

**Results and discussion.** The clinical presentation of cutaneous candidiasis can vary depending on the type of infection and the degree of immunosuppression. Most often, a pruritic red rash develops. Physical examination reveals a rash that begins with vesiculopustules that enlarge and rupture, causing maceration and fissuring. The area involved has a scalloped border with a white rim consisting of necrotic epidermis that surrounds the erythematous macerated base. Paronychia and onychomycosis are frequently associated with immersion of the hands in water and with diabetes mellitus.

Most localized cutaneous candidiasis infections may be treated with topical antifungal agents. In cases of extensive cutaneous infections, infections in immunocompromised patients, folliculitis, or onychomycosis, systemic antifungal therapy is recommended. Topical antifungal agents include polyene antibiotics: amphotericin B, nystatin, natamycin; azoles: bifonazole, clotrimazole, econazole, ketoconazole, miconazole, oxiconazole, sertaconazole; allylamines, for example, terbinafine; other topical agents: undecylenic acid, ciclopirox and etc. Systemic antifungal drugs include allylamines (terbinafine), polyene antibiotics (amphotericin B, nystatin, levorin), pyrimidine antibiotics (flucytosine).

Of the clinically employed azole antifungals, only a handful are used systemically. These include ketoconazole, itraconazole, fluconazole and etc.

**Conclusion.** Thus, we studied and analyzed modern standards of medical care for patients with cutaneous candidiasis, according to which the treatment of cutaneous candidiasis includes the use of local and systemic antifungal drugs.

## CURRENT TRENDS IN THE USE OF 1, 4-BENZODIAZEPINE DERIVATIVES IN MEDICAL PRACTICE

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**Introduction.** Despite the fact that anxiety is a normal reaction of the body to the action of environmental factors, yet with chronic manifestations, it can significantly impair the quality of life. The reasons for its occurrence are many: from problems in the family, education or work to the detection of the disease at a later stage. At present leading positions among anxiolytics, the effects of which are aimed at reducing anxiety, continue to occupy 1, 4-benzodiazepine derivatives.

**Aim.** The aim of the study was to current trends in the use of 1, 4-benzodiazepine derivatives in medical practice.

**Materials and methods.** In this research we used content analysis of official sources of information.

**Results and discussion.** The main target of benzodiazepines are  $\gamma$ -aminobutyric acid (GABA) type A (GABAA) receptors. GABA receptors are ligand-controlled anion channels that are activated by GABA, the major inhibitory neurotransmitter in the central nervous system. When stimulating GABA-ergic inhibitory activity with endogenous ligands, benzodiazepines or other drugs, sedation, amnesia and ataxia occur, while the weakening of GABA-ergic activity leads to the development of disorders, anxiety and insomnia. Each functioning GABA receptor is a heteropentamer, where all five subunits have the same tertiary structure and form a rosette around the membrane channel for chlorine ions. Each GABA receptor has two binding sites for GABA ( $\alpha\beta + \alpha\beta$ ) and one site ( $\alpha\gamma$ ) for binding of benzodiazepines and hypnotics of non-benzodiazepine

structure (zopiclone, zolpidem), which bind in a special "pocket" on the junction of  $\alpha$  and  $\gamma$  subunits.

The pharmacological effects of this group of derivatives are manifested by reducing the excitability of the subcortical areas of the brain (limbic system, thalamus, hypothalamus), responsible for emotional reactions, inhibiting the interaction of these structures with the cerebral cortex, and suppression of polysynaptic spinal reflexes.

Benzodiazepines have an analgesic effect in animals, in humans there is a temporary analgesic effect when administered intravenously, which in fact may be due to amnesia, which they cause. Benzodiazepines, unlike barbiturates, do not induce hyperalgesia.

**Conclusions.** Therefore a very interesting area of study of the activity of new benzodiazepine derivatives is the study of their analgesic activity due to the possible indirect effect on cannabinoid receptors, which can be used in the treatment of patients with pain under chronic stress.

## MODERN DRUGS IN THE TREATMENT OF ORPHAN DISEASES

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**Introduction.** Last year, 2020, the U.S. Center for Drug Evaluation and Research (CDER) approved a fairly broad list of new uses and formulations for existing market positions. Also, analogues of existing drugs were introduced in order to expand the choice for the consumer, and the most interesting part of this is the list of novel drugs, which include newly discovered chemical compounds not previously used in this field.

**Aim.** Analyze the market for new drugs intended to treat orphan diseases based on the CDER 2020 reports.

**Materials and methods.** A literature search was performed on PubMed and Medscape, as well as the official website of the U.S. Food and Drug Administration. Information on new drugs approved for rare diseases treatment (such as small cell lung cancer, Chagas disease and spinal muscular atrophy) was analyzed.

**Results and discussion.** Rare diseases are defined as those with an incidence of less than one in every 2,000 people in Europe. Orphan diseases mean poorly researched conditions, diseases without specific treatment known, and illnesses that are of limited interest only to scientists and physicians. Patients with such disorders often feel neglected and "lost" in the world of healthcare. For therapeutic progress, the rarity of a disease raises challenges. Well-designed clinical trials to assess therapy effectiveness and safety can be difficult to perform because of lack of participants. Patients will be willing to take risk for future advantages if no alternative treatments are accessible. However, the risk–benefit ratio may not be easily measured and in case of unfavorable ratio drug use may be undesirable. If a new drug is not likely to be commonly used, unless costs are high, drug manufacturers may expect small revenue profits, in which case drugs will not be cost-effective. Mentioned factors significantly impede progress in treatment of such rare conditions. Despite these aspects, in 2020, CDER approved 53 novel drugs, including new molecular entities under New Drug Applications, and new therapeutic biologics under Biologics License Applications. In this list there is the drug named ZEPZELCA (lurbinectedin) used to treat adults with metastatic small cell lung cancer with disease progression on or after platinum-based chemotherapy. Lurbinectedin is a