

Proceedings of International Educators Conference

Hosted online from Rome, Italy.

Date: 25th May - 2024

ISSN: 2835-396X

Website: econferenceseries.com

MODERN VIEW ON THE TREATMENT OF ONYCHOMYCOSIS

Hakimov Dilshod Rustamovich

Doctor of medical sciences PhD dermatovenerologist

Ziyokhujaeva Nozima Baxtiyor qizi

The third-year student of Kimyo International
University In Tashkent In Beauty Aesthetic faculty

Annotation:

The literature review is devoted to the etiology, epidemiology and modern possibilities of treatment of onychomycosis. Information on the use of external and systemic products, as well as new techniques – laser and photodynamic therapy – is presented.

Keywords: onychomycosis, triggering factors, causative agents, combination therapy.

Introduction

Every year the world increases the number of patients is increasing onychomycosis. According to epidemiological studies recent years, frequency of occurrence fungal nail infections in adults low ranges from 7 to 15% [1], and these figures vary significantly in different countries. So, in Italy they mycosis was detected in more than 14.2% in a survey of 8000 people [2]. The incidence also differs among different population groups, it determines depends on various factors, including environmental and social, and also individual properties organism – gender, age and availability including concomitant diseases [3].

The incidence of onychomycosis has increased improves with age: enough they are rare among children, much more widespread among people of mature age, reaching almost 50% in patients over 70 years of age years and above [4, 5].

The question of who gets the fungus more often is COVID-19 infections – men or women, does not have an unambiguous th answer. A number of authors point to more frequent infection of men, others give priority to women. Thus, according to a number of authors, in India fungal nail infection more common was registered among men [6], in Brazil – in women (66% of cases) [7]. In our country men suffer



Proceedings of International Educators Conference

Hosted online from Rome, Italy.

Date: 25th May - 2024

ISSN: 2835-396X

Website: econferenceseries.com

onychomycosis 1.3 times more often than women [8, 9]. A significant role in the development of onychomy- goat play vascular diseases lower extremities, obesity, poor Scoopia and other foot deformities. Fungal infections are especially common nails occur in patients with diabetes diabetes, which creates favorable conditions associated with increased high levels of glucose in the blood, used by fungi for metabolism ical processes, as well as changes large and small vessels (diabetic angiopathy), which leads to a decrease in loss of tissue trophism and weakening of the body's defenses [10].In patients with onychomycosis, the secretion. There are about 50 types of different grills bov (dermatophytes, yeast-like, mold fungi), however, the dominant. Dermatophytes remain the most common, with a share which account for about 80% of all cases of fungal infection nails [11]. The main pathogens are Chomycosis in our country is considered xia Trichophyton rubrum and Trichophyton mentagrophytes. Tr. rubrum can affect the nail plates both on the hands and feet, Tr. mentagrophytes - only on the feet. In Europe, the USA and in our country from 70 up to 90% of cases of nail onychomycosis stop caused by Tr. rubrum, and to a share Tr. mentagrophytes account for 10 to 20% of cases. Other dermatophytes with onychomycosis there are significant much less often. The second most common causative agents of onychomycosis are yeast-like fungi of the genus Candida, which most often affect the nail beds skin on the hands (40–60% of cases). They cause onychomycosis of the feet less often - in 5–10% of cases. The main excitation cause of candidal onychomycosis is Candida albicans, less frequently detected affects Candida parapsilosis and Candida krusei [12]. Onychomycosis of the feet, caused by moldy and yeast-like mushrooms, more common in countries with subtropical and tropical climates obscenities [13, 14]. Relevance of the problem of onychomic- due to not only extremely widespread among population, but also significant difficulties treatment options for this disease. Many patients and sometimes doctors perceive a fungal infection nails only as an aesthetic problem mu, forgetting that this is chronic an infectious disease that may cause development or worsening treatment of the course of allergic dermatitis toses, erysipelas of the lower limbs and other pathological states [15]. Adequate therapy for onychomycosis must be comprehensive and include start using external agents, systemic drugs and mechanical removal of affected parts of the nail plates [16, 17]. There are a lot of



Proceedings of International Educators Conference

Hosted online from Rome, Italy.

Date: 25th May - 2024

ISSN: 2835-396X

Website: econferenceseries.com

local treatments in the form of creams, sprays, solutions, ointments, varnishes, plasters. Monotherapy they are justified in case of small area of nail plate affected stinkiness (up to 30–40%), with superficial non-white onychomycosis, as well as with presence of serious contraindications to prescribing systemic drugs. Local therapy allows you to create give on the surface or in the thickness nail high concentrations of anti-fungal preparation, fungicide suitable for most pathogens. Local application of drugs is safe but, since the drug is not absorbed into the systemic circulation and does not cause side or toxic effects. At the same time, with pronounced hyperkeratosis, external preparations do not help penetrate into the thickness of the nail and do not lead to death of fungal cells. To soften the nail plate - use drugs based on urea; Mikospor cream, containing urea and bifonazole [18]. Well known and very popular we have preparations in the form of varnishes – amorolfine, ciclopirox, used for local and combination therapy onychomycosis [19]. To the benefits such therapies include convenience application, good tolerance varnishes, which makes it possible long-term treatment until complete clinical and mycological health restoration, especially in the presence of contraindications to the use of systemic drugs. Amorolfine has worked well itself as a drug with a wide spectrum action - its effectiveness has been proven activity against dermatophytes, yeast, mold, dimorphic mushrooms [20–22]. Ciclopirox is a fungicide effective on most excitable. The parents of onychomycosis are dermatophytes (*T. rubrum*, *Epidermophyton floccosum*), as well as yeast-like (*C. albicans*) and molds (*Aspergillus niger*). It also inhibits the development of some gram-positive and gram-negative body bacteria, which is especially important due to the increasing incidence of mixed infections [23].

A new direction in therapy onychomycosis is the application lasers (long-pulse neodymium-doped modal, fractional CO₂ laser), which cause protein denaturation fungal cell, heating the area lesions up to 45–53°C. For treatment use lasers with wavelengths 870 nm, 930 nm, Nd:YAG 1064 nm, Nd:YAG 1319 nm [24, 25]. Authors studies indicate good, but still insufficiently effective the effectiveness of such therapy is the percentage of survival adjustment after 8 procedures amounted to from 51.9 to 66.67% [26, 27]. In another study, in vivo and in vitro, the authors reported. They say that the fungicidal effect for dermatophytes was achieved by heating all crops up to 50°C for 10–15 minutes, and cure onychomycosis in no patients were observed even after 5 or more courses of therapy [28]. So Thus, this method can consider-



Proceedings of International Educators Conference

Hosted online from Rome, Italy.

Date: 25th May - 2024

ISSN: 2835-396X

Website: econferenceseries.com

an alternative for those patients to whom the system cannot be prescribed therapy, but requires more serious and long-term studies dovaniya. Another potentially effective effective method of treatment may be widely used in dermatology photodynamic therapy (PDT) [29]. In the study as photosensitizers used methylene blue and 5-aminolevulinic acid. At comparative study of PDT with the use of these photosensitivity congestion clinical effectiveness was 80 and 43%, respectively, with follow-up for 12 months [30]. The disadvantages of laser and photodi- namic therapy can be attributed side effects in the form of painful pain and swelling of the treated area, as well as the possible development of onycho- dystrophy as a result of thermal impact.

Systemic therapy today is the main method of treatment niya of onychomycosis, but it has a number there are no contraindications effective as monotherapy for severe damage to the nail plates stinkcock. The most effective combination ted treatment, which, along with systemic antimycotics including no removal of nail plates, cleaning nail bed and the use of topical drugs [31–33]. Basic drugs for systemic therapy: terbinafine, itraconazole and fluconazole. Terbinafine is highly effective effective for the treatment of dermatophytosis - onychomycosis, itraconazole is effective acts on dermatophytes, yeast-like fungi and molds; fluconazole – on yeast-like fungi and to a lesser extent cervical dermatophytes [34, 35]. The advantage of terbinafine is it is possible to use it children, patients with diabetes, elderly sick people, as well as patients with Down syndrome [36]. According to various authors, the effectiveness activity of therapy when used standard methods are sufficient varies greatly and ranges from 45 to 96%. So, when using ter- binafine for 3 months together with amorolfine varnish for 12 months the therapeutic effect was reached 59.2% of patients, and with mono- terbinafine therapy – 45% [37]. By according to J. Wen, Z.F. Lin (2005), effective effectiveness of treatment of 88 children with onychomycosis in goats was 96.6% [38]. Similar the result was also obtained during treatment adults – 94% [39]. Itraconazole is the most effective drug in treating Research Institute of Onychomycosis of Mixed Ethio-logic, it is well tolerated simplicity and ease of use [40]. Its effectiveness, according to different authors, ranges from 70 to 92% [41–43]. A comparative study was carried out administration of itraconazole at a dosage of 100 mg and a new form of the drug in dosage 200 mg in 1 capsule. Shown in the same way high efficiency and safety the effectiveness of these two forms of the drug in compared to placebo, as well as convenience for



Proceedings of International Educators Conference

Hosted online from Rome, Italy.

Date: 25th May - 2024

ISSN: 2835-396X

Website: econferenceseries.com

patients [44]. There are still no clinicians consensus on which one systemic drugs are preferred

her. A comparative research on the effectiveness of five protocols for the treatment of patients with onycho- mycosis. Patients (133 people) were distributed into 2 groups depending on depending on the values of the SCIO index – scoring clinical index for onychomycosis (KIOTOS - clinical index assessment of the severity of onychomycosis) from 6 to 9 and 12 to 16. Within these groups five treatment protocols were carried out tion: fluconazole 150 mg was prescribed. Once a week, continuous therapy itraconazole, pulse therapy itra- conazole, terbinafine 250 mg/day and the combination of terbinafine with cyclopi-rocks. The effectiveness of treatment is estimated nivali at 48 weeks and she was almost comparable – 92.30%, 81.81, 83.33, 90.90 and 100% with index KYOTOS 6–9; 78.57%, 78.57, 75, 80 and 86.66% – with an index of 12–16 corresponding responsibly. So there was no statistically significant differences in treatment effectiveness these drugs [45]. Approximately the same data is obtained chens D.P. Westerberg and M.J. Voyack – the effectiveness of terbinafine is la 76%, itraconazole in pulse mode therapy – 63%, with continuous use eme – 59%, fluconazole – 48% [46].

So at the moment there are many different drugs and treatment methods chomycosis, each of which has your positive and negative aspects that must be taken into account by the doctor when prescribing therapy.

References

1. Kushwaha A., Murthy R.N., Murthy S.N., Elkeeb R., Hui X., Maibach H.I. Emerging therapies for the treatment of unguinal onychomycosis. *Drug Dev Ind Pharm.* 2015;41(10):1575–81.
2. Papini M., Piraccini B.M., Difonzo E., Brunoro A. Epidemiology of onychomycosis in Italy: preva- lence data and risk factor identification. *Mycoses.* 2015;58(11):659–64.
3. Ayanlowo O., Oladele R.O. Onychomycosis: updates and management challenges. A review. *Niger. Postgrad. Med. J.* 2014;21(2):185–91.
4. Rosen T., Friedlander S.F., Kircik L., Zirwas M.J., Stein Gold L., Bhatia N., Gupta A.K. Onychomycosis: epidemiology, diagnosis, and treatment in a changing landscape. *J. Drugs Dermatol.* 2015;14(3):223–33.



Proceedings of International Educators Conference

Hosted online from Rome, Italy.

Date: 25th May - 2024

ISSN: 2835-396X

Website: econferenceseries.com

5. Polat M., Ilhan M.N. Dermatological Complaints the Elderly Attending a Dermatology Outpatient Clinic in Turkey: A Prospective Study over a One-year Period. *Acta Dermatovenerol. Croat.* 2015;23(4):277–81.

6. Yadav P., Singal A., Pandhi D., Das S. Clinico- mycological study of dermatophyte toenail ony- Chomycosis in New Delhi, India. *Indian. J. Dermatol.* 2015;60(2):153–58.

7. Ribeiro C.S., Zaitz C., Framil V.M., Ottoboni T.S., Tonoli M.S., Ribeiro R.P. Descriptive study of them- chomycosis in a hospital in Sao Paulo. *Braz. J. Microbiol.* 2015;46(2):485–92.

8. Sergeev A.Yu. Fungal diseases of nails. M., 2001. 155 p.

9. Sergeev Yu.V., Sergeev A.Yu. Project "Hot"



E- Conference Series

Open Access | Peer Reviewed | Conference Proceedings



E- CONFERENCE
SERIES