NEW APPROACHESTO TREATMENT OF FUNGAL INFECTIONS AT WOMEN

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Abstract: The article reflects the main problems of diagnosis and treatment of patients with vulvovaginal candidiasis (VVC). Data on the effectiveness of the broad-spectrum antimycotic drug fenticonazole in the treatment of VVC are presented, which makes it possible to increase the effectiveness of treatment and reduce the frequency of relapses of the disease.

НОВЫЕ ПОДХОДЫ К ЛЕЧЕНИЮ ГРИБКОВЫХ ИНФЕКЦИЙ У ЖЕНЩИН

Аннотация: В статье отражены основные проблемы диагностики и лечения больных кандидозным вульвовагинитом (ВВК). Представлены данные об эффективности антимикотического препарата широкого спектра действия фентиконазола при лечении ВВК, что позволяет повысить эффективность лечения и снизить частоту рецидивов заболевания.

INTRODUCTION

The relevance of studying the problem of vulvovaginal candidiasis (CVV) is due, on the one hand, to its predominant development in women of young reproductive age, and on the other hand, ambiguous approaches to the diagnosis and treatment of this pathology (1).

C. albicans, C. tropicalis, C. pseudotropicalis, C. krusei, C. parakrusei, C. parapsilosis, C. Guillermondi are pathogenic for humans. Of the listed yeast-like fungi in gynecological practice, the pathogen that affects the vulva and vagina is more often C. albicans. The latter are distinguished by a pronounced enzymatic activity, which is manifested by the ability to produce proteolytic and lipolytic enzymes. This ensures their high adhesive ability and deep penetration of fungi into vaginal epitheliocytes (5).

Genital candidiasis at the present stage is characterized by polyetiology, torpidity of the course, chronicity with frequent relapses. Some species of the Candida genus that causes genital candidiasis are refractory to available therapeutic agents, resulting in a prolonged course of the disease, resistance to therapy, and frequent recurrence (3). Fungi of the genus Candida can be isolated from the vagina in almost many healthy women in the absence of clinical signs of vulvovaginal candidiasis (carriage). Under certain conditions, under the influence of external and / or endogenous factors, these fungi become pathogenic, causing disease. Genital candidiasis is characterized mainly by lesions of the vaginal mucosa (colpitis), stratified squamous epithelium of the vaginal part of the cervix (cervicitis), vulva (vulvitis).

Recurrent course of CVC (RCC) with exacerbations

Occurs 4 or more times a year at present with a frequency of 14–28% (2). In 50% of women with CVD, symptoms appear within a few days to 3 months. after successful treatment of the previous episode of the disease (2). S.D. Rathod in 28% of women after 3 months. after treatment, the CVC was again diagnosed.(7). RVV among adolescents has been described in 22% of cases (8).

The pathogenesis of CVV is complex and still insufficiently studied. C. albicans strains isolated from patients with CVV and carriers do not differ significantly in a number of biochemical characteristics; The trigger for the development of the disease is not a change in the properties of the fungus, but a decrease in the resistance of the host organism (4).

Indications for treatment of CVC are the presence of clinical manifestations of CVC and a diagnosis confirmed by laboratory detection of Candidaspp. Therapy is not indicated when Candidaspp is detected. in women without clinical manifestations (candidiasis) (9).

One of the recently emerging promising agents for the treatment of CVI on the domestic pharmaceutical market is an imidazole derivative with a wide spectrum of antifungal, as well as antitrichomonas and antibacterial activity, for the local treatment of superficial mycoses and vaginal candidiasis. The increased interest in this drug is due to the fact that it meets all the criteria for the treatment of superficial fungal infections: it has a wide spectrum of action, is effective at low concentrations, has a high affinity for vulvar and vaginal epitheliocytes, and does not provoke the development of resistance.

The drug is a substance from the azole group with a unique molecular structure that provides this drug with properties that are different from other fungicides. The high efficiency of the drug is due to the unique dual mechanism of antifungal action: the presence of both fungicidal and fungistatic effects. The drug imidazole disrupts the structure of the cell membrane of the fungus and provokes its self-destruction due to inhibition of the synthesis of enzymes responsible for the adhesion of the pathogenic fungus to epithelial cells of the mucous membranes, as well as the deactivation of an important antimicrobial barrier - immunoglobulin A.

As a result, the drug blocks the pathogenicity factor of the yeast hyphae. The fungicidal mechanism of action is associated with inhibition of the synthesis of ergosterol in the cell wall of the fungus. Preparations of the imidazole series, interacting with the microsomal 14-α-demethylase system of lanosterol (cytochrome P-450-dependent), causes the accumulation of 14-α-methylsterols, which blocks the synthesis of ergosterol, which ensures the stability of cell wall phospholipids, and, therefore, causes its destruction. Cytotoxicity of the drug is associated not only with a violation of the synthesis of ergosterol, but also with a violation of cytomembrane permeability and blockade of cytochrome oxidase activity as a result of a loss of energy potential.

Unlike other known azole compounds, Imidazole preparations block the synthesis of enzymes by yeast-like fungi at concentrations below the minimum threshold values, that is, it has a therapeutic effect when using minimal doses of the medicinal substance (many times less compared to other fungicides).

Preparations of the imidazole series have a pronounced antibacterial effect, inhibiting the reproduction of gram-positive flora (Staphylococcusaureus, Streptococcus spp.), As well as activity against Trichomonasvaginalis, there is evidence of activity against Candidaspp., Malasseziafurfur, Trichophytonssp., Microsporumssp. Therefore, it can be used for mixed infections (6).

Purpose of the study: to evaluate the efficacy of imidazole a series drugs in patients with chronic recurrent VVC.

MATERIAL AND METHODS

Clinical, laboratory and instrumental examinations were carried out in 60 women of reproductive age with recurrent candidal vulvovaginitis.

Inclusion Criteria:

- reproductive age from 18 to 50 years
- recurrent VVC (a history of four or more episodes of vaginal candidiasis during the year).
- Informed consent of the patient for the study.

Exclusion Criteria:

- acute and chronic diseases of the pelvic organs (in the acute stage) - acute VVC

- the presence of sexually transmitted infections (syphilis, gonorrhea, trichomoniasis, chlamydia, genital herpes with overt manifestations)
- individual intolerance to the components of the drug;
- period of pregnancy and lactation
- treatment with antifungal drugs (within the last 4 weeks)

The patients were comparable in terms of ethnicity, gynecological diseases, the duration of vulvovaginal candidiasis, and the number of its relapses. The diagnosis of recurrence of vulvovaginal candidiasis was established on the basis of clinical manifestations of the disease, the detection of fungi and pseudomycelium during microscopic examination, and colonization by fungi of more than 104 CFU/ml according to cultural studies.

The study showed that during the initial examination, 60 (100%) patients complained of cheesy discharge, 48 (80%) - of itching and burning in the vulva, and 38 (63%) had a combination of all complaints. Physical examination found that all 60 (100%) patients had pathological discharge from the genital tract, hyperemia of the vaginal mucosa. Microscopic examination of vaginal swabs in 43 (72%) patients was determined by the 3rd degree of purity, and in 25 (42%) - by the 4th. Also, in 100%, microscopy revealed mycelial and budding yeast cells, and in 15 (25%), Tr. Vaginalis

In the course of the study, a comparative analysis of the clinical and etiotropic efficacy of one of the new generation antimycotic drugs of the imidazole group in the treatment of RVVC was carried out.

Sick women were divided into two equal groups. The first group of 30 women in therapy was prescribed vaginal preparations of the imidazole series 1000 mg twice intravaginally at night with repeated administration of the drug after 3 days. days (on the 1st, 4th and 7th day), to reduce the frequency of relapses of VVC.

RESULTS AND DISCUSSION

An analysis of the treatment of recurrent CVC showed that in the first group, after using drugs of the imidazole a series, all patients noted a positive trend on days 2-3, as well as in the oral fluconazole group. With a repeated clinical and laboratory study, which was carried out after 10, 30 days and 3 months. after the end of treatment, all patients had no complaints, as well as inflammatory changes in the vaginal mucosa during visual examination. A culture study after a month showed a negative result for the presence of fungi in 100% of patients, both in the first and second groups. After 3 months at a repeated control examination (microscopic and cultural examination of the vaginal discharge), there were also no signs of candidal infection.

When analyzing the safety of drugs of the imidazole a series, no side effects, either local or systemic, were recorded in any patient.

CONCLUSION

1. Intravaginal use The preparations of the imidazole a series showed high efficacy, a rapid clinical response, and the absence of side effects of the drug, which makes it possible to recommend this drug in the treatment of chronic recurrent VVC.

2. Convenience of double use The preparations of the imidazole a series, both for the patient and for the doctor, play an important role in the choice of the drug and make Enzofen an example of an innovative approach to the pharmacotherapy of diseases. This drug meets the most modern requirements for the effectiveness and safety of therapy and is not inferior in its effectiveness to the action of systemic antifungal drugs.

References:

1. Mendling W. Vulvovaginalmykosen. Klinikum Frankfurt (Oder), AkademischesLehrkrankenhaus der Humboldt–Universitat (Charite) zu Berlin. Z ArztlFortbildQualitatssich 1998; 92 (3): 175–9.
2. Rathod S.D., Klausner J.D., Krupp K., Reingold AL, Madhivanan P. Epidemiologic features of vulvovaginal candidiasis among reproductive-age women in India. Infectious Diseases in Obstetrics and Gynecology; 2012. Article ID 859071, 8 p.
3. Rylander E., Berglund A.-L., Krassny C., Petrini B. Vulvovaginal candida in a young sexually active population: prevalence and association with oro-genital sex and frequent pain at intercourse. SexuallyTransmittedInfections. 2004;80:54–57.
4. Urogenital candidiasis. Clinical recommendations. RODViK, ROAG, Utl. Ministry of Health of the Russian Federation 2016. M., 2016. 22c. (in Russ). Literature:
5. Glazkova L.K. Etiology, clinic and therapy of vulvovaginal candidiasis // Obstetrics and gynecology. - 2005. - No. 3. – P. 55–58.
6. Blostein F., Levin-Sparenberg E., Wagner J., Foxman B. Recurrent vulvovaginal candidiasis. Annals of Epidemiology. 2017;27(Suppl. 9):575–582. DOI: 10.1016/j.annepidem.2017.08.010
7. Kachalina T.S., Grechkanov G.O., Nikishov N.N. and other 125p .
8. Ozone technologies in obstetrics and gynecology. N. Novgorod. 2007. 292 p.
9. Kubota T. Chronic and recurrent vulvovaginal candidiasis. Dept of Obstetrics and Gynecology, JuntendoUrayasu Hospital, JuntendoUniv, 2–1–1. Tomioka Urayasu-si, Chiba 279–0021. Nippon Ishinkin Gakkai Zasshi 1998; 39(4):213–8.
10. Martyshkina E.Yu. Non-contraceptive effects of hormonal contraception. View of Russian and foreign experts. Obstetrics, gynecology and reproduction. 2011; 3:52-54.