**Azerbaijan Medical University**

**Department of Dermatovenerology**

**Practical training №5 (dermatology)**

**Dermatomycoses**

**(trichophytia, favus, microsporia, deep mycoses)**

*Epidemiology. Etiology. Pathogenesis. Clinic. Diagnostic laboratory. Differential diagnostics. Treatment and prevention.*

**1. Define trichophytosis.**

XBT-10: B35 Trichophytia is a superficial fungal disease of the dermatophyte group, characterized by damage to smooth skin, hair, and rarely nail plate caused by various pathogenic fungi of the Trichophyton spp family, with high contagiousness.

**2. List the clinical forms of trichophytia.**

• superficial trichophytosis of smooth skin

• superficial trichophytosis of the hairy part of the head

• chronic trichophytia

• nail trichophytosis

• infiltrative-purulent trichophytia

• favus (piece)

• tiled mycosis (tokelo)

**3. List the source of infection of trichophytosis and ways of transmission of the infection.**

Source of infection - sick people and sick animals. Ways of transmission - direct contact with sick people, sick animals and infected objects.

**4. Identify the causes of trichophytia.**

• Trichophyton violaceum, T. tonsurans (Trichophyton endothrix) - causes superficial and chronic trichophytosis.

• T. mentagraphytes, T. verrucosum (Trichophyton ectothrix) - causes purulent-infiltrative trichophytosis.

**5.What is trichophyton endothtix and trichophyton ectothrix?**

If the fungal spores are located inside the hair during hair damage - Trichophyton endothrix, if the spores cover the outside of the hair - it is called Trichophyton ectothrix.

**6. Indicate the localization of trichophytia.**

Face, neck, body, limbs, scalp, hair, rarely nails.

**7. Describe the clinical signs of superficial trichophytosis on smooth skin.**

On smooth skin - one or more slightly swollen, round, pink-red, sharp-edged, erythematous-squamous spots prone to growth and peripheral ring formation.

**8. Describe the clinical signs of chronic trichophytosis in smooth skin.**

On smooth skin - erythematous squamous spots with rounded, indistinct edges, dark blue color.

**9. Describe the clinical signs of purulent-infiltrative trichophytosis on smooth skin.**

On smooth skin - bright red, round, with a pronounced pustulation on the tendency to grow towards the periphery.

**10. Indicate which form of trichophytosis of smooth skin results in scarring.**

Purulent-infiltrative trichophytia.

**11. Show how the hairs are damaged during superficial trichophytosis of the hairy part of the head.**

Hair in the lesions loses its luster, elasticity and breaks in the form of black dots at a height of 2-3 mm above the skin, or at the level of the skin.

**12. Show how the hair is damaged during chronic trichophytosis of the hairy part of the head.**

The hairs are broken in the form of black dots in the lesions.

**13. Show how the hair is damaged during purulent-infiltrative trichophytosis of the hairy part of the head.**

The hair in the lesions does not break, loosens and softens at the roots, and is painless when pulled. The affected area looks like a center of alopecia.

**14. Note the subjective symptoms of trichophytosis.**

In all species there is a slight itching, and in the large-infiltrative form there is a mild pain.

**15. Children interrupt Indicate the causes of the spread of trichophytosis.**

It is explained by low levels of keratin and fungistatin in skin and hair cells in children up to 14-15 years of age due to the weak bactericidal effect of serum against the background of lack of cellular-humoral immunity in children.

**16.XBT10: List the factors that predispose to B35 Favus (Fragment).**

Immunodeficiency, chronic somatic and infectious diseases, endocrinopathy, avitaminosis, violation of sanitary and hygienic rules.

**17. Indicate the causative agent of the favus and the source of infection.**

The causative agent - Trichophyton shonleinii (Trichophyton endothrix). The source of infection - sick people, mostly women.

**18. Indicate the location and shape of the favus**.

Damage to the hair is also localized on the hairy part of the head, facial skin, trunk, around, and nail plates are damaged. There are 3 forms of favus - classical (scutular), impetiginous and squamous forms.

**19. Describe the clinical signs of favus.**

Scaly-shaped scales and dry scutules, yellowish-orange, saucer-like odor. During impetiginous favus - on the background of erythema there are abscesses, crusts, scales. In the form of squamous - numerous erythematous-squamous foci appear.

**20. What is a scutula?**

The scutula is a yellowish-orange mass with an unpleasant odor, a saucer-like shape, and a layer of scaly scales.

**21. Show how hairs and nails change during favus.**

Hair damaged during favus does not break, loses its luster, elasticity, becomes dry and pale, looks like an old wig, breaks easily. Damage to the nail plates leads to the formation of onychomycosis.

**22. Define microsporia.**

XBT-10: 35 is a superficial fungal disease of the microsporia-dermatophytia group, characterized by high contagiousness of smooth skin, hairs, and rarely nail plate damage caused by various pathogenic fungi of the Microsporum spp family.

**23. Indicate the classification and causative agents of microsporia.**

Microsporia caused by anthropophilic fungi. (causative agents - M. audouinii, M.ferrugineum).

Microsporia caused by zoophilic fungi (causative agents - M. canis, M. distortum).

Microspores caused by geophilic fungi. (perpetrators - M gypseum, M. nanum).

**24. List the factors that predispose to microsporia infection.**

Age, micro lesions, changes in the chemical composition of sweat, neuroendocrinopathies, immunodeficiency, intoxications, chronic diseases.

**25. Identify the source of microsporia infection.**

The source of infection - sick people, animals and soil.

**26. Indicate the localization of microspores.**

The hairy part of the head, the skin of the face, trunk and limbs, the hairs, rarely the nail plates.

**27. Show clinical signs of microsporia of smooth skin.**

Erythematous-squamous spots on smooth skin, round, pinkish-red, 0.5-5.0 cm in size, with a clear contour, peripheral ring and prone to growth on the periphery.

**28. Note the subjective signs of microsporia of smooth skin.**

Mild itching.

**29. Show clinical signs of microsporia of the hairy part of the head.**

Erythematous-squamous foci, round and irregular, with inaccurate edges, small, without signs of inflammation, prone to growth on the periphery. In the damaged hearth, the hairs are broken at a distance of 4-6 mm from the skin surface.

**30. Record the diagnostic test used in microsporia of the hairy part of the head.**

Wood luminescent lamp is used as a diagnostic test. Damaged hairs show a greenish glow.

**31. XBT-10: B38-B49 Indicate groups of deep mycoses.**

Conditional deep mycoses are divided into two groups: subcutaneous mycoses - deep mycoses, characterized by primary damage to the skin and subcutaneous fat cells, and systemic mycoses - deep mycoses, characterized by primary damage to internal organs. Skin damage in systemic mycoses occurs as a result of hematogenous or lymphogenic dissemination of the process.

**32. List the diseases belonging to the group of subcutaneous and systemic mycoses.**

Subcutaneous mycoses - sporotrichosis, chromoblastomycosis, misetoma, lobomycosis. Systemic mycoses - coccidioidosis, histoplasmosis, blastomycosis, paracoccidioidosis.

**33. Define coccidioidosis, indicate its causative agent and course characteristics.**

XBT¬-10: B38 Coccidioidosis is a systemic mycosis characterized by primary lung damage. The hematogenous disseminator penetrates the skin, bone tissue and meninges. The causative agent of coccidioidosis is Coccidioides immitis, a dimorphic fungus that lives in the soil. In 60% of patients, the disease is asymptomatic and the process of self-treatment is observed.

**34. Show skin signs of disseminated coccidioidosis.**

Skin manifestations - nodules, abscesses, plaques, abscesses, phlegmons, fistulas, ulcers, warts, granulomas.

**35. Disseminated coccidiosis list the diseases in which idiosyncrasy is differentiated.**

Warts, pyoderma, nodular pruritus, keratoacanthoma, North American blastomycosis, cryptococcosis, cutaneous tuberculosis, tertiary syphilis.

**36. Define histoplasmosis and indicate the causative agent.**

XBT-10: B39 Histoplasmosis is a systemic mycosis with primary lung damage. The hematogenous disseminator penetrates the skin, mucous membranes, liver, spleen, meninges. The causative agent of histoplasmosis, Histoplasma capsulatum, is a dimorphic fungus that lives in the soil, feces of birds and bats.

**37. Show signs of histoplasmosis of the skin and mucous membranes.**

Localization - mucous membranes of the face, extremities, body, soft palate, mouth-pharynx, larynx and nostrils. In the lesions - horny and necrotic nodules, nodules, erythematous spots; sometimes pustules, vegetative plaques; paniculitis, erythroderma may develop.

**38. List the diseases in which histoplasmosis is differentiated.**

Other deep mycoses, skin tuberculosis, skin lymphoma, squamous cell carcinoma, syphilis.

**39. Define North American blastomycosis, indicate its causative agent.**

XBT-10: B40 North American blastomycosis is a systemic mycosis that occurs with primary lung damage, often asymptomatic. As a result of hematogenous dissemination, the pathogen penetrates the skin, bone tissue, meninges, liver, adrenal glands, and growth glands. The causative agent is Blastomyces dermatitidis Gilchrist, a dimorphic yeast-like fungus.

**40. Describe the clinical signs of North American blastomycosis on the skin.**

Favorite localization - symmetrical damage to the body, rarely - the face, upper extremities. Papulose-pustular elements are formed in the lesions, followed by scar papillomatous-ulcerative plaques, which are reminiscent of a geographical map.

**41. Describe the differentiated diseases of North American blastomycosis.**

Deep form of pyoderma, wart tuberculosis, leprosy, other deep mycoses, fungal mycosis, squamous cell carcinoma of the skin, syphilis.

**42. Define sporotrichosis, indicate its causative agent.**

XBT -10: B42 Sporotrichosis is a subcutaneous mycosis that affects the skin, subcutaneous connective tissue, and mucous membranes. As a result of lymphogenic dissemination, the pathogen spreads to the lymphatic system, as a result of hematogenous dissemination - to bone tissue, eyes, meninges, internal organs. The causative agent of sporothrichosis - Sporothrix

schenckii; is a dimorphic, yeast-like fungus that lives in soil and plants.

**43. Show the clinical signs of sporotrichosis of the skin and mucous membranes.**

Favorite localization - the top of the hand and fingers, paws, toes, in children - the face; mucous membranes of the mouth, yawning, larynx, nose. Papules / pustules / nodules appear in the traumatized areas of the skin, ulcerated and painful "sporotrichosis chancre" is formed. Erythematous-ulcerative and papillomatous lesions are noted in the mucous membranes.

**44. Indicate the diseases differentiated by sporotrichosis.**

Deep form of pyoderma, cutaneous tuberculosis, leishmaniasis, other deep mycoses, syphilis.

**45. Define chromoblastomycosis, indicate the causative agent.**

XBT-10: B43 Chromoblastomycosis (syn. Piedrosis disease, black blastomycosis) - is a subcutaneous mycosis, which damages the skin, subcutaneous connective tissue, and in most cases, damage to internal organs and bone tissue. The causative agents are fungi of the family Dematiaceae: Fonsecaea spp., Phialophora verrucoza, Cladophialophorae carrionii, Rinocladilla aquaspera; prepares melanin, is located in the soil and plants.

**46. ​​Show the clinical signs of chromoblastomycosis on the skin.**

Favorite localization - unilateral damage to the calf, paw, rarely the hands, chest. Nodules / blisters, nodules are formed in the lesions, which multiply, turn into superficial papillomatosis - ulcerative plaque. Furnaces can cover the entire leg or paw as a sign of elephantism.

**47. Indicate the diseases differentiated by chromoblastomycosis.**

Deep form of pyoderma, skin tuberculosis, lepramatosis type of leprosy, skin leishmaniasis, other deep mycoses, squamous cell carcinoma of the skin, syphilis.

**48. Define misetoma, indicate the perpetrator.**

XBT-10: B47 Misetoma is a subcutaneous mycosis that damages the skin, subcutaneous connective tissue, fascia, muscles, and bone tissue and is accompanied by elephantiasis and tissue deformation. The causative agent is Madurella spp fungi; lives on land.

**49. Indicate the clinical signs of misetoma.**

Favorite localization - unilateral damage to the calf, paw, hands, and rarely - damage to the trunk, arms, thighs, buttocks. Painful papules or nodules form at the lesions. They become ulcerated, causing the formation of fistulae with purulent secretions. The process expands in the tissues, elephantiasis, tissue deformation develops.

**50. Differentiation with misetoma Indicate the diseases.**

Deep form of pyoderma, cutaneous leishmaniasis, other deep mycoses, Kaposi's sarcoma.

**51. Indicate the diagnostic methods of dermatomycoses.**

Dermatomycoses are diagnosed on the basis of clinical and laboratory diagnostics (microscopic, cultural, pathomorphological studies).

**52. List the methods used in the prevention of dermatomycoses.**

Registration of public prophylaxis, its analysis, active detection and treatment of people with latent forms of the disease. Regular disinfection of public places

Personal prevention - primary (following the rules of personal hygiene) and secondary (disinfection of underwear, bed linen, hats, shoes, etc.)

**53. List the antifungal drugs used in the systemic treatment of dermatomycoses.**

**Systemic therapy**

Antibiotic antibiotics

• Polyene - pimafucin, amphotericin B, nystatin, levorin, mycoptin; non-polyene - grizeofulvin.

• Azoles: imidazoles - clotrimazole, miconazole, econazole, bifonazole, ketoconazole; triazoles- itraconazole, fluconazole.

• Alilamines - terbinafine.

**54. Indicate the drugs used in the local treatment of dermatomycoses.**

**Topical therapy**

• Antifungal drugs - shampoos, solutions, sprays, gels, ointments, ointments - naftifine, terbinafine, clotrimazole, bifonazole, ketoconazole, natamycin, nystatin; varnishes - cyclopirox, amorolfine.

• Antiseptic and disinfectant substances - iodine, aniline dyes, boric acid, potassium permanganate, ethacridine lactate solutions.

• Keratolytic drugs - salicylic alcohol, salicylic sulfur ointment.

• Antibacterial drugs - tetracycline, erythromycin, gentamicin, fusidin, levamekol, sulfatiazole ointments, creams, gels.