightly closed for 12-24 hours. You can use disinfected shoes after it has been well ventilated.

Prevention of fungal infections of the feet is to comply with sanitary and hygienic rules. This includes sanitary supervision of cleaning and disinfection of rooms and equipment in baths, showers, swimming pools, gyms.

Disinfection of impersonal shoes, especially in medical institutions, sports shoes. Active detection of patients and their timely treatment, dispensary observation of patients after treatment for a year.

Of great importance in the prevention of fungal diseases is the proper care of the skin of the hands and feet, the fight against excessive sweating. In this regard, it is necessary to harden the feet. To reduce sweating of the skin of the feet, it is recommended to walk barefoot in dew, hot sand, to carry out preventive treatment of the skin of the feet with antifungal agents, especially in the spring and summer.

Sanitary and educational work is needed, primarily among the organized contingent in order to explain to them the conditions, ways of infection with fungal diseases of the feet and their prevention.

Organization of the work of the mycological office. One of the important functions of tannery establishments is organizational, methodological and treatment-and-prophylactic work in the fight against fungal diseases. The fulfillment of these tasks is entrusted to mycological rooms or departments that function in skin and veterinary dispensaries.

The main tasks in the work of the offices are: identification of patients and sources of their infection; conducting medical examinations to identify mycoses in children's institutions; control over the effectiveness of preventive measures carried out in children's institutions, hostels, etc.; treatment of fungal diseases; dispensary observation of patients and family members where the disease is registered; registration of those who have been ill and those who have been in contact with them; control over the dynamics of fungal diseases in your region; carrying out sanitary and educational work among patients and the population. In the performance of these and other tasks, the primary role belongs to the nurses working in these offices or departments.



**Pic.30 Onychomycosis**

## Candidosis

Candidiasis is a disease of the skin, mucous membranes, nails, internal organs, caused by yeast-like fungi of the genus *Candida*, which are widely distributed in nature on vegetables, fruits, berries, as saprophytes live on the skin and mucous membranes of a person, when special conditions arise, they become pathogenic and cause disease.

The causes of the disease can be both exogenous and endogenous.

Of the exogenous factors, increased sweating, constant maceration, injuries of the skin and mucous membranes, overheating and high humidity of the environment are important, which leads to a change in the state of the water-lipid mantle of the skin, reduces its pH and favors the penetration of yeast-like fungi.

The development of candidal lesions of the interdigital folds of the hands, nail folds and nails is also influenced by the working conditions associated with prolonged exposure of hands to water at dishwashers, when cleaning vegetables, in the confectionery industry in contact with powdered sugar, with rotting vegetables and fruits in fruit and vegetable production.

Diabetes mellitus, in which an increase in the level of glucose in the blood leads to an increase in its content in the skin (normally, the skin contains half of its concentration in the blood), is a good nutrient medium for the development of the causative agent of candidiasis.

In addition, blood diseases (leukemia, anemia), dysbacteriosis, obesity, acrocyanosis, vitamin imbalances, especially B2 (riboflavin) and B6, the use of glucocorticoids and antibiotics, immunosuppressants, changes in the functional state and mechanisms of cellular and humoral immunity. We must not forget that almost half of AIDS patients have candidal lesions of the skin, mucous membranes and internal organs. There are superficial, visceral (systemic) and chronic generalized candidiasis. As an intermediate form between superficial and visceral candidiasis, candidomycosis or allergids are separately isolated. Candidiasis of the mucous membranes, or thrush, affects the oral mucosa. In the lesions, against the background of severe hyperemia, a white plaque appears in the form of a film, the removal of which is accompanied by bleeding.

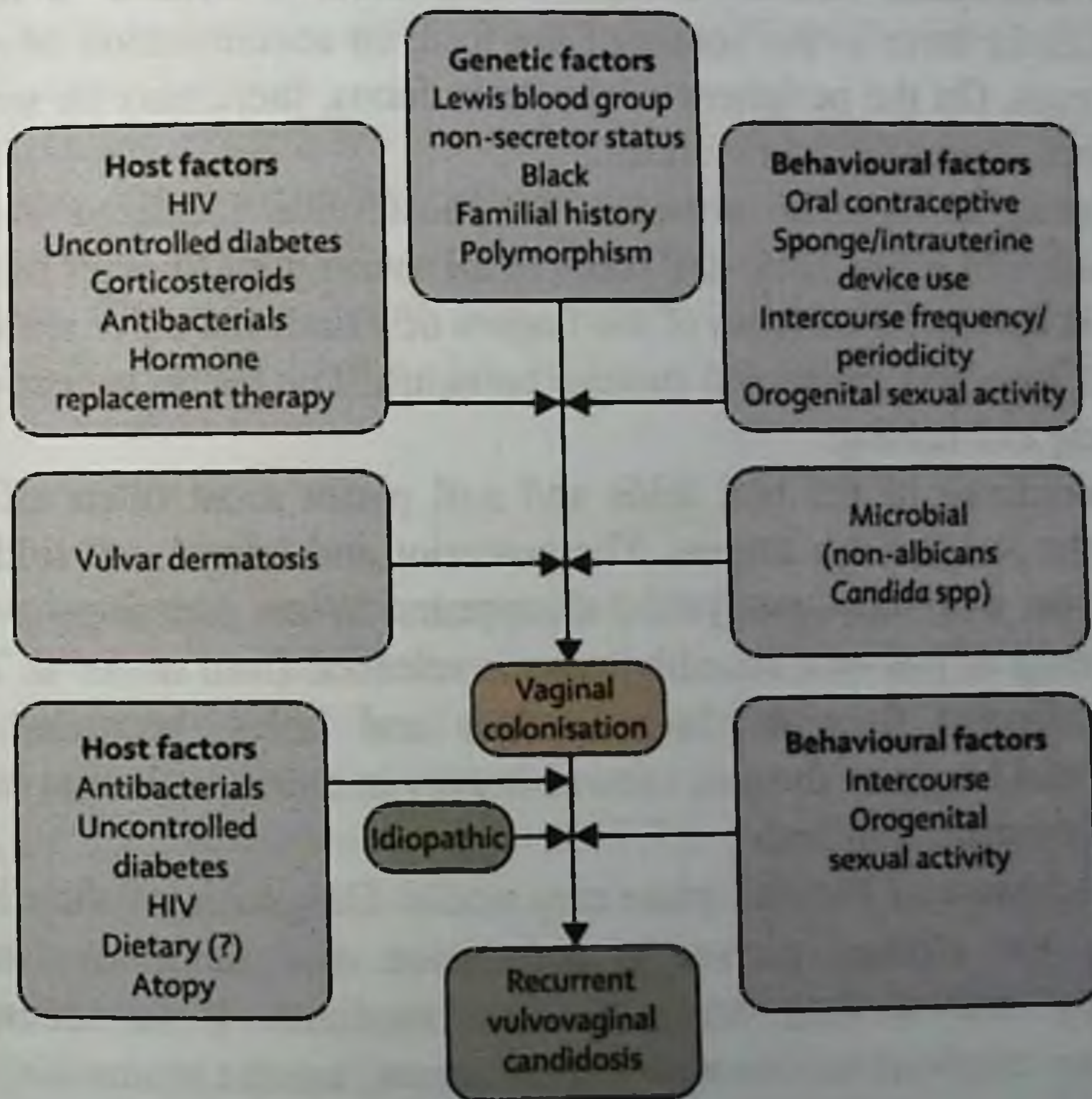
Vulvovaginal candidiasis is manifested by hyperemia or dryness of the vulva and vaginal mucosa with a grayish-white coating. There may be a liquid cloudy discharge with crumbly white lumps. Lesions are accompanied by itching of the genitals.

**Candida balanoposthitis.** The skin of the glans penis and the inner layer of the foreskin is hyperemic, macerated, sometimes eroded, with whitish layers. Subjectively worried about itching. Syphilis must be ruled out.

Chronic generalized granulomatous candidiasis begins with the oral mucosa (thrush)

in infancy or early childhood with a transition to the red border of the lower lip (cheilitis), corners of the mouth (jam).

Periungual ridges and nail plates (paronychia, onychia) are affected. Hyperemic scaly spots, papules appear on the skin. Gradually, infiltration



**Pic.31 Candidiasis**

develops in the lesions, and the papules turn into tumor-like, granulomatous formations with loose brown crusts.

When removing the crusts, bleeding growths (vegetations) are visible. After resolution of the granulomas, atrophic spots remain.

Candidiasis of the corners of the mouth (zaeda) is manifested by erosions or painful cracks with a whitish border of the macerated stratum corneum. There may be candidal lesions of the red border of the lips.

Candidiasis of large folds is more often localized in the inguinal - scrotal region, in the intergluteal fold, under the mammary glands in women, in the armpits and in the folds of the abdomen. Small vesicles and pustules appear in the lesions, upon opening of which erosions are formed, sharply limited from healthy skin with a collar of a swollen macerated stratum corneum. The erosion surface is dark red, moist. Cracks form in the center of the fold, an accumulation of a whitish mushy mass. On the periphery of the main focus, there may be screenings in the form of pustules and vesicles.

Interdigital candidal erosions are most often localized in the 3rd interdigital fold of the hand and often in all interdigital folds of the feet, as well as on the lateral surfaces of the fingers of a dark red color with a white border of a peeling macerated stratum corneum. The lesion is accompanied by burning and itching.

Candidiasis of the nail folds and nail plates most often affects the nails of the 3rd and 4th fingers. The posterior and lateral nail folds swell, turn red, the nail skin (eponychia) disappears. When pressing on the nail roller, a drop of pus or a crumbly mass is released from under it. The nail plate is affected from the lateral edges and holes, becomes cloudy, crumbles and becomes thinner, brownish-gray in color, its lateral edges are separated from the nail bed.

Detachment of the nail plate may occur. Diagnosis of the disease is based on the clinical picture of the lesion and laboratory research, microscopy and seeding on a nutrient medium. It is necessary to differentiate candidal lesions with lichen planus, atopic stomatitis, erosive syphilis, streptococcal lesions.

Treatment. It is necessary to examine the patient in order to identify pathogenetic factors of the onset of the disease, conduct a general blood test, examine blood glucose and other biochemical and immunological parameters.

Be sure to rule out HIV infection. General strengthening treatment is carried out with vitamins B1, B2, B6, B12, A, C, phytin, aloe, folic acid, immunocorrective agents - gamma globulin, sodium nucleinate, taktivin, methyluracil, placental suspension and others.

Iron preparations are widely used. For etiological treatment, anti-candida drugs are prescribed - nystatin, levorin, dekamini, pimafucin, pimafucort, lamisil, orungal, ketoconazole, fluconazole, flucytosine and others. External treatment consists in the use of clotrimazole, pimafucort, travogen, travocort, mycospore, a solution of aniline dyes, mycosolone, nizoral, dactarin, lamisil, citeal, triderm and other preparations in the form of ointments and creams.

Prevention of candidiasis consists in rational nutrition, disinfection of objects used by patients with candidiasis, in identifying and eliminating exogenous and endogenous factors that contribute to the development of the disease. The medical staff of the wards and departments of newborns with candidal lesions of the skin and mucous membranes should not be allowed to work.

### **Keratomycosis**

The group of keratomycosis includes fungal diseases in which the stratum corneum of the epidermis and the hair cuticle are affected. A representative of this group of diseases is pityriasis or versicolor, which is caused by the fungus *Pityrosporum orbiculare*. The development of the disease or its recurrence is promoted by excessive sweating, diabetes mellitus, obesity, diseases of the gastrointestinal tract, and non-compliance with sanitary and hygienic standards.

The clinical picture is characterized by the appearance mainly on the skin of the chest, shoulder girdle, back, neck, less often on the scalp, slightly scaly yellowish spots. Peeling comes to light more clearly when



scraping (symptom of Besnier-Meshchersky). Subjective sensations, as a rule, are absent. The course of the disease is long, the spots increase in size, merge, and can occupy a large area of the skin.

Diagnosis of the disease is based on clinical manifestations, a positive Balzer test (lubrication of foci with 2% - 5% alcohol iodine solution).

With a positive test, intense staining of the spots occurs, since small scales absorb iodine more. To diagnose a lesion of the scalp, a Wood's fluorescent lamp is used, with a lesion in the foci there will be a red-yellow or dark-brown glow.

In some cases, a microscopic examination of the scales for the presence of a fungus is performed. Differential diagnosis. Due to the fact that white spots remain after treatment, which do not sunbathe under the influence of UV light, it is necessary to distinguish them from syphilitic leukoderma, from secondary spots after pink lichen, psoriasis and other skin diseases.

Treatment presents certain difficulties due to possible relapses of the disease. In this regard, it is necessary to warn the patient about the mandatory disinfection of linen and clothing that came into contact with the affected skin.

Local treatment consists in lubricating stains with 2% - 5% alcohol solution of iodine, 2% salicylic alcohol, a saturated solution of boric acid, 20% benzyl benzoate, UVI, fungicidal agents. Prevention consists in observing the basic rules of personal hygiene, combating excessive sweating, and treating concomitant diseases.

### **Erithrasma**

Erythrasma is caused by carinebacteria and belongs to pseudomycosis. Men get sick more often. One of the predisposing factors in the development of the disease is excessive sweating. Localization of lesions is more often in the inguinal-scrotal fold, less often in the intergluteal, in the armpits, under the mammary glands in women.

The disease manifests itself as sharply limited and slightly scaly brown spots, usually not bothering a person. Diagnosis is based on the

clinical manifestations of the disease and microscopic examination of the scales.

It is necessary to differentiate the disease from the manifestations of epidermophytosis of large folds.

Treatment. Means are used, as with pityriasis versicolor. A good therapeutic effect is the use of 5% erythromycin ointment for two weeks.

Prevention of the disease is based on the observance of elementary sanitary and hygienic rules, wiping the folds with 2% boron-salicylic alcohol.

Fungal diseases of the skin and hair: Trichomycoses are fungal quarantine infections that affect the hair. These include trichophytosis superficial, chronic and deep, microsporia and favus. Trichophytosis can be caused by fungi that parasitize only humans - the so-called anthropophilic, or parasitizing both humans and animals - zooanthropophilic.

The anthropophilic type of the disease includes superficial and chronic trichophytosis. The spores and filaments of the mycelium of the fungus in these diseases are inside the hair and are called Trichophyton endothrix. Due to this localization of pathogens, there is no pronounced inflammatory reaction of the skin. Pure cultures of the fungus, which can be obtained by inoculation on Sabouraud's nutrient medium, are called Trichophyton violaceum (purple) and Trichophyton crateriforme (craterform). The source of infection with these types of fungi is a person.

The zoophilic type of the disease includes deep infiltrative suppurative trichophytosis, in which the spores and filaments of the mycelium of the fungus are outside the hair (Trichophyton

ectothrix). Due to this arrangement in relation to the hair, patients develop a pronounced perifocal inflammation with purulent fusion of hair follicles and surrounding tissue. Pure cultures of the fungus are called Trichophyton gypseum (gypsum) and Trichophyton faviforme (faviform). The source of infection with infiltrative suppurative trichophytosis are cows, calves, horses, rats, mice, rabbits, guinea pigs.



**Pic.32 Erythrasma**



**Pic.33 Trichomycoses**

## Superficial Trychophytia

Predominantly children of pre-school and school age are ill. Hair and smooth skin are affected. The source of infection are adults and sick children with chronic trichophytosis. Infection of children occurs directly through contact with patients or through objects used by the patient - hats, toys, scissors, razors, etc. Superficial trichophytosis of smooth skin is manifested by localization, mainly in open areas of the skin, of pink spots of a rounded shape with clear boundaries raised above the level of the skin, with peeling in the center of the spots. Subsequently, resolution occurs in the center of the spot, and a rim with the presence of microvesicles, serous crusts is formed along its periphery, and the focus takes the form of a ring. Sometimes a new focus is formed in the center of the ring due to autoinoculation, and then it resembles the shape of a ring within a ring. Rashes on the skin do not bother the patient at all.

**Diagnostics.** Microscopic and bacteriological studies from the lesions.

**Differential diagnosis.** The clinic of superficial trichophytosis of smooth skin resembles a lesion with microsporia. The main thing for confirming superficial trichophytosis is the history and data of microscopic and cultural diagnostics.

**Treatment.** Without damage to vellus hair, external treatment is sufficient with the use of 5% alcohol tincture of iodine, lubrication with lamisil, ointments containing sulfur, tar and other antifungal agents. Superficial trichophytosis of the scalp is usually manifested by several round-shaped lesions with peeling, on which hair is broken off at the skin level in the form of black dots or in the form of stumps 2-3 mm long., There are also individual unaffected hair. Due to peripheral growth, lesions slowly increase in size. There are no subjective feelings. The illness can last for years. In the absence of treatment at the age of puberty, more often in boys, self-healing occurs. If self-healing does not occur, then superficial trichophytosis turns into chronic adult trichophytosis.

Diagnostics. The diagnosis must be confirmed by microscopic and bacterioscopic methods. Differential diagnosis is carried out with microsporia and favus, which is helped by laboratory data.

### Chronic Trychophytia

Chronic trichophytosis of adults is more often observed in women who did not have self-healing of superficial trichophytosis in childhood. The reasons for the transition of superficial trichophytosis to chronic are endocrine disorders, including hypofunction of the gonads in women, Itsenko-Cushing's disease, diabetes, hyperthyroidism, hypovitaminosis, immunodeficiency, peripheral circulatory disorders and others. Patients with chronic trichophytosis are sources of infection with superficial trichophytosis in children. Smooth skin, scalp, nail plates are affected. The causative agents of the disease are identical to the causative agents of superficial trichophytosis. Smooth skin lesions are localized in the buttocks, shins, thighs, forearms, knee and elbow joints, symmetry is possible. It is characterized by the presence of pink-violet spots with clear scalloped borders, rather large in size. The surface of the spots with the phenomena of small-lamellar or bran-like peeling over the entire surface or in its individual sections. There may also be papular grouped or ring-shaped rashes. Slight itching of the skin is possible. Often, vellus hair can be affected, which is the cause of recurrence of the disease.

Chronic trichophytosis of the scalp proceeds without inflammation, localized more often in the occipital and temporal regions with mild peeling. Hair breaks off at skin level and is visible as black dots. There may be small areas of skin atrophy. Patients with chronic trichophytosis are detected, as a rule, during examinations of contacts of children suffering from superficial

trichophytosis. Damage to the nails can be both in combination with damage to the hair, smooth skin, and independent, isolated. Fingernails are predominantly affected. The lesion begins with the free edge of the nails. Grayish-white spots and stripes appear in the thickness of the nail plate. The nail plate thickens, becomes loose and brittle, takes on a bumpy

appearance. The absence of inflammation of the nail folds is characteristic. Diagnosis is based on the epidemiological history, clinical manifestations and laboratory detection of pathogens. Differential diagnosis is carried out with all trichophytosis.

### **Infiltrative - Purpose Trichophytia.**

The most common routes of infection are direct contact with diseased animals (cows, calves, horses, rabbits, mice and mouse-like rodents), or indirectly, through various objects that have hair of sick animals infected with fungi. Less commonly, people become infected from patients with infiltrative - suppurative trichophytosis when healthy people get infected hair (hats, hair clippers, clothes and other items) on the skin of healthy people. The lesion of smooth skin is characterized by the appearance of an acutely inflammatory, sharply defined, rounded infiltrated plaque, on the surface of which there are many follicular pustules, purulent crusts, and peeling. Without treatment, after a few weeks, the lesions resolve on their own, leaving pigment spots or scars behind.

The defeat of the scalp is manifested by the presence of a limited inflammatory tumor-like infiltrate in diameter up to 8 cm, dense consistency with follicular pustules. In the future, it softens and fluctuates. When squeezing the infiltrate from the expanded mouths of the hair follicles, droplets of pus are released, which resembles honeycombs. This formation is called Kerion Celsii (Celsus honeycomb). Hair in the lesion is removed easily and painlessly. The disease may be accompanied by a violation of the general condition, fever, an increase in regional lymph nodes. Without treatment, after 2-3 months, the lesions spontaneously resolve, leaving behind skin atrophy and baldness. With the localization of infiltrative-suppurative trichophytosis in the area of the beard and mustache, the disease is called parasitic sycosis. Its clinical manifestation is similar to changes in the scalp. However, it must be distinguished from staphylococcal sycosis, which, unlike parasitic, has a chronic course with frequent relapses, is difficult to treat, self-healing never occurs, and hair is pulled out with difficulty and severe pain.

Trichophytides or allergides occur with improper treatment, when the elements of the fungus or their decay products enter the bloodstream and cause the development of an inflammatory skin reaction far beyond the main focus.

Diagnosis of infiltrative-suppurative trichophytosis is based on microscopic and bacteriological studies, clinical manifestations and epidemiological history. Differential diagnosis is carried out with all trichomycosis.

### **Microsporiation**

The disease is more common among children, has a high contagiousness.

There is an anthropophilic (human) type of microsporia, which affects only people. *Microsporum ferrugineum* (rusty microsporum) and *microsporum Audoin* (Audouin's microsporum) are pathogens that parasitize only on the human skin and its appendages.

Anthropophilic type of microsporum is more common in European countries, in China, Japan, it can be brought to the territory of Belarus from these countries.

In our region, a zoophilic type of disease is common, the source of infection of which are cats and dogs. The main pathogens are *Microsporum lanosum* (furry or feline) and *Microsporum canis* (canine), pathogenic for both animals and humans.

Microsporia carriers can be hamsters, horses, cats. In our conditions, the most common sources of human infection are cats and dogs. In 85% of cases of microsporia, cats are the source of infection, in which eyebrows, mustaches, eyelashes, and hair can be affected, and these lesions are most often detected using a Wood's lamp. Recovered cats do not acquire immunity. Cat microsporum can vegetate for 1 - 2 months on vegetable peelings, wet rags, moistened paper. In dry soil, garbage, dust of basements and stairwells, in affected hair, it remains viable for up to 1.5 years. The incidence is seasonal and is associated with the breeding period of cats. Infection occurs when children come into contact with animals or with sick

children, or through objects contaminated with fungi. The increase in incidence begins in June - July, reaches its highest height in September - October, when kittens of the second offspring appear. Fleas and flies can carry pathogens from sick cats to healthy ones. Microsporia affects smooth skin, scalp, extremely rarely nails. In adults, smooth skin is predominantly affected, the lesion is superficial, and the deep form is rare. The incubation period lasts from a week to 2 - 3 months. Microsporia of the scalp, caused by fluffy microsporum (*Microsporum lanosum*), is manifested by the presence of one or two large rounded foci with clear boundaries. There are small foci around the main foci. Inflammatory phenomena are not pronounced. with the presence of a large number of white scales. In the outbreak, all the hairs are broken off at a height of 4-6 mm above the skin level, which resembles a mowed meadow, hence the popular name of the disease is "ringworm", and at the base of the hair there is a whitish cap, which is an accumulation of mycelial threads and

fungus spores. Affected hair, when irradiated with a Wood's lamp (Uviol glass impregnated with nickel salts, through which ultraviolet rays are passed), glows green. Sometimes microsporia can proceed acutely with infiltration phenomena, with the presence of screenings, microsporides, due to an increase in the allergic reactivity of the patient's body.

Anthropophilic microsporia caused by a rusty microsporum (*Microsporum ferrugineum*) is characterized by multiple, larger lesions mainly in the marginal zone of hair growth with a transition to smooth skin, with pronounced peeling and fuzzy boundaries. Hair

break off at a height of 6-8 mm and above, wrapped in a white cap. However, with this form of the disease, not all hair breaks off in the lesions, and normal ones remain.

Microsporia of smooth skin is manifested by the presence of sharply defined pink spots, round or oval in shape with an inflammatory ridge along the periphery, raised above the level of the skin, resembling a ring, on which microvesicles, pustules, papules, serous-purulent crusts, scales are located. Peeling is noted in the center of the spot. Due to autoinoculation, new rashes appear, as a result of which a "ring in a ring"



focus or the so-called "iris" shape is formed, which can be compared with the appearance of the iris of the eye. This clinical picture is typical for anthroponotic microsporia. The foci can merge with each other and form bizarre figures with scalloped edges. Vellus hair may be affected.

Diagnosis of microsporia is based on the clinical manifestations of lesions of the scalp and smooth skin, a greenish glow when illuminated by a Wood's lamp. However, it must be remembered that even after a single lubrication of the lesions with any antifungal agent, there may not be a glow. Microscopic and bacteriological diagnostics are mandatory. For research, hair or scales broken off with the presence of a cap are taken.

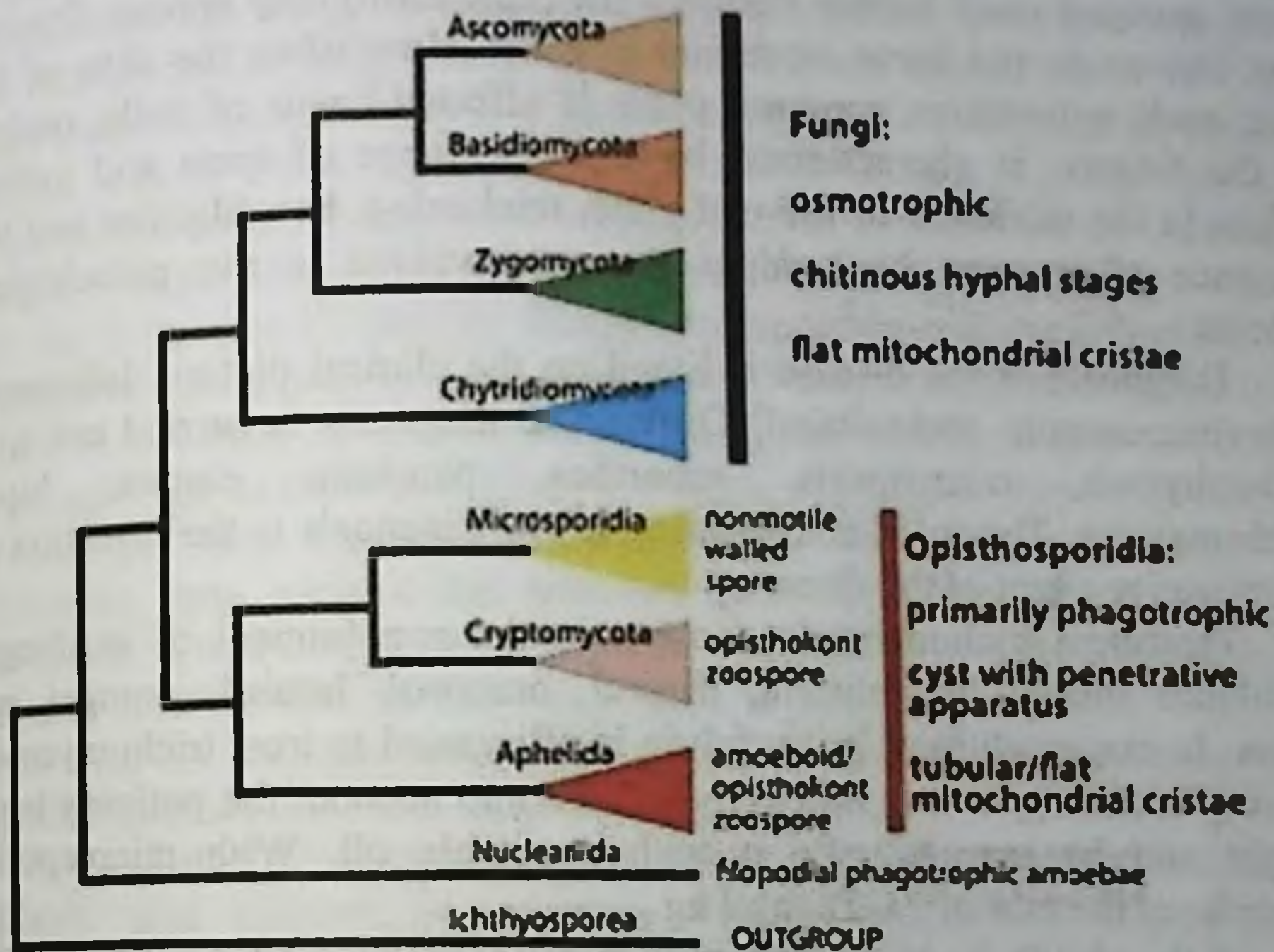
Differential diagnosis is carried out with trichophytosis, which is helped by microscopic and bacteriological research methods.

### Favus

The disease is caused by the anthropophilic fungus *Trichophyton Schonleinii*, which is located inside the hair. Favus is less contagious than microsporia and trichophytosis, is focal or familial. The source of infection is a sick person, extremely rarely mice, cats and other animals. Infection occurs through direct contact with a sick person, but more often through objects used by the patient (hats, combs, fur collars, children's toys, etc.). The incubation period ranges from 2 weeks to 12 months. The disease begins in childhood more often in persons suffering from gastrointestinal, neuro-endocrine diseases, hypovitaminosis, immunodeficiency states. The scalp, nails and smooth skin are affected. Favus of the scalp can manifest itself in the form of scutular, squamous, impetigo clinical forms. The scutular form develops due to the introduction of the fungus into the mouths of the hair follicles, scutulae or shields appear, which are a pure culture of the fungus. Approximately 2

weeks after infection, itchy, hyperemic, slightly edematous spots appear, on which yellow or yellowish-gray saucer-like dense dry crusts - skutules are formed with a sink in the center. Due to peripheral growth, they merge, forming large plaques. Affected hair does not break off, but loses its elasticity and shine, and is easily pulled out. A barn or mouse smell comes from the foci, which is formed as a result of the vital activity

of fungi. When the shields are removed, a bright pink, smooth surface of the skin is visible. The disease ends with the formation of an atrophic scar and persistent baldness, with the exception of the marginal zone, in the



**Pic.34 Microsporiation**

form of a narrow border of unaffected hair up to 2 cm wide. An increase in regional lymph nodes is noted.

The squamous form is manifested by large-lamellar peeling on slightly hyperemic skin. When removing the scales, foci of atrophied skin are visible. The impetiginous form is rare in children. In the mouths of the hair follicles, pustules form, which dry out with the formation of layered, dirty yellow crusts. Hair is changed, the process ends with atrophy.

Favus of smooth skin as an independent disease is rare and is usually combined with lesions of the scalp. Against the background of inflammatory spots, typical scutulae are formed, which, merging with each

other, form rather large plaques (scutular form), occupying rather large areas of the skin. Sometimes, against the background of pink spots, peeling is determined, most pronounced in the mouths of vellus hair follicles (squamous form). Sometimes, against the background of erythematous spots, grouped small bubble elements (herpetic form) may appear. Smooth skin lesions do not leave cicatricial atrophy. More often the skin of the face, neck, extremities, scrotum, penis is affected. Favus of nails, mainly of the fingers, is characterized by the appearance of spots and yellow stripes in the thickness of the nail plate, thickening, irregularities and the presence of grooves. Nail ridges are not involved in the pathological process.

Diagnosis of the disease is based on the clinical picture, laboratory data (microscopic and cultural) Differential diagnosis is carried out with trichophytosis, microsporia, seborrhea, psoriasis, chronic lupus erythematosus. The main confirmation of the diagnosis is the detection of the causative agent of the disease.

Treatment trichomycosis consists in the appointment of antifungal antibiotics inside: griseofulvin, nizoral, oranosol, lamisil, orungal and others. In our conditions, griseofulvin is often used to treat trichomycosis. When prescribing it, it is necessary to take into account the patient's body weight and be sure to take it with vegetable oil. With microsporia, prescribe at the rate of 21-22 mg / kg

of the child's body weight, with trichophytosis - 18 mg / kg., With favuse - 15-16 mg/kg body weight. Moreover, for the first 3-4 weeks, the daily dose of the drug is prescribed daily in 3 doses (until the first negative analysis), then for 2-3 weeks the daily dose is prescribed every other day (up to three negative tests), the next 2 weeks are taken 2 times a week. At the same time, multivitamins, calcium gluconate 0.25 3 times a day, hepatoprotectors - Karsil 1 tablet 3 times a day for 25 days, silibor 1 tablet 3 times a day, hepatofalk and others, biogenic stimulants, immunomodulators are prescribed.

Local treatment is carried out with antiparasitic agents (5% -10% alcohol solution of iodine, sulfur-tar ointments, mycosolone, kanesten, clotrimazole, mycospor, lamisil and others). Shave off as hair grows. The first laboratory control of the effectiveness of treatment for lesions of the

scalp is carried out after 3 weeks and then every 7 days; with microsporia of smooth skin without damage to vellus hair, the first analysis is done 2 weeks after the start of treatment. From the moment of receiving the first negative analysis, a laboratory test is carried out 2 times once every 7 days. If microsporum fungi are detected during this period, control tests against the background of daily intake of griseofulvin are carried out 1 time in 3 days until a negative result is obtained, after which a new test for fungi is carried out 2 times after 7 days. After a 3-fold negative analysis, griseofulvin is prescribed for 2 weeks, 2 times a week. Control studies 1 time in 7 days. Dispensary observation after the end of treatment is carried out for 3 months in case of damage to the scalp and smooth skin with damage to vellus hair. If there is a lesion of only smooth skin, patients are under observation for one month. Control tests for fungi after the end of treatment are carried out after 10 days, and then once a month by microscopic and bacteriological methods. With negative results of laboratory tests, patients are removed from dispensary observation. It is necessary to examine persons in contact with patients once every 10 days for 1.5 months, and in children's groups daily for a month. Hats and underwear in contact with the affected areas should be treated in disinfectants or boiled and ironed.

Prevention of trichomycosis consists in the timely identification of patients and sources of infection through medical examinations of children's groups and contacts, in the timely isolation of patients and their treatment, in the implementation of anti-epidemic, anti-epizootic and disinfection measures in the foci. It is necessary to conduct sanitary and hygienic supervision of baths, laundries, hairdressers, as well as veterinary supervision of animals. Great importance in the prevention of trichomycosis is given to sanitary - educational work among the population and in organized groups. An important role in prevention is also dispensary observation of those who

have been ill and contact. With microsporia, observation is carried out for 1.5 months with a frequency of examination for treated patients weekly, for contact patients - when registering and before deregistration after 1.5 months. In organized children's groups, examinations are carried out weekly. With superficial and deep trichophytosis, observation is carried

out for 2 months, for treated patients - weekly, for contacts in family foci - when registering and 2 months before deregistration, and in children's groups - weekly. In chronic trichophytosis of adults, dispensary observation is carried out for 2 years: the first 3 months - 1 time in 2 weeks, then after 6, 9, 12 and 24 months. With favus, observation is 2 years with a frequency of examination for the first 3 months 1 time in 2 weeks, then after 6, 9, 12 and 24 months. Children who have recovered from illness are allowed to visit organized groups after 3 negative tests for fungi during treatment with griseofulvin and 2-fold control examination (after 5 negative results). When identifying patients with trichomycosis, it is imperative to send a notice to the dermatological dispensary and the center of epidemiology and hygiene, and in the zoophilic form, to the veterinary service.

**CHAPTER 8 VIRAL AND PARASITIC DISEASES OF THE SKIN.  
DESCRIPTION. ETIOLOGY, PATHOGENESIS, CLINIC,  
CLINICAL FORMS, BASIS OF DIAGNOSIS AND TREATMENT**

**Viral Dermatoses**

Among human viral diseases, one of the leading places is occupied by herpes. The causative agent of infection is characterized by dermatoneurotropism, a pronounced affinity for the skin, mucous membranes and nervous tissue. Infection with herpes can occur by airborne droplets, contact (direct or indirect), by kissing, with saliva. Epidemiological significance in the spread of infection is the transfusion of fresh blood, long-term immunosuppressive and radiation therapy, in some complex surgical operations. Nosocomial outbreaks of infection may develop, especially in premature and newborn units, in intensive care units. A predisposing factor to herpetic infection in such a contingent is a decrease in the body's resistance. The virus enters the body through the mouth, nasopharynx, eyes. Herpes is also transmitted sexually, taking second place after trichomoniasis. Under natural conditions, only humans are the source of infection. Primary infection usually occurs in utero, at an early age, and can be secretive. After an infection, the virus remains in the body for life in a latent form, and after hypothermia, insolation, fever, infections, emotional and other disorders of the body, relapses of herpetic manifestations on the skin and mucous membranes may occur. The incubation period of viral dermatoses ranges from 2-3 days to 3-6 weeks. There are herpes simplex (herpes simplex) and herpes zoster - shingles.

Herpes simple. Favorite localizations are lips (herpes labialis), nose (herpes nosalis), mucous membranes of the oral cavity (herpetic stomatitis), cornea of the eye, skin of the cheeks, eyelids, auricles. Quite often, the genital organs (herpes genitalis) are also affected: in men in the region of the head and shaft of the penis, in women the large and small labia, perineum, as well as around the anus and on the buttocks. In HIV-infected patients, atypical localization of herpes simplex is noted: on the skin of the legs, armpits. On slightly edematous and hyperemic

skin, grouped blisters the size of millet grains with serous contents appear, quickly turning into purulent. Bubbles may burst with the formation of erosions with small scalloped edges or immediately dry up into serous-purulent crusts. On the 7-10th day of erosion completely epithelialize, leaving no permanent changes behind. Skin lesions are accompanied by itching or pain. Some patients may suddenly develop herpetic fever with chills, fever up to 40 ° with severe headaches, meningeal phenomena, vomiting. Often there may be an increase and soreness of regional lymph nodes. Herpes simplex is often recurrent, with short intervals. Especially often there are recurrences of genital herpes that occur in women during menstruation, and in men after intercourse. Genital herpes also affects the productive function of women and the health of newborns, providing teratogenic properties. Children who have had intrauterine herpetic infection may be born with microcephaly, hydrocephalus, microphthalmia, retinal and cornea dysplasia, soft and hard palate defects. The following forms of herpes simplex are distinguished: abortive, with a small number of elements; edematous, with bright hyperemia and density; zosteriform, with a linear form of location, mainly on the lateral surfaces of the trunk and limbs; with ulceration of erosive areas; recurrent, with usual localization on the red border of the lips and in the genital area.

Diagnosis is mainly based on clinical manifestations. A cytological method is used to detect giant multinucleated cells. To confirm the diagnosis, you can put the reaction of passive hemagglutination and RSK. Differential diagnosis is carried out with manifestations of herpes zoster, and with localization on the genitals and near natural openings with manifestations of the primary period of syphilis (hard chancre).

Treatment of herpes simplex is a difficult task, especially in recurrent genital form. Local treatment consists in the use of antiviral ointments or creams: 2% - 5% tebrofen, 0.25% - 3% oxolinic ointment, 5% cream or 3% ointment virolex (acyclovir), 0.5% ointment bonafton, 0.25% - 1% rhyodoxol ointment, 3% megosin ointment, 3% gossypol liniment, lubrication of lesions with leukocyte interferon, and others. In addition, aniline dyes and pastes are widely used. Given the life-long carriage of the

virus and the complex relationship between the virus and the human body, it is necessary to prescribe a comprehensive treatment aimed, on the one hand, at increasing the body's defenses, and on the other, a direct effect on the pathogen.

The tactics of treating patients with recurrent genital herpes should take into account the stage of the disease. In the acute stage, it is advisable to prescribe antiviral drugs to patients – rimantadine 0.05 3 times a day after meals, acyclovir (virolex, zovirax, cyclovir) 0.2 four times a day, bonafton 0.1 three times a day after meals, retrovir capsules 0.2 4-6 times a day; leukocyte interferon - the contents of the ampoule are dissolved in 2 ml. chilled boiled water, 5 drops of the solution are prescribed in each nasal passage 2 times a day. Recommended for oral use famvir, and in the form of an aerosol - epigen. In addition, ascorbic acid, immunomodulators (levomizol, taktivin, plasmol, etc.) should be prescribed. In the stage of relapse resolution, immunoglobulin, autohemotherapy, herpes vaccine, applications with a 0.5% zinc sulfate solution can be recommended. In the period of remission of the disease - herpetic vaccine, pyrogenal. Be sure to treat all sexual partners.

**Prevention.** Compliance with personal hygiene, which prevents damage to the eyes, which can lead to blindness, abstinence from sexual activity until the resolution of herpetic eruptions on the genitals. It is believed that during the period of remission, sick men are practically not contagious. The fight against viral infection should be carried out in the form of anti-epidemic and sanitary-hygienic measures, affecting the source of the disease, the mechanisms of transmission of the pathogen and the susceptibility of people to the disease, as well as immunoprophylaxis.

### Shingles

The disease is caused by the filterable Strongyloplasma zonae virus, neurodermotropic, close to the chickenpox virus, which confirms the possibility of contracting chickenpox from patients with herpes zoster and vice versa. In children under 10 years of age, the disease is very rare. Possible disease at the same time simple and herpes zoster. It occurs as an independent disease, but can develop with pneumonia, pleurisy, lymphocytic leukemia, lymphogranulomatosis, cancerous and



other processes. Probably, the virus is located in the nerve ganglia and posterior roots, from where it is transferred to the skin through the perineural lymphatic spaces. The incubation period is from 2 days to a month. Any localization of the lesion, along the nerve trunks.

The clinic is characterized by the appearance on the skin along the course of individual nerves, more often intercostal, branches of the trigeminal nerve, less often on the extremities, foci of edematous hyperemia, against which grouped vesicles with transparent contents quickly form. Before the appearance of rashes, patients may have pain, burning, fever, general malaise and weakness. In addition, when localized on the skin in the abdomen, various diseases can be simulated - appendicitis, gallstone and other diseases, and on the skin of the chest - heart and lung diseases. The rash is located asymmetrically, linearly. After a few days, the contents of the vesicles become cloudy, swelling and inflammation are significantly reduced, and after a week they dry out, forming crusts, which are rejected by the end of the 3rd week, leaving behind pigmentation. Regional lymph nodes enlarge and become inflamed.

There are also atypical forms of the disease: abortive, when small grouped vesicles form against the background of hyperemic skin, almost not containing exudate, resembling papules; bullous - due to the fusion of bubbles, large bubbles are formed; hemorrhagic - content vesicles are hemorrhagic in nature, they can leave scars after themselves; gangrenous - the most severe form, in place of the vesicles scabs are formed, upon rejection of which ulcers are visible, healing with a scar; generalized - in different areas along the nerves separate bubbles pour out, like elements of chicken pox.

The disease, as a rule, leaves strong immunity, relapses of the disease indicate a poor prognosis, as they occur in patients with malignant neoplasms, lymphogranulomatosis or leukemia. Patients with HIV infection usually have generalized processes and a combination with Kaposi's sarcoma. Diagnosis with a typical form is made without difficulty on the basis of clinical manifestations. differential diagnosis. In atypical forms, it must be distinguished from anthrax, erysipelas.

### Treatment.

It is necessary to prescribe etiopathogenetic treatment, which consists in taking antiviral drugs, famvir, gamma globulin, methyluracil, analgesics, B vitamins (B1, B2 and B12). When complicated by a secondary infection, broad-spectrum antibiotics are used. Of the physiotherapeutic procedures, ultraviolet radiation, sollux, indirect diathermy of the cervical and lumbar sympathetic nodes, reflexology, ultrasound are shown. With severe pain, novocaine blockade of the corresponding nerve is prescribed. External treatment is carried out as with simple vesicular lichen. Molluscum Contagiosum

The causative agent of the disease is a filterable smallpox virus - Molitor hominus. Infection occurs through direct contact with the patient, including sexual contact, or through the use of household items contaminated with viruses: towels, washcloths, toys, house dust, dust from gyms, libraries. Children get sick more often. In children's groups, epidemic outbreaks can be observed. It must be remembered that in adults suffering from molluscum contagiosum, especially when the lesion is localized in the abdomen and external genital organs, this disease can be one of the clinical manifestations of AIDS. The incubation period ranges from 2 weeks to several months. Clinic. On the skin of the face, neck, genitals, perineum, trunk, extremities, scalp, rashes appear in the form of dense, slightly shiny hemispherical papules. In the center, especially of large elements, an umbilical depression is visible. Elements can merge to form large conglomerates. When squeezed, a white mushy mass is released from them from keratinized epidermal cells and mollusk bodies. There are no subjective sensations. Without treatment, after 2-3 months, the elements spontaneously disappear. There are several clinical forms: multiple small rashes, stalk clams and giant clams. The diagnosis is made on the basis of the clinical picture of the disease. The differential diagnosis is carried out with warts, condylomas, papular syphilis, lichen planus, xanthomas, AIDS.

morphological element is a papulo-vesicular rash, small in size. When scabies is characterized by pairing of elements, i.e. their very close location, itchy passages. In addition, scratching, hemorrhagic crusts are observed on the skin. When a secondary infection is attached, impetigo, ecthyma, folliculitis, and boils may appear. With the localization of impetigo and ecthyma or bloody crusts on the extensor surface of the elbow joints, this manifestation is called the Gorchakov-Ardi symptom.

There are the following atypical forms of scabies:

oligosymptomatic, or erased scabies occurs in clean people. There are single papular elements, excoriations on the skin, there are no scabies, but there is severe itching.

Norwegian scabies, first described in 1848 by Beck in patients with leprosy, is a rather rare disease that develops in debilitated individuals suffering from asthenia, Down's disease, and immunodeficiency. Lasts for months and even years. Itching is absent, the process can be universal. On the skin there are massive dirty-brown layered crusts up to 2-3 cm thick, between the layers of which and under them there are large clusters of mites. These lesions are extremely contagious. Grain scabies is caused by a mite found in straw and on grains. Human infection occurs when a tick comes into contact with the skin from straw mattresses, with dust. At the site of tick bites, blisters, hyperemia, vesicles appear, which can turn into pustules, severe itching worries. Nodular scabies is characterized by itchy papules that appear after a complete scabies treatment. It is suggested that a granulomatous skin reaction may result from the introduction of the scabies mite, due to skin irritation during scratching, or due to the absorption of excrement decay products. There is also an opinion about the immunoallergic origin of nodular scabies. N.S. Potekaev and other researchers consider it as scabies lymphoplasia, so it is not advisable to prescribe additional anti-scabies treatment.



Plc. 37 Parasitic skin diseases scabies

Pseudo-scabies, or tick-borne dermatitis, occurs when animals (dogs, pigs, horses, rabbits, sheep, goats and other animals) are infected with scabies. Dogs are the most common source of human infection. The incubation period lasts several hours. Ticks do not penetrate the epidermis, but inflict bites, causing severe itching, the appearance of blisters, large papules, vesicles with a pronounced inflammatory reaction of the skin. The disease is not transmitted from person to person. Some authors distinguish infant and children's scabies. Instead of itching, the infant has irritation, and the clinical picture resembles urticaria with scratching and blisters, covered with a bloody crust in the center. Localization is more often in the perineum, on the scrotum, in the armpits. The skin of the face may be affected as a result of contact with soiled linens. On the skin of the feet, scabies can be identified. In school-age children, scabies is often complicated by pustular lesions and may resemble the clinical picture of eczema, pyodermatitis, and children's pruritus.

Diagnosis of scabies is based on the epidemiological history, clinical picture, the results of examination of the patient's contacts and laboratory tests. Differential diagnosis should be carried out with a group of pruritic dermatoses: pruritus, pruritus, urticaria, neurodermatitis, distinguished from allergic dermatitis, toxicoderma, lichen planus and other dermatoses. With the localization of lesions on the penis, it is

necessary to exclude syphilitic manifestations. Currently, you can get both scabies and syphilis at the same time.

Treatment. There are many drugs, but the ideal anti-scabies agent should have an effective effect on mites and their larvae, have minimal sensitizing and irritating effects, be quickly excreted

from the body, be of low toxicity, be odorless and not stain clothing. For many years, preparations containing sulfur at a concentration of 10% - 33% in the form of sulfur ointment, Wilkinson's ointment, polysulfide liniment, etc. have been widely used. However, in addition to a pronounced positive therapeutic effect, they also have undesirable properties: they have an unpleasant odor, stain clothes and underwear, irritate the skin and cause dermatitis, eczema. Benzyl benzoate is widely used in the treatment of scabies in the form of a 20% water-soap solution or ointment, for children under 3 years old - 10%. Before lubrication, the patient takes a shower, then rubs benzyl benzoate twice with a 10-minute break, puts on clean linen. The treatment is carried out for 3 days, after which the patient takes a shower and changes underwear and bed linen.

33% sulfuric ointment (for children 10% - 25%) is rubbed into the skin against hair growth after a shower for 5 days 2 times a day. On the sixth day, the patient takes a shower, changes linen. Polysulfide liniment, proposed for the treatment of scabies by L.I. Bogdanovich and A.I. Koncha, is characterized by simplicity and ease of obtaining, the duration of storage of its components (up to one year) and a quick therapeutic effect. The basis of polysulfide liniment is 5% soap gel. For its preparation take 50 gr. crushed baby soap per 1 liter of water and heated until the soap dissolves, then cooled. For the preparation of sodium polysulfide take 600 ml. water, add 200 gr. caustic soda and 200 gr. powdered sulfur and stir with a glass rod. After about an hour, sodium polysulfide is formed. The ratio of water, caustic soda, sulfur - 3:1:1. To obtain 10% polysulfide liniment, 10 parts of sodium polysulfide solution and 2 parts of vegetable oil are added to 100 parts of soap gel. 10% polysulfide liniment (for children 5%) is rubbed after a shower for 10-15 minutes. Repeated rubbing is carried out the next day. After 2 days, a shower is taken with a change of linen. Crotamiton in the

form of a cream, ointment or lotion, in addition to anti-scabies properties, has an antipruritic effect, does not cause adverse reactions, children and pregnant women can be treated. After washing, apply to the skin twice after 24 hours or four times after 12 hours for 2 days. Permethrin ointment 4% - is used according to the treatment regimen with sulfuric ointment. Spregal is prescribed for the treatment of infants, children over one year old and adults, it is recommended for family use. In the evening, the affected areas of the skin are treated, and after 12 hours, washing with soap is carried out. It is advisable to carry out two treatments with an interval of 3 days. During treatment, it is necessary to follow some rules: treat the entire surface of the body and limbs, and not just the affected areas; pay special attention to the treatment of hands, feet, interdigital folds, perineal skin, scrotum; avoid getting the drug on

the mucous membranes; in the case of Norwegian scabies, with the help of keratolytic agents, skin areas are cleared of crusts, the patient is isolated. Thorough disinfection of clothing and bedding, washing followed by boiling is necessary. After treatment, some patients have severe itching, which may be due to an allergy to the drug used, physiological hypersensitivity, misdiagnosis or improper treatment.

Prevention consists in the observance by the population of sanitary and hygienic standards, early diagnosis, isolation and treatment of patients. Mandatory disinfection of linen and clothing. Persons who were in close household or sexual contact with the patient but without manifestations of scabies are prescribed prophylactic treatment. It is necessary to carry out preventive examinations for contagious skin diseases in preschool and school institutions, as well as in youth groups, and sanitary and educational work among the population. For each patient with scabies, an emergency notice is filled out to the center of epidemiology and hygiene for current and final disinfection. Dispensary supervision. After discharge from the hospital, the patient is re-examined after 2 weeks. If no manifestations of the disease are detected, all contacts are examined and treated, the patient is removed from the dispensary register.

## Pediculosis

Pediculosis, or lice, is a parasitic skin disease. The causes of pediculosis are poor material and living conditions, overcrowding, malnutrition, and non-compliance with basic rules of personal hygiene. There are three types of lice that parasitize humans : head lice, body lice, and pubic lice. Head lice are localized on the scalp, mainly in the occipital and temporal regions. Can be on eyebrows, mustache, beard, eyelashes. Infection occurs by direct contact or through combs, hats. On the scalp, due to severe itching, scratching, inflammation of the skin appear; a secondary infection may join, the occipital and cervical lymph nodes may increase. Treatment. Nittifor is used, which is rubbed into the hair roots at the rate of 10 - 60 ml. per person. Then the head is tied with a scarf. 40 minutes after treatment, the drug is washed off with warm running water and soap or shampoo for washing hair. After washing, comb the hair with a fine comb to remove dead insects. Body lice are caused by body lice, whose bites cause itchy skin and blistering rashes. In addition, scratching, excoriation are noted at the site of the bites, and a secondary pyococcal infection may join. Treatment is reduced to washing the body with soap and changing underwear and bed linen, which must be subjected to decontamination or boiling. Pubic lice. Infection occurs mainly during sexual intercourse, less often through bed linen. Parasites are localized in the hair of the pubis, scrotum, anus, labia majora, can attach to the hair of the body and even the armpits.

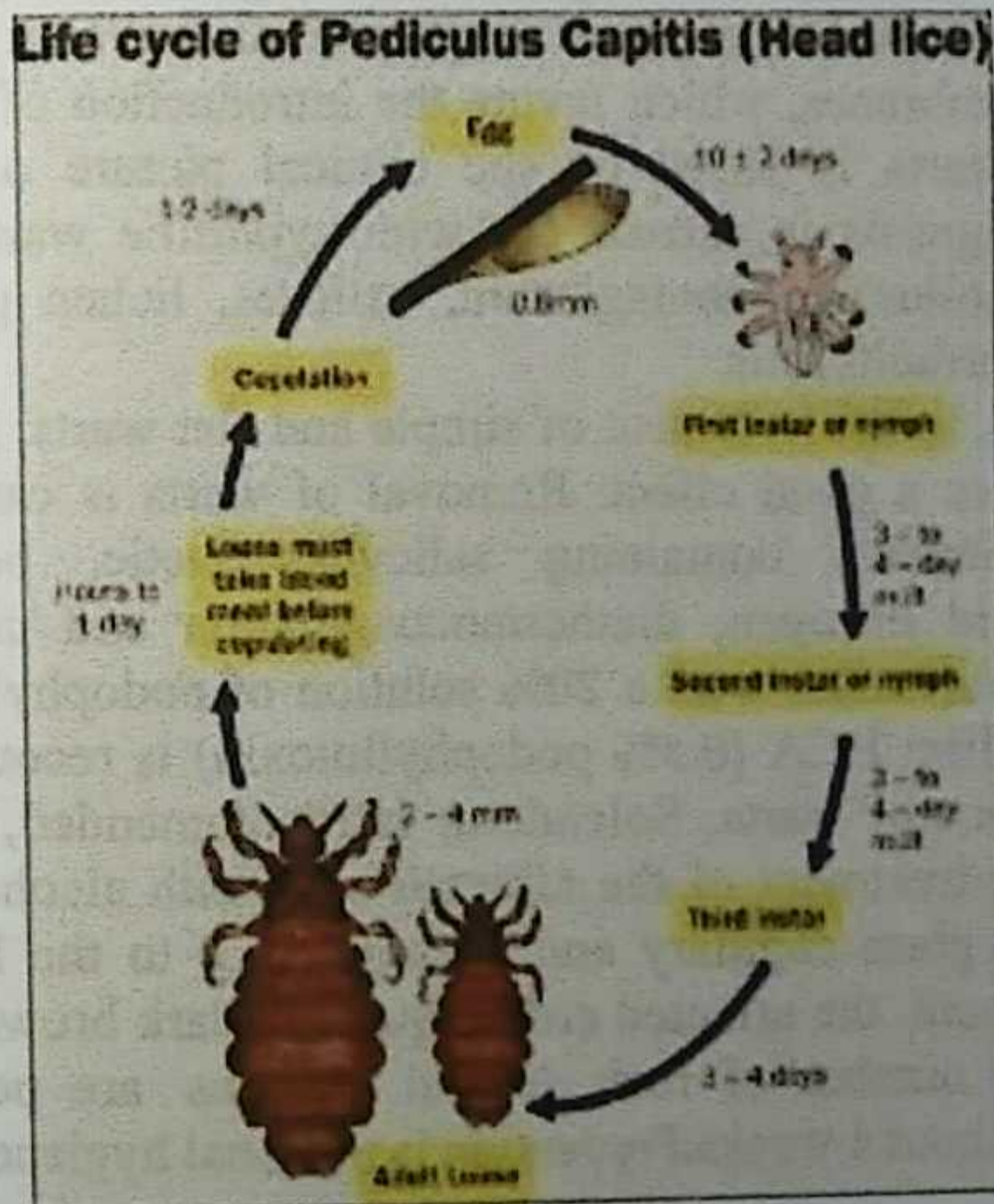
Rounded bluish spots appear at the site of the bites, which are similar to spots in secondary recurrent syphilis.

Treatment. After shaving the hair, 30% gray mercury ointment or 10% white mercury ointment is rubbed into the lesions for 2-3 days once a day. However, with this method of treatment, there can be serious complications such as toxicoderma, kidney damage. Therefore, it is better to use 20% - 25% benzyl benzoate ointment or nittifor, pedilin, reed, sifax shampoos. Prevention of pediculosis consists in identifying and quickly eliminating each case of lice, in observing the rules of personal and public hygiene.

## Warts

Warts are caused by DNA-containing dermatotropic viruses. Infection occurs through direct contact or through various objects. It can also be transmitted through sexual intercourse. The

incubation period lasts from several weeks to 9 months. Factors contributing to the appearance of warts are traumatization, maceration and skin irritation. Apparently, the state of the central nervous system plays a certain role in their pathogenesis. Ordinary, or simple warts, are more often localized on the back surface of the hands, feet, palms, face skin, scalp, red border of the lips, on the nail folds, under the free edge of the nail plate. They are epidermal papules of yellow-gray color, up to a pea, with an uneven surface covered with horny scales. Warts can merge with each other, forming plaques. The course is long, their sudden self-healing is observed.



**Pic. 38 Pediculosis**



Juvenile, or flat warts, are flat, slightly raised papules, the color of normal skin or yellowish brown. More often localized on the skin of the back of the hands and fingers, on the chin and forehead. The course is long, self-healing is possible. This is a disease of childhood and adolescence. Plantar warts are localized in places of greatest pressure on the plantar surface of the foot, resemble a corn up to several centimeters in size, yellow in color. In the center of the wart are hypertrophied, easily bleeding papillae. There is a sharp soreness that makes it difficult to walk and wear shoes. Genital warts, or genital warts, appear as papillary growths with a narrow stalk at the base, have a lobed structure, a soft texture, and resemble a cauliflower. They are localized mainly on the inner layer of the foreskin, in the coronary sulcus in men and on the eve of the vagina, in the anus or in the inguinal-femoral fold, under the mammary glands in women. Such localization is facilitated by inflammatory diseases of the genital area, gonorrheal, trichomonas, chlamydial lesions, in which there are secretions that lead to irritation of the mucous membranes, which favors the introduction of the pathogen. Diagnosis of warts is based on the clinical picture of the disease. Differential diagnosis is carried out with syphilitic warts, warty skin tuberculosis, molluscum contagiosum, calluses, lichen planus, Hopf's acrokeratosis verruciformis.

**Treatment.** In the treatment of simple and flat warts, hypnotherapy, reflexology gives a good effect. Removal of warts is carried out with keratolytic ointments containing salicylic, lactic, benzoic acids, resorcinol, liquid nitrogen, diathermocoagulation and cryodestruction can be used. Lubrication with a 20% solution of podophyllin, ferezol, a solution of condilin HCA (0.5% podophyllotoxin) is recommended. For external treatment of warts, Solcoderm is recommended, a solution of which, after pre-treatment of the affected area with alcohol or ether, is applied using a glass capillary and an applicator to the lesion. A few days after treatment, the affected area acquires a dark brown color. When treating a large number of foci, several sessions are performed with interruptions of about 4 weeks. Prevention is personal hygiene.



**Pic.39 Warts**

**CHAPTER 9 PSORIASIS. LICHEN RED FLAT. DESCRIPTION.  
ETIOLOGY, PATHOGENESIS, CLINIC, CLINICAL FORMS,  
BASIS OF DIAGNOSIS AND TREATMENT**

**Psoriasis**

Psoriasis, or psoriasis, is a chronic relapsing disease manifested by papular rashes on the skin and mucous membranes, damage to the nails and joints. About 2% of the world's population suffers from this dermatosis. The etiology and pathogenesis of the disease have not been fully elucidated. There are various theories of the origin of psoriasis: viral, infectious - allergic, neurogenic, endocrine disorders, metabolic. However, none of them can fully explain the occurrence of the disease. Currently, it is believed that the leading role in the development of the disease is played by hereditary factor, genetically determined predisposition. Sometimes abnormal genes show up in children before their parents have psoriasis. This state is called anticipation. The immediate cause of the occurrence of rashes against the background of predisposition is most often infectious, neuropsychic, traumatic and other factors, resulting in accelerated reproduction and inadequate maturation of epidermal cells. Based on the accumulated data, it can be assumed that psoriasis occurs as a result of the interaction of a combination of negative exogenous and endogenous factors against the background of a certain predisposition to this dermatosis.

There are the following clinical forms of psoriasis: vulgar, exudative, arthropathic, psoriatic erythroderma (total and partial), pustular psoriasis. Clinic of psoriasis vulgaris. The primary morphological element is a pink, rounded epidermal papule, abundantly covered with silvery- white, easily removable scales, which, when scraped, exfoliate and increase in number, giving the impression of a stearin drop - the phenomenon of a stearin spot. With further scraping, the scales are removed and a wet, shiny red surface is exposed - the phenomenon of the terminal film. Further scraping leads to the appearance of pinpoint drops of blood on the surface of the film - the phenomenon of Polotebnov's "blood dew" or Auspitz's pinpoint

bleeding. These phenomena are based on the phenomena of parakeratosis, acanthosis and papillomatosis. In the dynamics of the development of the psoriatic process, three stages are distinguished. The progressive stage is characterized by small papules of a bright pink color, peeling in the center of the element, a positive Koebner phenomenon - the appearance of new papules at the site of a skin scratch, when determining the biodose to UVA after an average of 7 days. The stationary stage is manifested by the negative Koebner phenomenon, the pale color of the elements, the peeling occupies the entire surface of the papule, the presence of Voronov's collar around the papules.

stage of regression. The resolution of elements can start from the center or from the periphery. In place of papules, spots of hypo- or hyperpigmentation remain. Recognition of the stages of psoriasis is important for the appointment of a rational general and external treatment. During the course of the disease, seasonality is noted, there are summer, winter and off-season forms of psoriasis. Damage to the nails is manifested by the deformation of the nail plates with point impressions resembling a thimble - a symptom of Heller. Then the color of the nails becomes yellowish-brown, the plates become thinner or thicker with a deformity like a bird's claw - psoriatic onychogryphosis. In addition, there may be transverse grooves on the nail plates - a Beau-Reilly symptom

Arthropathic psoriasis begins like psoriasis vulgaris, but pain and swelling of the small joints of the hands and feet, ankles, and wrists join. In the future, develop severe deforming arthritis, ankylosis, leading to disability. Psoriatic erythroderma can occur spontaneously or after infection, vaccinations, sun exposure, etc. The plaques merge into one common erythema, the skin becomes brick-red, edematous. A secondary infection may join and the temperature rises, itching intensifies, a feeling of skin tightening. Erythroderma can be total and partial. Exudative psoriasis is characterized by the presence of large lamellar exudative scales or crusts due to pronounced exudation.



Pustular psoriasis is less common and is manifested by rashes on intact skin of sterile pustular elements (Tsumbush). Similar rashes can also be observed on the hyperemic skin of the palms and soles (Barbera). The course of psoriasis in infants is characterized by the presence of erythematous foci with maceration phenomena, detachment of the stratum corneum along the periphery with predominant localization in the folds of the anogenital region (inverse psoriasis), which resembles diaper rash, candidiasis, eczema. Along with papular rashes, children may have vesicular and pustular elements like ostiofolliculitis or streptococcal impetigo. Exudative forms of psoriasis in children account for about 40%.

The treatment of psoriasis remains a difficult task and is carried out according to the form and stage of the disease, taking into account the nature of the skin lesion, the seasonality of the process, age, drug tolerance, and the functional state of internal organs. General treatment should be complex with the use of sedative, neuroleptic, hyposensitizing agents, non-specific immunotherapy drugs (aloe, ATP, pyrogenal, etc.), vitamin therapy. For the treatment of psoriasis, manifested by severe infiltration of

psoriatic plaques, we have proposed lidase, which is administered subcutaneously or intramuscularly at 64 units. in one day. For a course of treatment up to 15 injections. Intravenous drip infusions of 200-400 ml of gemodez are widely used once every three days, intramuscular injection of pyrogenal. Depending on the state of the immune system, T-activin, leakidin, thymalin, methyluracil, splenin, placenta extract and others are used. Lipoic acid, dipromonium are shown to normalize lipid metabolism. In case of violations of liver function, they are prescribed: sirepar, methionine, unithiol, Essentiale, LIF - 52, carsil. In the treatment of psoriasis, aromatic retinoids are used - tigazon, etretin and others, antioxidants for the correction of peroxidation. The use of cytostatics and corticosteroids is advisable in exceptional cases, when other methods of treatment have been unsuccessful. In an advanced stage of the disease sparing, non-irritating therapy is prescribed, it is advisable to prescribe calcified autologous blood to stop the progressing process. The method of using calcined autologous blood is as follows: 10 ml of a 10% solution of calcium chloride is injected intravenously. Without removing the needle from the vein, the patient's blood is drawn into the syringe and injected intramuscularly. To stop fresh rashes, according to our observations, five procedures are enough, which are carried out every other day in a volume of 2 ml, 4 ml, 5 ml, 6 ml, 8 ml. External treatment should be carried out with caution, since erythroderma may develop with irrational treatment. Keratoplastic ointments or creams (2% - 3% salicylic ointment) are prescribed. In the stationary stage, local absorbable ointment therapy is actively used in combination with hydro- and physiotherapy procedures (UVI, PUVA). Shown sanatorium - resort treatment. Patients with psoriasis should be registered in the dispensary. During the period of remission, it is necessary to carry out restorative treatment, taking into account the seasonality of the exacerbation.

### **Lichen Planus**

The etiology of the disease has not been fully elucidated. There are viral, nervous, allergic theories of the development of the disease.

The clinic of a typical form of the disease is characterized by the appearance on the skin of the trunk, limbs, oral mucosa and genital organs of papules of a polygonal shape, pink-red in color, with an umbilical

depression in the center, with a shine, there is a Wickham mesh due to uneven thickening of the granular layer of the epidermis. The isomorphic Koebner reaction is determined. Patients are worried about itching. In addition to the typical form, hypertrophic, atrophic, bullous, pigmented and others are distinguished. The hypertrophic, or warty form is manifested by towering papules, on the surface of which there may be papillary-horny growths. Frequent localization on the shins, hands, scrotum, in the sacral region. The atrophic, or sclerosing form is characterized by atrophic scars at the site of former papules. Localization on the head, trunk, armpits, genitals. It is characterized by papules and atrophic spots with a yellowish-brown color typical of lichen planus. Ring-shaped foci with a slight brownish-cyanotic ridge and a brownish center may form. Bullous or pemphigoid form of lichen planus is a rare disease that occurs with the formation of blisters on plaques and papules or on inflamed areas of the skin, accompanied by severe itching. More often localization them on the lower extremities. Pigmentary lichen planus is localized on the face, trunk, limbs in the form of multiple brownish spotted rashes. For diagnosis, it is necessary to try to detect typical papular elements. In addition, there may be a linear form of the disease in which papular rash is located in the form of stripes and more often along the nerves, occurs in children. Zosteriform lichen planus is characterized by the presence of typical papules located along the nerve and clinically resembles the manifestations of herpes zoster. There are localized, disseminated and generalized lichen planus. The course can be acute (up to 1 month), subacute (up to 6 months) and long-term without remission or recurrent.

In infants, lichen planus is characterized by a tendency to merge papules, their swelling, hyperemia. Due to the fact that children's skin is abundantly supplied with blood vessels, hydrophilic and contains a lot of intra- and extracellular fluid, the exudative component predominates in children. Due to this, vesicular and pemphigoid forms of lichen planus are formed. In addition, the rash may be in the form of diffuse hyperemia of a dark red color with swelling and peeling (erythematous lichen planus). Diagnosis is facilitated by the detection of characteristic papules along the periphery of areas of erythema. With an unfavorable course of the disease, erythroderma may occur with damage to the scalp and nails.

Treatment of dermatosis should be complex and individual. In the acute period, in the presence of intense itching, histamine H1 blockers, vitamin A, tigazon, vitamin E - (tocopherol acetate), aevitare indicated. In chronic cases, actovegin is indicated. In some cases, effective therapy with quinoline derivatives (delagil, chloroquine, presocil 0.25 2 times a day) in combination with corticosteroid drugs (prednisolone, triamcinolone, dexamethasone). In chronic and generalized forms, lesions of the mucous membranes, it is advisable to prescribe corticosteroid therapy along with conventional methods of treatment. It is possible to carry out immunotropic therapy using exogenous interferons (reaferon, interlock) and interferonogens (neovir, ridostin). Hypnotherapy, electrosleep have a good effect. Locally applied glucocorticoid ointments, irrigation with chlorethyl, chipping with hydrocortisone emulsion, diathermocoagulation, laser therapy, PUVA therapy.



Plc. 42 Lichen planus



**CHAPTER 10 LUPUUS, SCLERODERMA. PHOTODERMATOSES.  
DESCRIPTION. ETIOLOGY, PATHOGENESIS, CLINIC,  
CLINICAL FORMS, BASIS OF DIAGNOSIS AND TREATMENT**

**Connective Tissue Diseases Lupus Erythematosus**

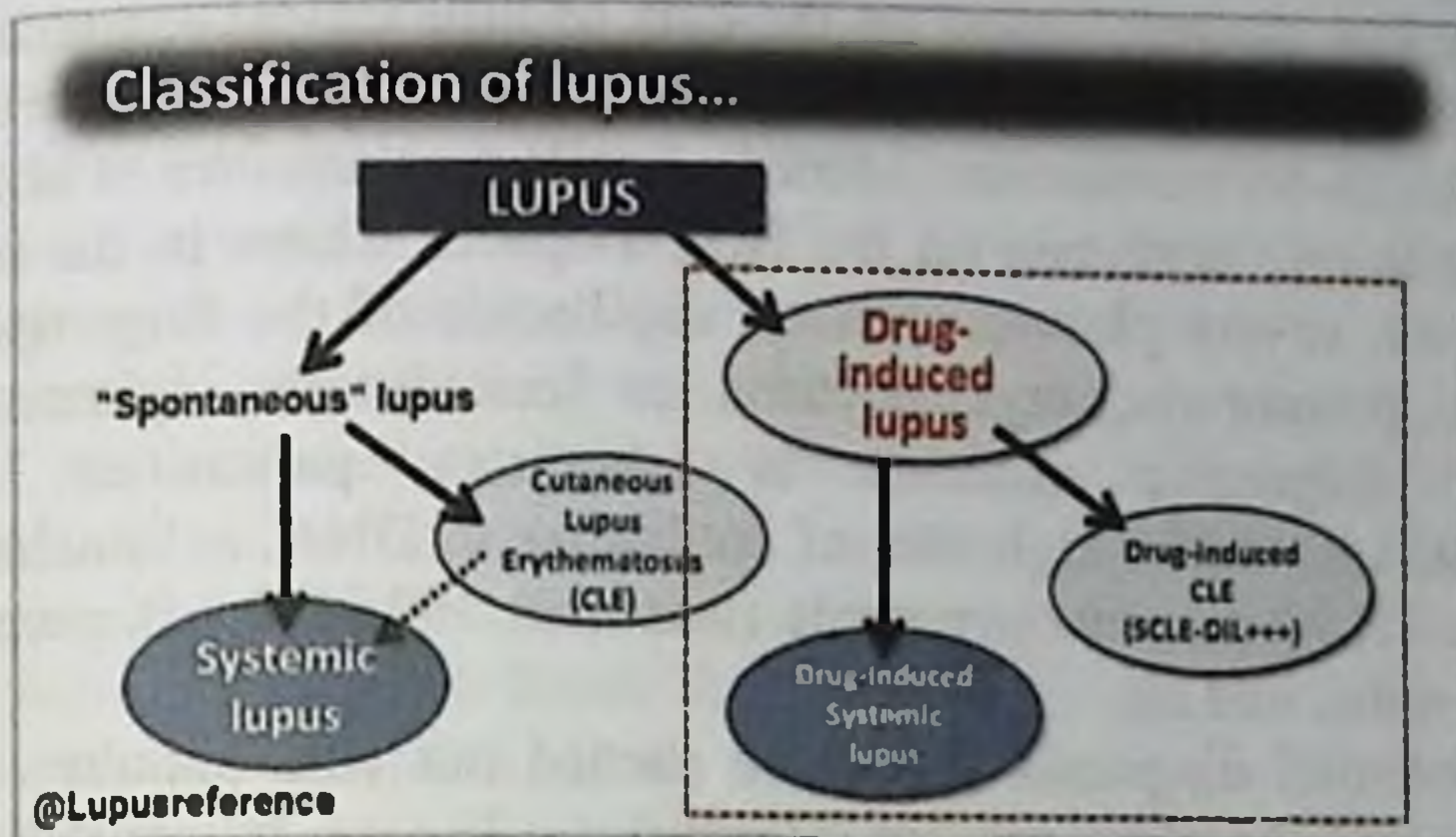
Lupus erythematosus, or scarring erythematosus, is a chronic connective tissue disease. Etiology and pathogenesis have not been fully established. There are a number of theories of the origin of the disease (autoimmune, genetic, endocrine, viral, etc.), but none of them can explain the whole essence of the disease. It has been proven that mechanical and chemical factors, exposure to ultraviolet rays, certain drugs, radiation, foci of focal infection, etc. are of great importance in the development of the disease. Increased sensitivity of the skin to ultraviolet rays, metabolic disorders of the fibrous component of connective tissue and autoantibodies. It has been established that the cause of skin hypersensitivity to UV radiation is due to the presence of coproporphyrin in the secretion of the sebaceous glands of the skin. Photodynamically processed secretion of the sebaceous glands of the skin is a source of polyautoantigens, which, entering the blood, cause changes in the immune status characteristic of lupus erythematosus. The presence of a special aggressive protein, called the antinuclear factor, has been established. It belongs to the Jg G class and, penetrating into leukocytes, is fixed on their nuclei and, as the end result of its action, the formation of lupus erythematosus cells (LE - cells). Lupus erythematosus cells are often found in patients with a systemic form of the disease and rarely in chronic ones. In systemic lupus erythematosus, antinuclear autoantibodies are found in the blood serum. Classification of lupus erythematosus:

Chronic lupus erythematosus, which is divided into 4 clinical forms: Bietta's discoid, disseminated, centrifugal erythema, Irgang-Kaposi's deep lupus erythematosus.

Systemic lupus erythematosus - acute, subacute, chronic.

Discoid lupus erythematosus is most often localized on areas of the skin exposed to insolation: the back of the nose, cheeks, forehead, chin, scalp, red border of the lips, and others. The primary element is erythema with edema, and later infiltration. The elements merge, forming

erythematous-infiltrative plaques, covered with tight-fitting horny scales, upon removal of which the patient feels pain - a symptom of Besnier-Meshchersky. On the inner surface of the removed scale, a spine is



**Pic. 42 Connective Tissue Diseases Lupus Erythematosus**

determined - a symptom of the "lady's heel". The soreness and symptom of "lady's heel" is explained by the presence of follicular hyperkeratosis in discoid lupus erythematosus. The skin process ends with atrophy of the lesions. Thus, this form of the disease is characterized by three symptoms: erythema, follicular hyperkeratosis and atrophy. Three zones can be seen in the lesion: cicatricial atrophy in the center, infiltration and hyperkeratosis in the middle, and erythema along the periphery. Disseminated scarring erythematosus is characterized by the presence of many erythematous-squamous lesions with the presence of follicular hyperkeratosis and pink atrophy. The process may be accompanied by subfebrile temperature, increased ESR, anemia, leukopenia, arthralgia. There is evidence of a transition to systemic lupus erythematosus. Centrifugal Bielt's erythema is characterized by the formation of edematous erythematous spots with clear boundaries without hyperkeratosis and atrophy, more often on the skin of the zygomatic region and forehead. There are no subjective sensations. Transformation to systemic lupus is possible. Deep lupus erythematosus of Irgang-Kaposi is manifested by the presence of deep subcutaneous dense bluish-pink nodes

that are not soldered to the underlying tissues. It is localized in the cheeks, nose, scalp, trunk, limbs.

Diagnosis of chronic lupus erythematosus is based on the clinical picture, and in doubtful cases on the data of histological examination. Be sure to check for systemic lupus erythematosus. Diagnostic criteria for systemic lupus erythematosus (according to V.A. Nasonova et al.) include a skin syndrome: erythema on the face, alopecia, ulcers in the mouth or nasopharynx, severe photosensitivity, capillaritis of the fingertips. Renal syndrome: proteinuria, erythrocyturia or leukocyturia, cylindruria. An important diagnostic criterion is laboratory parameters: anemia, leukopenia, LE - cells, high titer of antibodies to DNA, antinuclear factor more than 1:100, thrombocytopenia (less than  $100 \cdot 10^9 / l$ ), complement CH 50 35 units. and etc.

Differential diagnosis should be carried out with papulo - necrotic tuberculosis of the skin, rosacea, Borovsky's disease, tubercular syphilis, dermatomycosis, focal alopecia.

Systemic lupus erythematosus. Mostly young women are affected. It can develop spontaneously or as a result of transformation of the chronic form. The skin syndrome is characterized by edematous erythema on the face, similar to erysipelas, which spreads to the skin of the neck and chest. On the trunk and extremities there is a polymorphic rash in the form of blisters, papules, vesicles, erythematous-hemorrhagic spots with peeling. Skin lesions end with pigmentation or not pronounced cicatricial atrophy of the skin. Mucous membranes are rarely affected. The general condition is disturbed - fever, general weakness, fatigue, weight loss. In 50% of patients, the kidneys are affected, protein, cylinders, and erythrocytes appear in the urine. Uremia may develop, which is an unfavorable prognostic indicator. Damage to the heart manifests itself in the form of endocarditis, pericarditis, myocarditis. Perhaps the development of pneumonia, pleurisy. The lymph nodes, liver and spleen are enlarged, the joints are affected. The acute form of systemic lupus erythematosus proceeds according to the type of severe septic disease, in 20% of patients it proceeds without skin manifestations. In subacute course, there is a predominance of skin-articular syndrome. The chronic form proceeds for a long time with periodic exacerbations. In the blood, there is an

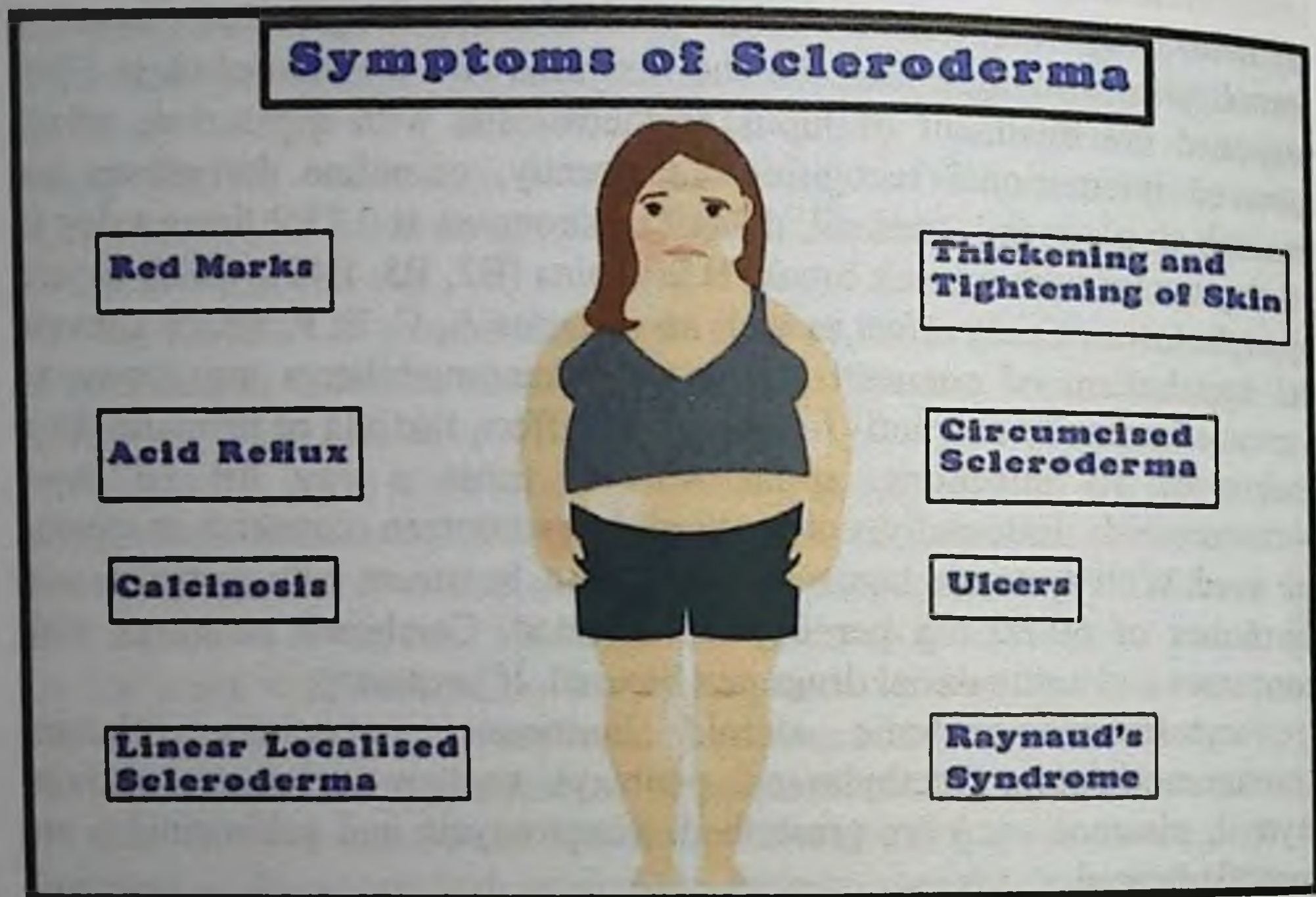
increased ESR, anemia, leukopenia with lymphopenia, thrombocytopenia, A decrease in total protein, hypergammaglobulinemia, proteinuria, the presence of LE cells. Diagnosis is based on clinical manifestations and laboratory data. The diagnosis of systemic lupus erythematosus is confirmed by the presence of LE cells (lupus erythematosus cells) in the blood, which are found in 60-84% of cases. Differential diagnosis is carried out with other collagenoses. Chronic lupus erythematosus is treated with antimalarial drugs that have a photohyposensitizing effect. For the first time A.Ya. Prokopchuk in 1940 proposed the treatment of lupus erythematosus with quinacrine, which received international recognition. Currently, quinoline derivatives are prescribed: plaquenil, presocil, delagil, chloroquine at 0.25 2 times a day in 10-day cycles with a week break, B vitamins (B2, B5, B12), which have a hypophotosensitizing effect, as well as vitamins A, C, E, P, which activate the metabolism of connective tissue. Immunomodulators are shown to increase immunity and anti-inflammatory effect, taktivin or thymalin for a course of 10 injections, apilak 0.01 3 times a day for 10 days, corticosteroids. Externally, corticosteroid or sunscreen ointments or creams are used. With systemic lupus erythematosus, treatment with corticosteroid hormones of 60-80 mg per day is indicated. Combined treatment with hormones and antimalarial drugs can be used. If necessary,

cytostatics, anabolic steroid hormones, potassium, calcium, immunomodulators (methyluracil, pentaxyl, sodium nucleinate, taktivin, thymol, plasmol, etc.) are prescribed. Streptomycin and sulfonamides are contraindicated.

**Prevention.** In order to prevent recurrence, dispensary observation of patients is carried out. Before the appearance of intense insolation, photohyposensitizing agents are prescribed, photoprotective creams "Luch", "Shield", "Quantum", powders, varnishes, creams containing 5% 10% salol, tannin, para-aminobenzoic acid are used. It is necessary to employ the patient to work indoors, to prohibit exposure to the sun, to recommend the use of protective summer umbrellas, scarves or red scarves, because it reflects ultraviolet rays. Be sure to sanitize foci of chronic infection. It must be remembered that pregnancy can exacerbate the skin process. Scleroderma is a disease based on disorganization of connective

tissue with damage to the skin, internal organs, musculoskeletal system, and neuroendocrine system. Systemic scleroderma ranks third in frequency after rheumatism and rheumatoid arthritis, and limited scleroderma is about 0.3% in the overall structure of skin morbidity. The disease has been known since ancient times.

## Scleroderma



Pic.43 Scleroderma

In 1874, I.S. Turgenev in the story "Living Powers" described with great accuracy the clinic of a severe scleroderma lesion. The etiology of the disease has not been definitively established. Acute and chronic infections, injuries, vibration, radiation energy, physical and mental overstrain, medicines, vaccines, serums play an important role in its occurrence. In pathogenesis, pronounced vasospasm is important due to the accumulation of serotonin and hyaluronic acid, as a result of which fibrinoid degeneration of the connective tissue develops with edematous indurative proliferation in the skin. The role of genetic factors is not excluded. The

disease can occur at any age, more often in women, and in recent years it has become more frequent in children, including newborns. There are limited and systemic scleroderma. There are several clinical forms of localized scleroderma. The plaque form in its course goes through the stages of inflammatory edema, skin thickening and atrophy. On the skin of the trunk, upper and lower extremities, less often on the face, neck, on the mucous membranes of the oral cavity (cheeks, tongue, palate) an edematous spot of pale pink color with indistinct borders, dense consistency appears. Gradually, in the center of the spot, the color turns pale, takes on an ivory shade, and a bluish-pink stripe or ring remains along the periphery. The presence of this ring is a clinical sign of the acute stage of the disease. In the future, the focus acquires a dense texture, the skin in it is not folded, shiny, the skin pattern is smoothed, hair, sweat and sebum secretion are absent, sensitivity decreases. Over time, the lilac ring disappears, the density decreases, atrophy develops.

Linear, or strip-like, form of the disease is more common in children. The process also begins with an erythematous patch with a stage of edema, induration and atrophy. The focus is localized on the scalp with the transition to the skin of the forehead, the back of the nose and resembles a scar from a saber strike. In addition, foci can be located along the nerve trunks or Zakharyin-Ged zones in the limbs and torso. The underlying tissues may be deeply affected with the development of ulcerations and mutilations. White spot disease, or lichen sclerosus, is a superficial form of scleroderma in women. It is localized most often on the skin of the back, between the shoulder blades, chest, genitals. Small white or mother-of-pearl foci of sclerosis and skin atrophy appear with retractions. Sometimes there may be a narrow violet-pink border around the focus. The process ends with superficial atrophy. The differential diagnosis is carried out with lupus erythematosus, parapsoriasis, adult scleroderma and neonatal scleroma, myopathy.

Systemic, or diffuse scleroderma, begins acutely or subacute malaise, numbness, itching, joint pain, fever. Then a dense swelling of the skin is formed, which is not folded, tense,

marbled (edema stage). The infiltrative stage is characterized by dense, like a tree, skin, closely soldered to the underlying tissues, its color

is waxy, the surface is smooth. All kinds of movement and breathing are difficult, the face is mask-like. Due to sclerosis and atrophy of the subcutaneous tissue and muscles, the patient resembles a skeleton covered with atrophic skin. Virtually all internal organs and systems are affected. Diagnostics. There are no absolute laboratory tests to confirm the diagnosis.

However, there is an increase in ESR, hyperproteinemia (more than 85 g/l ), hypergammaglobulinemia, it is advisable to determine antibodies with DNA or antinuclear factor. Differential diagnosis is carried out with scleroderma-like diseases, dermatomyositis.

Treatment in the progressive stage of the disease is carried out with penicillin, 1 million units. per day, for a course of 15 million units. Appointed 2 - 3 courses with breaks between them 1.5 - 2 months. The therapeutic effect of penicillin is due to its component - penicillamine, which blocks the formation of insoluble collagen. With limited and generalized forms of scleroderma, lidase is prescribed at 64 units. subcutaneously or intramuscularly every other day, for a course of 15 injections. Repeated courses are held in 2-3month. In severe cases of the disease, with involvement of the fascia in the process and the absence of the effect of penicillin therapy and lidase, it is advisable to prescribe corticosteroid therapy. To activate metabolic processes in the connective tissue, it is advisable to prescribe biostimulants (splenin, vitreous body, aloe). Immunocorrelating effect is exerted by immunomodulators that normalize immune changes and collagen formation. Taktivin is injected subcutaneously in 1 ml for 2 weeks. Vasodilators are shown - teonicol, complamin, andekalin and others, vitamins of groups B, A, E, C. Physiotherapeutic treatment is widely used: ultrasound, electrophoresis with a 0.5% solution of zinc sulfate every other day, for a course of 10-12 sessions, paraffin applications or ozocerite and other thermal treatments. Prevention consists in identifying and eliminating harmful factors, treating foci of infection in order to prevent exacerbations and generalize the process. Patients with all forms of scleroderma are subject to clinical examination.

## Dermatomyositis

Dermatomyositis refers to diffuse connective tissue diseases. The etiopathogenesis of the disease has not been fully established. The viral and virus-genetic nature of the disease is assumed. There are immune disorders, mainly cellular immunity, changes in the nervous and endocrine systems, metabolism, increased sensitivity to insolation, hypothermia, injuries, and certain drugs. Women at any age get sick more often. Dermatomyositis is divided into idiopathic and paraneoplastic.

**Clinic.** Dermatomyositis begins with skin, muscle, musculocutaneous and general manifestations: malaise, erythema and swelling in the eyelids, face, hands, muscle weakness, fever. In the acute form, weakness, sweating, muscle pain in the extremities, chills, fever, and vomiting are more pronounced. Paraorbital edema with erythema appear on the skin of the face. Cheeks, nose, neck, chest, back, joints and palms are gradually affected. The course of the disease is long, erythema becomes congestive with peeling, telangiectasia and lichenoid papules. The phenomena of hyper- or depigmentation and skin atrophy resemble poikiloderma. Rarely, scarlatina-like rashes, blisters, blisters may appear. Polyadenitis develops, and in the subcutaneous fat the deposition of calcium salts (dystrophic calcification). The mucous membranes are edematous, hyperemic, with erosions and ulcers. Muscular syndrome is manifested by pain, weakness and adynamia. In severe cases, aphonia, dysphagia, arthralgia and arthritis develop. Visceral pathology is caused by damage to the muscular system and is manifested by myocarditis, myocardial dystrophy, and dysmotility of the gastrointestinal tract. There is a defeat of various organs and systems. In children, predominantly acute forms of the disease are observed, and skin changes precede damage to internal organs. Besides, there is a more pronounced inflammatory reaction and dissemination of the lesion. Children often have arthritis and polyserositis, visceral pathology due to pronounced exudative processes, vesicular, bullous and blistering elements can be in the lesions. Early symptoms of skeletal muscle damage appear: shoulder girdle, chewing muscles, muscle weakness, contractures and joint



stiffness. In the future, the muscles of the pharynx (dysphagia), larynx (aphonia), neck, back, intercostal, diaphragm, interosseous muscles of the hands with retraction of the skin are affected. Atrophy of the thenar and hypothenar muscles is possible. In addition, with dermatomyositis, and visceropathy (myocardial dystrophy, pleuropneumonia, nephritis), neurovegetative disorders (hyperhidrosis, polyneuritis, hyperesthesia, arterial dystonia) are always observed. Paraneoplastic, or tumor dermatomyositis, occurs over the age of 40 as a manifestation of malignant tumors of the internal organs, and men are more likely to get sick. These are adenocarcinomas, more often of female genitalia, prostate cancer, seminoma, thymoma, plasmacytoma, melanoma, thyroid cancer, leukemia and others. Dermatomyositis in 70% of cases precedes the first clinical manifestations of cancer and is a poor prognostic sign. Successful surgical treatment of cancer leads to complete remission of dermatomyositis, and tumor recurrence leads to recurrence of dermatomyositis. In this regard, in patients over the age of 40 years with high ESR, temperature, resistance to hormone therapy, it is necessary to exclude the tumor. Diagnosis is based on skin and skin-muscle symptoms and is

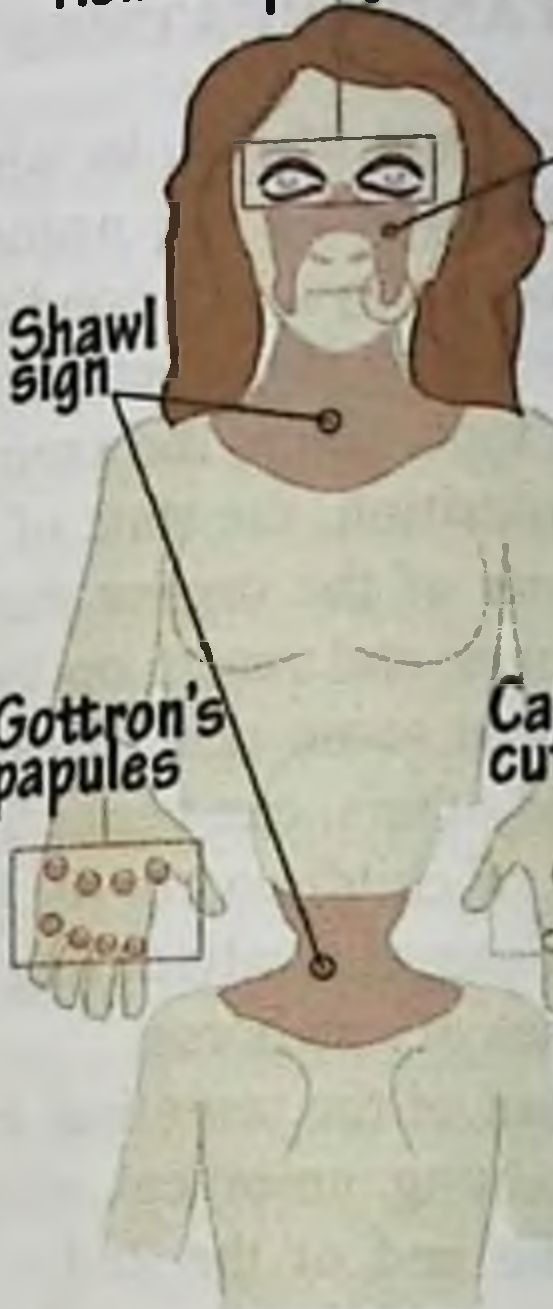
confirmed by laboratory and instrumental tests: creatinuria, an increase in aminotransferases, especially serum AST, biopsy and electromyography data. Differential diagnosis is carried out with systemic lupus erythematosus, rheumatoid arthritis, rheumatism, scleroderma, thrombophlebitis, endarteritis, infectious diseases (trichinosis, mononucleosis, brucellosis, typhoid fever).

**Treatment.** The general treatment consists in taking corticosteroid hormones, more often prednisolone, non-steroidal anti-inflammatory drugs, cytostatics (methotrexate, prospidin, azathioprine, etc.). The complex treatment includes vitamins B, C, E, ATP, anabolic hormones. Locally apply massage, thermal procedures, lubrication with corticosteroid ointments.

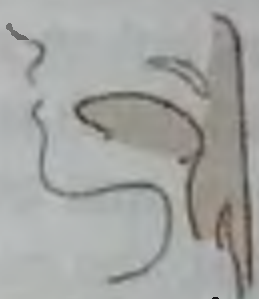
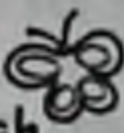
**Prevention** is the timely detection of malignant diseases. It is necessary to avoid traumatization of the skin and hypothermia.

# DERMATOMYOSITIS

Heliotrope eyelid rash



Malar rash  
Nasolabial folds



Shawl sign

Gottron's papules

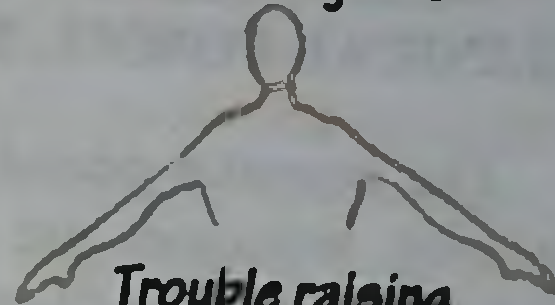


Calcinosis cutis



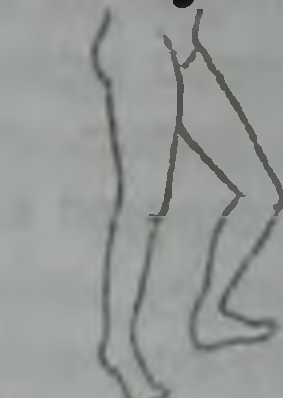
# Proximal Weakness

Shoulder girdle



Trouble raising arms above head

Pelvic girdle



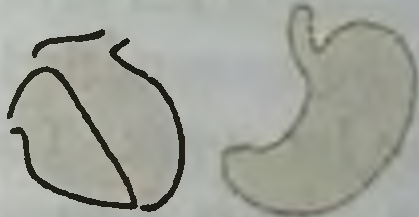
Trouble rising from a chair

Pharyngeal weakness



Ground-glass opacity

Interstitial lung disease



CHF GI Vasculopathy

- Transcriptional intermediary factor 1- $\gamma$   
*Cancer-associated myositis*

# POLYMYOSITIS

• DM without rash and NO other identifiable inflammatory myopathic cause.

Pic.44 Dermatomyositis

**CHAPTER 11 DISEASES OF NEWBORN CHILDREN.  
DESCRIPTION. ETIOLOGY, PATHOGENESIS, CLINIC,  
CLINICAL FORMS, BASIS OF DIAGNOSIS AND TREATMENT**

The neonatal period is the most critical age stage of life, in which adaptation processes are barely outlined. The duration of the neonatal period has individual fluctuations, but on average is 28 days. The condition of the child immediately after childbirth is determined by its genetic code, the conditions in which pregnancy and childbirth took place, the sanitary and hygienic regime of the habitat, the nature of nutrition, the state of the immune system, etc. The skin of a newborn is one of the organs that is directly exposed to various environmental influences and reacts on these influences by various manifestations. It is known that some skin diseases, especially congenital defects, deformities, nevi, and others, can begin from the first weeks of life, remain for the entire period of childhood or for life. There is a group of skin diseases that appear and disappear only during the neonatal period. These are the so-called skin diseases of newborns.

**Omphalitis.** Normally, the mummified remnant of the umbilical cord falls off by the end of the 1st week. The remaining umbilical wound epithelizes, granulates and a scar is formed by the end of the 2nd - the beginning of the 3rd week of life. If the umbilical wound becomes infected with staphylococcus, streptococcus, intestinal, *Pseudomonas aeruginosa*, diphtheria, tetanus bacilli, the fall-off of the remainder of the umbilical cord and the healing of the umbilical wound is delayed. Tetanus is currently extremely rare, but this should be remembered, since isolated cases can be observed during childbirth on the road, in the field, when the umbilical wound turns out to be the entrance gate. The disease begins between the 5-10th day of life and is manifested by the child's anxiety, difficulty sucking due to spasm of the facial muscles, cyanosis, muscle rigidity, and general tonic convulsions. At the same time, the umbilical wound was not changed externally. Anti-tetanus serum is used for treatment at the rate of 3000-10000 IU per 1 kg of body weight (introduced once according to Bezredka), seduxen - for convulsions

**Weeping navel (catarrhal omphalitis).** With prolonged healing as a result of infection of the umbilical wound, its weeping is observed,

followed by the formation of crusts. After their rejection, wounds with a bleeding surface are exposed. The general condition of the child is not disturbed, the appetite is good, the temperature remains normal. With a decrease in the overall resistance of the child's body, increased virulence of the microbial flora, and in the absence of rational therapy, the process can turn into a more extensive and severe lesion and even lead to sepsis. With damage to the skin and subcutaneous fatty tissue, omphalitis develops around the navel. The umbilical region protrudes significantly, it is hyperemic, edematous, infiltrated. Thin blue stripes extend radially from the umbilical wound (dilated veins). Often, next to the blue stripes, red ones are noticeable, due to the addition of lymphangitis. The general condition of the child is disturbed, he sucks poorly, burps, becomes restless. Breathing is shallow, rapid. The legs are brought to the stomach, the temperature rises to 37.2 - 37.5 ° C. With a mild course of the disease, complete recovery occurs. In severe cases, peritonitis and sepsis are possible. As a result of infection wounds with streptococcus, erysipelas of the navel, inflammation of the umbilical vessels in the form of phlebitis and arteritis may develop. The most severe form of the inflammatory process is navel gangrene, in which the inflammatory process spreads both on the surface and in depth. Destruction of the abdominal wall and gangrene of intestinal loops may occur. The prognosis for the life of the child is unfavorable.

**Treatment.** With a weeping navel (catarrhal omphalitis), the umbilical wound is thoroughly washed daily with a 3% solution of hydrogen peroxide, dried and irradiated with ultraviolet rays, after which the wound is treated with 1% - 2% brilliant green solution or 5% potassium permanganate solution, or 2% - 5% solution silver nitrate. With the development of granulations, they are cauterized with lapis. If the inflammatory process spreads to the surrounding tissues and in depth, the temperature rises, along with the local one, a general treatment is carried out. Assign injections of antibiotics (oxacillin, ampioks, tseporin, methicillin, etc.), 2-3 injections of antistaphylococcal immunoglobulin. Prevention of infection of the umbilical wound should begin in the delivery room. The navel is treated first with a 3% solution of hydrogen peroxide, and then with a 5% solution of potassium permanganate, a 1% alcohol

solution of aniline dyes. Limited congenital defects of the skin and subcutaneous tissue. Etiology and pathogenesis are unknown. The disease can be inherited in an autosomal dominant manner, or be the result of a viral infection transmitted by the mother during pregnancy, intoxication as a result of radiation therapy, as well as a failed abortion attempt and under the influence of other factors.

**Clinic.** Defects in the skin or subcutaneous tissue are detected immediately after the birth of a child, most often in the form of oval or round ulcers, sometimes oblong, ranging in size from 0.2–0.5 cm to 4–5 cm in diameter. In the following days, crusts appear on their surface. Localization is different, more often on the scalp, but can be on the trunk and extremities. Defects can be either single or multiple. Ulcerative lesions, despite treatment, heal slowly over 4 weeks to 2–3 months. They can bleed, possibly attaching a secondary infection, leaving behind hypertrophic or atrophic scars. Initially, they are pink in color, and then acquire the color of the surrounding

healthy skin. The cosmetic defect depends on the location. In places of healed defects on the head, hair does not grow. Congenital skin defects can be combined with other developmental disorders: cleft palate and upper lip, syndactyly, lack of individual fingers, hydrocephalus, congenital heart defects.

The differential diagnosis is carried out with congenital syphilis, bullous epidermolysis, thermal and mechanical damage to the skin caused by medical personnel during childbirth or shortly after the birth of a child.

**Treatment.** First of all, defects must be protected from infection. For multiple and widespread defects, antibiotics are administered for several days. Outwardly, the lesions are lubricated with a 1% aqueous solution of aniline dyes, dressings are applied with Vishnevsky ointment. Subcutaneous adiponecrosis. Subcutaneous adiponecrosis usually occurs at 1–2 weeks of life in well-nourished children, with difficult births as a result of tissue compression.

Lesions are localized on the shoulders, back, limbs, sometimes on the head, especially in children extracted with medical forceps. Characteristic is the appearance of sharply demarcated dense infiltrates or nodes ranging in size from a pea to a child's palm. Apparently, normal skin always

remains between the lesions, and above the infiltrates it is cyanotic, sometimes purple-red, later becoming pale. Very rarely, softening with fluctuation can occur in the center of the infiltrates, from which a small amount of a white, crumbly mass is released. The general condition is not violated. The course of the disease is benign with a favorable prognosis. Slowly, within 3 - 4 months, infiltrates usually spontaneously resolve without traces, some patients sometimes have scars. Very rarely, secondary pyococcal infection or calcification is possible.

Differential diagnosis is carried out with abscesses of subcutaneous fat in septic conditions. In this case, purulent foci are formed during the period of sepsis with the presence of deep inflammatory infiltrates. There is no typical localization and traumatic situation in severe childbirth.

Treatment. To quickly resolve infiltrates, thermal procedures such as sollux, dry dressings, UHF, phonophoresis, and magnetotherapy are used.

Scleredema is a peculiar form of skin edema, accompanied by a significant thickening of the tissues. The disease appears on 2 - 4 day of life, usually in premature and weak children, but can also be in full-term, strong normal children. Etiology and pathogenesis have not been elucidated. The long and sharp cooling of the child matters. Infectious diseases, malnutrition, lung atelectasis, congenital heart defects can contribute to the appearance of scleredema. The prognosis is serious and depends on the intensity of the treatment.

Clinic. The lesion begins with the shins or thighs in the form of a doughy compaction of the skin and subcutaneous tissue, then quickly spreads to the feet, genitals and trunk, and can cover the entire body. When pressed, a hole remains. The general condition is severe, the child is lethargic, does not cry, there is hypothermia, bradycardia. The differential diagnosis is carried out with scleroma and adiponecrosis.

Treatment. The child is placed in an incubator, gradually and carefully warmed with warm baths, solux, heating pads. Effective blood transfusions of 25 - 30 ml every other day, gamma - globulin, aevit in the muscle, antibiotics, prednisolone 1-2 mg per 1 kg of body weight. For prevention, you need to protect the child from hypothermia, and if it happened, then injected intramuscularly aevit 0.1 ml 2 times a day for 5-7 days and warm the child.

Sclerema of newborns is a very serious disease. It develops exclusively in children with malnutrition, in weak, premature or with a septic condition in the first days or weeks of life. Usually on the 3rd - 4th day of life, a diffuse thickening of the skin and subcutaneous tissue appears symmetrically in the area of the calf muscles, buttocks, thighs, shoulder blades, face. When pressed, there are no indentations. The skin in the lesions is pale with a bluish tinge, dry, tense. On palpation, the foci are cold, the skin does not gather into a fold, the face is mask-like. The joints of the lower jaw are immobile, and the mobility of the limbs is limited. Unlike scleredema, the soles, palms, scrotum, and penis are not affected. Often the disease ends in death. Treatment is the same as for scleredema.

Diaper rash is limited inflammatory changes in the skin in areas that are easily subjected to friction and maceration, complicated by a secondary infection. Occur in case of violation of child care, rare washing, excessive wrapping, maceration of the skin with urine and feces, washing clothes with synthetic washing powders, with coarse diapers and oilcloths. Lesions are localized in the inguinal, femoral, axillary folds, behind the auricles. Three degrees of diaper rash are distinguished by intensity. The first degree is mild, characterized only by moderate redness of the skin; the second degree is of moderate severity, with bright hyperemia and erosion; the third degree is severe, manifested by bright redness, with pronounced weeping and individual erosions and sores.

**Treatment.** First of all, it is necessary to eliminate the defects in child care. With diaper rash of the first degree, powdering the affected areas with talc powder with dermatol (3% - 5%), zinc oxide, white clay, and also lubricating with sterile vegetable oil is sufficient. In the second degree, an indifferent agitated mixture (water or oil) is used, as well as lubrication of the lesions with a 1% - 3% solution of silver nitrate, followed by dusting with talc or zinc oxide. With diaper rash of the third degree, cool lotions with drilling fluid or lead water, 0.5% resorcinol, 0.25% lapis should be prescribed for 2-3 days. Then it is advisable to lubricate with a 1% - 2% solution of aniline dyes. After that, the affected skin is lubricated with zinc or Lassar paste.

Prevention is essential in preventing diaper rash. Mothers need to be explained the need for careful and proper hygienic care of the newborn and

infant, correct from the very beginning of feeding the child, which prevents the occurrence of dyspeptic stools that cause skin irritation.

Diaper dermatitis can be attributed to contact dermatitis, develops in the first days of life and is associated with skin friction on diapers, with exposure to the skin of decomposition products of urine, feces, ammonia, detergents remaining in diapers after washing.

Lesions in the form of redness and swelling, papular, vesicular, pustular elements are localized on the inner surfaces of the thighs, buttocks, anogenital region, lower limbs.

Prevention - the correct hygienic maintenance of the skin of the child, the use of cotton or linen diapers, washing diapers not with washing powder, but with soap, followed by repeated rinsing.

Treatment. Treatment of lesions with a solution of potassium permanganate, powders, creams. Prickly heat is often observed in infants, especially overweight. The disease is promoted by overheating of the child, which happens either with excessive wrapping of the child in a warm room, or an increase in body temperature during infectious diseases, when sweating increases. Distinguish prickly heat when a lot of transparent bubbles the size of millet grain appear, located scattered; prickly heat red - with an abundance of red nodules with bubbles on top and a red corolla around; white prickly heat - when the bubbles turn into pustules. With improper care, such prickly heat can turn into vesiculopustulosis. The treatment consists in rubbing the skin with 1% boric or salicylic alcohol, calendula solution, powders with boric acid are used. Prevention consists in proper hygienic care of child.

Seborrheic dermatitis may appear at the end of 1-2 weeks of life, and sometimes by the end of the 1st month, rarely up to 3 months of life. Allocate mild, moderate, severe forms of the disease. In a mild form, the lesion usually begins with the buttocks, within a few days it spreads to natural folds (inguinal, femoral, less often - axillary, cervical, behind the ear). The skin in the foci is hyperemic and moderately infiltrated. On the periphery of the foci, there is a scattered rash in the form of small spots and papules with pityriasis peeling. The general condition of the child is not disturbed. Rarely are regurgitation and unstable stools. In the moderate form, all natural skin folds are brightly hyperemic, infiltrated, their



maceration is visible, and peeling along the periphery. Hyperemia and peeling quickly spread to the skin of the trunk and extremities. In many children, the scalp is also affected, where scales and crusts accumulate. The general condition is disturbed: children sleep poorly, are restless, catarrhal otitis media, dyspeptic disorders, poor appetite are often observed, hypochromic anemia develops. A severe form of seborrheic dermatitis is characterized by damage to 2/3 of the skin, it is hyperemic, infiltrated with pityriasis peeling on the surface, massive crusts appear on the scalp. Clinical manifestations resemble desquamative erythroderma. Children with severe seborrheic dermatitis are subject to hospitalization.

**Treatment.** In severe and moderate forms, complex antibiotic therapy is carried out for 7-10 days (penicillin, semi-synthetic penicillins), infusion of plasma, albumin, glucose with ascorbic acid, gamma globulin, enzyme therapy is prescribed (hydrochloric acid with pepsin, gastric juice). In mild forms of seborrheic dermatitis, sometimes it is enough to lubricate the lesions with a 1% -2% aqueous or alcohol solution of aniline paints, naftalan 2% -3% paste, 0.5% prednisolone cream. Vitamins are prescribed inside. With the improvement of the general condition and the resolution of skin manifestations, all patients with seborrheic dermatitis undergo a course of UVR up to 15 sessions. Desquamative erythroderma of newborn Leiner - Moussou. In the development of the disease, a violation of protein and carbohydrate, fat and mineral metabolism in sick children, a lack of nutrition of vitamins A, E, B1, B2, B12, C, folic acid, a disorder of the functions of the gastrointestinal tract, especially the small intestine, sensitization of the body by pyococcal and yeast flora. Clinic. The disease most often begins in the first month of life, less often older, but no later than 3 months. Initially, the skin of the buttocks and inguinal folds is affected, then the process spreads over the entire surface of the skin, as a result of which the entire skin is brightly hyperemic, infiltrated and flaky abundantly. On the scalp, a kind of shell is formed from the accumulation of fatty scales, descending to the forehead and eyelids. The face becomes mask-like. Weeping and deep cracks are noted in the folds. The general condition is severe, accompanied by dyspeptic disorders, anemia, there may be abscesses, phlegmon, blepharitis, conjunctivitis. Vomiting in such children up to 7-10 times a day, loose stools. The prognosis is unfavorable.

Treatment consists of immediate hospitalization. To prevent infection, antibiotics, gamma globulin, albumin, plasma transfusions, droppers with glucose and Ringer's solution are prescribed. In severe condition, glucocorticoids are indicated at the rate of 0.5 - 1 mg per 1 kg of body weight. Disinfectants (aniline paints), ichthyol, ointments with glucocorticoids and antibiotics are locally prescribed

**CHAPTER 12 BLISTERING DERMATOSES. DUHRING'S DERMATITIS HERPETIFORMIS. DESCRIPTION. ETIOLOGY, PATHOGENESIS, CLINIC, CLINICAL FORMS, BASICS OF DIAGNOSIS AND TREATMENT**

**Vesical Dermatoses Pemphigus:**

The etiology and pathogenesis of the disease are not fully understood. There are many theories of the occurrence of the pathological process: the theory of chloride retention, toxic, neurogenic, enzymatic, bacterial, viral, autoimmune origin. There are the following clinical forms: vulgar, leaf-shaped, vegetative, seborrheic (erythematous). The vulgar form of pemphigus is more common. Among patients with this form of the disease, women over 40 years of age predominate. Common to all forms of pemphigus is acantholysis with the formation of intraepidermal blisters on the mucous membranes of the mouth and skin. Clinically, acantholysis is detected by determining Nikolsky's symptom - when sipping the lid of the bladder with tweezers, detachment of the epidermis is observed outside the bladder on apparently healthy skin, or when rubbing a healthy-looking skin near the bladder with a finger, the epidermis detaches with the formation of erosion. When pressing on the bladder, an increase in the area of the bladder occurs - a symptom of Asbo-Hansen. Pemphigus vulgaris. The clinical picture is characterized by the appearance of blisters, most often on the mucous membranes of the mouth and throat, which quickly open with the formation of painful bright red erosions with fragments of the epithelium. Erosions on the lips are covered with thick, loose, hemorrhagic crusts. In severe cases, the entire oral mucosa is a continuous erosive surface. Isolated lesions of the mucous membranes can be observed from several days to 6 or more months. Typically, such patients turn to dentists who diagnose and mistreat ulcerative or aphthous stomatitis, erythema multiforme, thrush, and others. Flabby blisters filled with transparent contents appear on externally unchanged skin, mainly on the chest and back. Large bubbles under the weight of

exudate can take a pear shape - a symptom of a pear. A positive symptom of Nikolsky and Asbo-Hansen is revealed.



**Pic.45 Pemphigus**

When the blisters open, erosions form, which epithelialize, leaving behind spots of pigmentation. Over time, the general condition of the patient begins to deteriorate, weakness appears, the temperature rises, and a secondary infection joins. In the absence of proper treatment, death can occur. Diagnosis of pemphigus vulgaris is based on the data of the

clinical picture, the positive symptom of Nikolsky, Asbo-Hansen, the detection of acantholytic Tzank cells - (altered spike-like cells with a large nucleus and a narrow strip of blue cytoplasm along the periphery and light blue around the nucleus). Apply the reaction of immunofluorescence (RIF). In the study of water and salt metabolism, a delay in sodium chloride is noted. The most convincing confirmation of the diagnosis is a histological examination, which reveals an intraepidermal blister. Vegetative pemphigus is characterized not only by the appearance of blisters on the oral mucosa, but also around natural openings, in the axillary, inguinal and femoral folds, under the mammary glands, around the navel. After opening the blisters on the erosive vein develop papillomatous growths, often occupying extensive surfaces. In the future, they are resolved, erosions are epithelialized, leaving behind age spots. The general condition of the patient is disturbed, death occurs from various complications. Pemphigus foliaceus is manifested by the presence of superficial, flat, flaccid blisters, erosions with the formation of thin lamellar scale-crusts. The symptom of Nikolsky is sharply expressed. The mucous membranes are usually not affected. Hair loss and nail damage are possible. Patients die from developing cachexia or from an associated infection. Seborrheic, or erythematous pemphigus, begins with the formation of lesions on the skin of the face, scalp with yellow scales or crusts, which, when removed, leave an eroded surface. In the future, blisters appear on the skin of the chest and back, quickly drying up into a crust, Nikolsky's symptom is positive. Lesions resemble seborrheic eczema or impetigo. The course of the disease is long, a transition to pemphigus foliaceus is possible. In children, pemphigus is rarely observed, mainly in girls aged 2 to 15 years. Of all the varieties of pemphigus vulgaris, the leaf-shaped form is the most common. Treatment. According to vital indications, corticosteroids are prescribed. Depending on the patient's condition, prednisolone is prescribed in loading doses (50-80 mg per day) until fresh rashes stop for two weeks, after which the dose is slowly reduced. It is necessary to determine the maintenance dose - this is the minimum dose against which there are no

fresh rashes. It is advisable to prescribe cytostatics together with corticosteroids. To prevent complications with long-term use of corticosteroids, it is necessary to take potassium preparations, anabolic hormones, antibiotics, regularly determine the content of glucose in the blood, the coagulation system, and measure blood pressure. For local treatment, rinses with disinfectants, lubrication of erosions with solutions of aniline dyes, ointments with antibiotics and corticosteroids are used. Patients with pemphigus should be in the dispensary.

### Pemphigoids

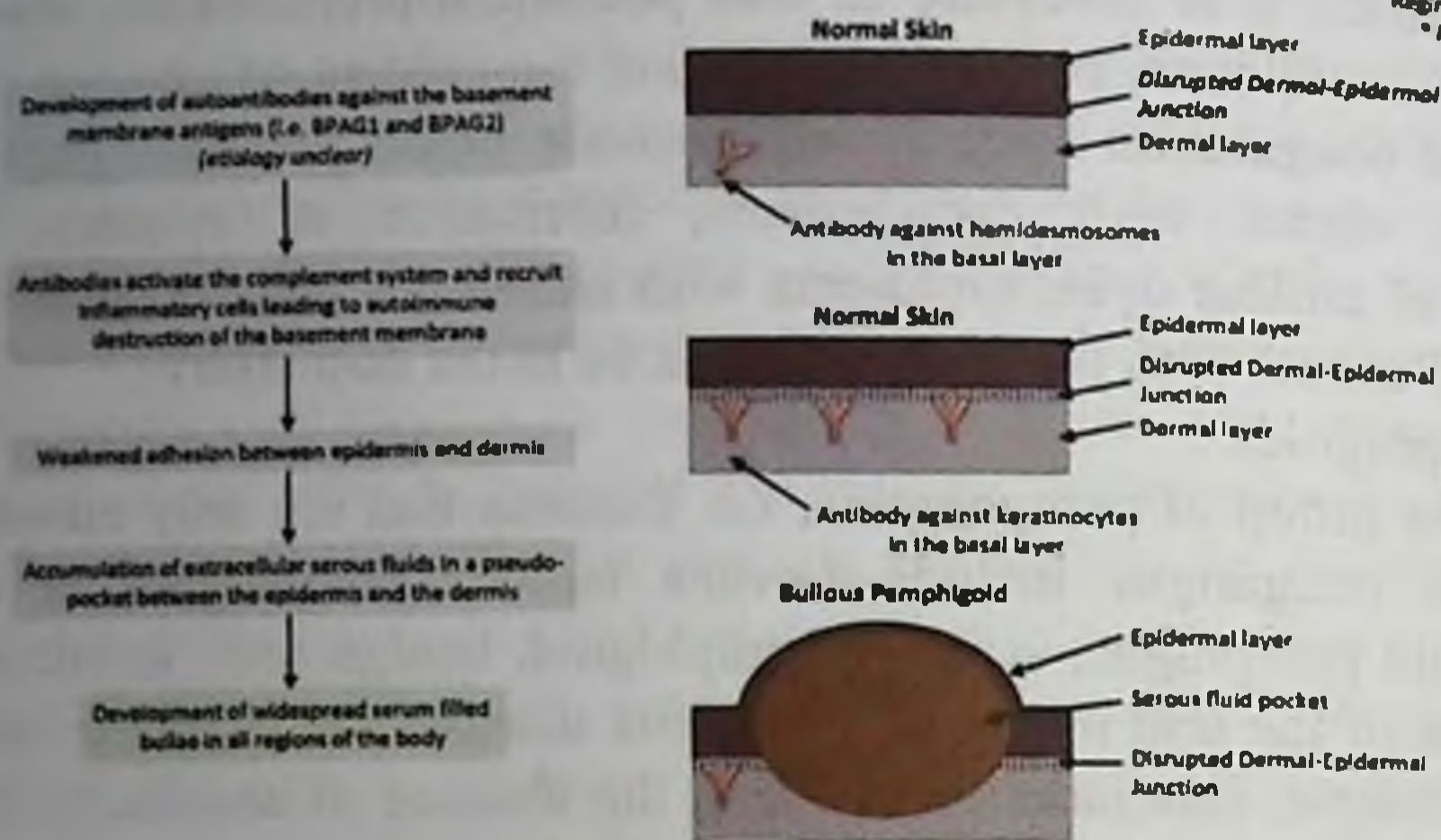
In the group of pemphigoids, i.e. diseases that are only outwardly similar to pemphigus include Lever's bullous pemphigoid or non-acantholytic pemphigus, scarring pemphigoid, benign non-acantholytic pemphigus of the oral mucosa only. These diseases are characterized by a benign course, subepidermal blisters, the absence of acantholysis and Nikolsky's symptom. Bullous pemphigoid. The disease occurs in people over 50 years of age and can begin with the oral mucosa. The etiopathogenesis has not been fully elucidated. Possible paraneoplastic, autoimmune nature, due to toxicosis or metabolic disorders. Clinic. On the background hyperemia and edema of the oral mucosa appear tense blisters up to 1 cm in diameter with serous or hemorrhagic contents. After a few hours or days, erosions are formed that are prone to epithelialization. Similar elements can occur on the skin.

In children, more often than in adults, the oral mucosa is affected. Along with blisters, papular and erythematous-urticarial elements appear on the skin. Clinical manifestations may resemble exudative erythema multiforme, toxic epidermal necrolysis. Diagnosis is based on clinical, cytological and histological data, RIF.

Treatment. It is necessary to exclude malignant tumors, leukemia, lymphogranulomatosis, and then prescribe glucocorticosteroids and cytostatics, as well as diaminodiphenyl sulfone (DDS). External treatment is similar to the treatment of pemphigus.

## Bullous Pemphigoid: Pathogenesis and clinical findings

Author:  
Danny Guo  
Reviewers:  
Yan Yu  
Jason Baserman  
Laurie Parsons\*  
Regine Mydanki\*  
\* MD at time of  
publication



Layers: Pathophysiology Mechanism Signs/Symptoms/Lab Finding Complications | Published November 1<sup>st</sup>, 2012 on [www.thecalenguides.com](http://www.thecalenguides.com)

### Pic.46 Pemphigoids

Scarring pemphigoid. It is characterized by a rash of blisters on the conjunctiva, oral mucosa and skin with the formation of scars and adhesions. Women over the age of 50 are more commonly affected. The first manifestations of the disease appear on the mucous membranes of the mouth or eyes, genitals. In the future, the mucous membranes of the pharynx, larynx, nose, esophagus, urinary tract, and rectum may be involved in the process. When the eyes are damaged, the process begins according to the type of catarrhal conjunctivitis, against which blisters appear with the formation of adhesions, which leads to fusion of the conjunctival sac (simbleforon), narrowing of the palpebral fissure, and blindness. The defeat of the mucous membranes leads to the formation of adhesions in the pharynx, in the corners of the mouth, to the destruction of the tongue and tonsils. There may be strictures of the larynx, esophagus, urethra, phimosis, vaginal atrophy, etc. Scarring pemphigoid must be differentiated from pemphigus vulgaris.

Treatment is most effective with the combined use of corticosteroids and sulfonic drugs.

Benign non-acantholytic pemphigus only of the oral mucosa. Etiology and pathogenesis are not known. Mostly women over 20 years of age are affected.

Clinic. Tension blisters with serous contents and a dense cover appear on the oral mucosa, which disappear or open without a trace after a few hours, forming slightly painful erosions that quickly epithelialize. The process is chronic, the course is benign.

Treatment is symptomatic.

## DERMATOSIS HERPETIFORMIS OF DUHRING

The etiopathogenesis has not been fully elucidated. However, patients were found to be hypersensitive to gluten (cereal proteins - wheat, rice, corn, oats, rye, barley, millet, etc.). Dermatitis is provoked by inflammatory processes in the gastrointestinal tract, liver damage, ascariasis, malignant tumors, lymphocytic leukemia, taking iodine and bromine drugs, past infectious diseases, autoallergic processes. ) and their grouping. One of the leading signs of the disease is itching of the skin, preceding the rash. Tension blisters appear on slightly hyperemic and edematous skin, open up, forming erosions, which, after epithelialization, leave pigmentation spots. Nikolsky's symptom is negative. Acantholytic cells are not found, however, there are a large number of eosinophils in the contents of the blisters. Patients have hypersensitivity to iodine preparations (Yadasson's test). Histological examination reveals a subepidermal arrangement of blisters and eosinophils. In children, the disease is preceded by fever, malaise, arthralgia, dyspeptic symptoms. At preschool age, large tense blisters predominate on edematous - hyperemic skin, more often on the trunk and thighs. Small papular and papulo are also characteristic vesicular eruptions. Sometimes grouped bubbles are localized in the inguinal and axillary folds, on the face, upper and lower extremities. Quite often, children are affected by mucous membranes. There are no rashes on the scalp.

The treatment is carried out with drugs of the sulfonic series: DDS, dimocifon, dapson, avlosulfone, promacitin, sulfetron, a combination with glucocorticoids is possible. Bromine, iodine, barbiturates and amidopyrine preparations are contraindicated. Local treatment is similar to the treatment of pemphigus.

Prevention consists in the exclusion from the diet of foods containing gluten, iodine. Patients must be in the dispensary.



**Main literature:**

1. Pakirdinov A.B. Dermatovenerologiya. Darslik. 2020 y.
2. Eshboyev E.X., Tashkenbayeva U.A., Teri-tanosil kasalliklari va ularning laboratoriya tashxisoti. Darslik. Toshkent. – “Navroz”. 2019 y.
3. Eshboyev E.X. Dermatovenerologiya. Darslik. 2019 y.
4. Rodionov A.N., Zaslavskiy D.V., Sıdikov A.A. Dermatologiya. Pilyustrirovannoye rukovodstvo poklinicheskoy diagnostike. – Moskva. “Granisa”. 2018 g. (po rekomendatsii minzdrava).
5. Vaisov A.Sh., Teri-tanosil kasalliklari. Darslik. - Toshkent, “Yangi asr avlodi”.

**Additional literature:**

1. Arifov S.S., Eshbayev E.X. Teri-tanosil kasalliklar. Darslik. - Toshkent. “Entsiklopediya”. 1997 y.
2. Atif Hasnain Kazmi. Color atlas of clinical dermatology. New Delhi, India. “Jaypee Brothers Medical Pub” 2015 g.
3. Olisova O.Yu., Kojnyye I venericheskiye bolezni. Uchebnik. – Moskva. “Prakticheskaya meditsina”. 2015g.
4. Chebotarev V.V., Tamrazova O.B., Chebotareva N.V., Odines A.V., Dermatovenerologiya. Uchebnik. – Moskva. “GEOTAR Media”. 2013g.
5. Pasricha J.S., Ramji Gupta. Illustrated Textbook of Dermatology. New Delhi, India. “JP Medical Ltd”. 2013y.
6. Korotkiy N.G. Kojniye I venericheskiye bolezni. Uchebnik. – Moskva. “Meditsinskoye informatsionnoye agentstvo”. 2011 g.
7. Skripkin Yu.K., Butov Yu.S., Dermatovenerologiya. Natsionalnoye rukovodstvo. – Moskva. “GEOTAR Media”. 2009 g.
8. Skripkin Yu.K., Kubanova A.V., Akimov V.G. Kojnyye I venericheskiye bolezni. Uchebnik. -Moskva, “GEOTAR Media” 2009g.
9. Ananyev O.L., Anisimova Ye.V. Kojno-venericheskiye zabolevaniya. Uchebnik. “EKSMO”, 2006 g.
10. Pol K. Bakston Dermatovenerologiya. Uchebnik. Rossiya. “Binom”, 2005 g.
11. Elinor Ye. San. Dermatologiya. 100 sluchayev iz praktiki.

Uchebnik. Rossiya. "Binom", 2001 g.

**Internet saytlari:**

1. [www.mediashhera.aha.ru//dermatol//derm-mn.htm](http://www.mediashhera.aha.ru//dermatol//derm-mn.htm);
2. [www.matrix.ucdavis.edu/DOJ.html](http://www.matrix.ucdavis.edu/DOJ.html);
3. [www.cc.emory.edu//WHSCIV/medweb.dermatology.html](http://www.cc.emory.edu//WHSCIV/medweb.dermatology.html);
4. [www.Mosbycom//Mosby//Periodicals//medical//CPDM//dm/html](http://www.Mosbycom//Mosby//Periodicals//medical//CPDM//dm/html);
5. [www.skindex.com](http://www.skindex.com);
6. [www.ama-assn.org//journals//standing//derm//denhome.htm](http://www.ama-assn.org//journals//standing//derm//denhome.htm);
7. [www.Crawford.com//epo//mmwz//world.html](http://www.Crawford.com//epo//mmwz//world.html).
8. [www.ziyonet.uz](http://www.ziyonet.uz);
9. [www.info@minzdrav.uz](mailto:info@minzdrav.uz);
10. [www.info@tma.u](mailto:www.info@tma.u)

**Abdullayev D.M., Toshev S.U., Kamalova M.I**

# **DERMATOVENEROLOGY AND PEDIATRIC DERMATOVENEREEOLOGY**

***Textbook***

***Certificate number: G/000122-2023***

**Publisher license number: 143413**

***Managing editor — Dildora TURDIEVA***

***Proofreader — Olim RAKHIMOV***

***Technical editor — Akmal KELDIYAROV***

***Layout — Dilshoda ABDIAKHATOVA***

***Designer — Davron NURULLAYEV***

**Printed in the printing house “SARVAR MEXROJ BARAKA”**

**Certificate number - 704756. 140100. Samarkand,**

**st. Mirzo Ulugbek, 3.**

**Signed for printing 31.08.2023 Protocol 1**

**Format 60x841/16. “Times New Roman” typeface. Con. prin .sh 9,53**

**Circulation: 200 copies. Order No. 211/2023**

**Tel / fax: +998 94 822-22-87. e-mail: [sarvarmexrojbaraka@gmail.com](mailto:sarvarmexrojbaraka@gmail.com)**

