



Rational and Gentle Therapy of Onychomycosis

Sefrankova M*

Faculty of Health Sciences, Catholic University, Slovakia

***Corresponding author:** Miriam Sefrankova, PhD student, Faculty of Health Sciences, Catholic University, Ruzomberok, Slovakia, Email: miriam.sefrankova@ku.sk

Editorial

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Editorial

Diseases caused by microscopic organisms - fungi (incorrectly "molds") - belong among the most common skin infections and studies show an increasing trend in their occurrence. Dermatomycoses are fungal infections which affect the skin, nails, or hair. Even though the best practices state that naming an infection should be based on identified trigger, the Latin word "tinea" followed by the area of the body (e.g. tinea unguium, tinea pedis) is used more frequently.

Onychomycosis, a fungal nail disease, is one of the most common dermatological diseases. It actually represents 1/3 of fungal skin infections. The most important causative agents of dermatomycoses are Trichophyton, Epidermophyton, and Microsporum. The first proportional position in Europe belongs to the anthropophilic dermatophyte Trichophyton rubrum. Trichophyton interdigitale is also significantly represented. Despite claims that incidence of mycoses caused by zoophilous dermatophytes is higher in tropical countries, we have also recently recorded, mainly in children, an increase in zoophilic infections caused by Microsporum canis. The Czech Republic reports a similar trend.

To get the most exact result a correct sampling must be carried out. The nails must not be treated in a way at least a month before sampling which means that nail polish can neither be applied nor removed at minimum a month before sampling. Microscopic examination during which fungal fibers are observed in the material macerated in KOH plays an important role as well. The most important is culture examination lasting 3-4 weeks. However, subsequent determination can be in some cases lengthy.

MALDI-TOF spectrometry is of great use in identification of microorganisms from culture, despite the fact that the methodology is very time-consuming. However, these results match PCR in almost 70%.

Microscopic and culture examination is a prerequisite for proper therapy. Local antifungal treatment comprises application of pastes, solutions or sprays. Iodine and its derivatives are used as well as organic dyes, hydroxyquinolines, sulfur and its compounds. In systemic therapy Terbinafine shows favourable results, but it is more effective against dermatophytes than against yeast. With systemic treatment the most serious side effect is liver toxicity. However, untreated onychomycosis can lead to the development of erysipelas and diabetic foot. Photodynamic therapy is a great non-invasive alternative. Under the influence of the light of a high performance LED lamp fungal cell wall stained with gel is disrupted which paralyzes its further growth. Such an option is provided by podiatry and chiropody clinics. In this case, it is more economically demanding, since the given performances are not covered by Health Insurance Company. Slovakia is one of the last countries in the Union where there are not such clinics. As a mycologist, I actively cooperate with unique podiatry in our region, and that is why I can say that the professional care provided in it is of a real benefit for our patients. Based on data collected by the National Centre for Health Statistics almost half of all patients with diabetic foot syndrome end up losing a limb or foot compared to one third of patients with the same diagnosis in the Czech Republic, awareness of this situation has become a strong motivation for us to create a network of high quality podiatric outpatient departments.

