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SOME MEDICINES USED FOR FUNGAL DISEASES

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Abstract. Mycoses are a broad group of diseases united by one characteristic - they are all caused by pathogenic fungi that parasitize the skin, mucous membranes and other human tissues.

Key words: mycosis, fungus, lichen, antibiotic, polyene.

Among all skin infections, they rank first in prevalence, but despite this, many sick people cannot recognize the disease in time and see a doctor, which is why dermatologists often have to deal with advanced forms of pathology.

Classification of mycoses is carried out according to various signs of diseases: by the genus and type of fungi, the depth of their penetration into the affected tissues, and their preferential localization.

The following types of fungal skin diseases are distinguished:

1.Keratomycosis (for example, pityriasis versicolor). Keratomycosis refers to fungal skin diseases in which the fungus affects only the stratum corneum of the epidermis and does not cause an inflammatory reaction of the skin.

2.Dermatophytosis. These include epidermatophytosis inguinalis, epidermatophytosis of the feet, rubrophytosis, trichophytosis, microsporia, favus.

3.Candidiasis is a disease of the skin, mucous membranes and internal organs caused by fungi of the genus Candida. Candida fungi are considered opportunistic microorganisms, as they are widely distributed in the external environment. The optimal temperature for their growth is 21-27 degrees, but they can grow at a temperature of 37 degrees. The depth of penetration of fungi into the affected tissue is different and depends on the location of the disease: for example, when affecting the vaginal epithelium, fungi penetrate into all its

layers, including the basal one, and in the oral cavity they affect only superficial epithelial cells.

Deep mycoses, including North American and keloid blastomycosis, sporotrichosis, chromomycosis. This group of diseases is mainly common in the countries of South America, Africa, and the USA. Infection occurs due to skin injuries, scratches, cracks. The clinical picture is different: tubercles and nodes appear on the skin, prone to decay with the formation of ulcers. They can affect the deep layers of the skin, subcutaneous tissue, underlying muscles and even bones and internal organs. This causes severe general symptoms, which does not exclude death.

Pseudomycoses are classified into a separate group: erythrasma, actinomycosis. Initially, these diseases were classified as fungal, but a more detailed study of their pathogens made it possible to classify them as microorganisms that occupy an intermediate position between fungi and bacteria.

Mycoses (Greek “mices” - fungus) are diseases caused by various fungi. Fungi can damage the skin, mucous membranes and internal organs. Mycostatic and mycocidal substances are used against superficial and deep-seated fungi to stop their reproduction. These substances are divided into 3 groups:

1. Substances used for deep mycoses.
2. Substances used for superficial mycoses-dermatomycosis.
3. Substances used for candidiasis.

Deep mycoses include actinomycosis, blastomycosis, coccidiosis, etc., antibiotics and amphotericin are used for their treatment.

When treating mycoses, nystatin, levorin, griseofulvin, clotrimazole, syncundan, undecine, nitrofungin, amphotericin and other drugs are used.

Nystatin is an antifungal drug from the group of polyenes. By binding to sterols in the cell membrane of fungi, it disrupts its permeability, which leads to the release of the main components of the cell. Has a fungistatic effect.

Active against yeast-like fungi of the genus Candida.

Levorin is a polyene antifungal antibiotic. Due to the large number of conjugated double bonds, it has a high tropism for sterol formations of the cell membrane of fungi. By binding to them, inducing membrane permeability, it leads to cell lysis. It exhibits the greatest activity against Candida albicans and some protozoa (amoeba, leishmania, trichomonas).

Griseofulvin - Antifungal antibiotic. Has a fungistatic effect. Active against dermatophytes of the genera Trichophyton, Microsporum, Epidermophyton. Inhibits cell division of fungal cells in metaphase, disrupting the structure of the mitotic spindle. Griseofulvin accumulates to varying degrees in skin, hair and nail cells, which are the precursors of keratin, making keratin resistant to fungal invasion. As the infected keratin is shed, it is replaced with healthy tissue.

Amphotericin is a polyene macrocyclic antibiotic with antifungal activity. Produced by Streptomyces nodosus. It has a fungicidal or fungistatic effect depending on the concentration in biological fluids and the sensitivity of the pathogen. Binds to sterols (ergosterols) located in the cell membrane of a fungus that is sensitive to the drug. As a result, the permeability of the membrane is disrupted and the release of intracellular components into the extracellular space and lysis of the fungus occurs.

Active against most strains of Histoplasma capsulatum, Coccidioides immitis, Paracoccidioides braziliensis, Candida spp., Blastomyces dermatidis, Rhodotorula spp., Cryptococcus neoformans, Sporothrix schenekii, Mucor mucedo, Rhizopus spp., Absidia spp., Basodiobolus ranarum, Aspergillus fumigatus .

Moderately active against some protozoa: Leishmania braziliensis, Leishmania mexicana, Naegleria fowleri.

The following are usually resistant to amphotericin B: Pseudallescheria boydii, Fusarium spp. Ineffective against bacteria, rickettsia, viruses.

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