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# ONYCHOMYCOSIS AND ITS IMPACT ON QUALITY OF LIFE

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One of the most common fungal disease in humans is onychomycosis, the invasion of the nail plate by fungi. The prevalence of the disease increases worldwide and it has been estimated that 8–20% of the adult population are affected in the developed countries [1]. There is no published data on the extent of onychomycosis in Hungary, but about 10% of the population could have fungal nail disease.

Fungal nail infections, usually of the toenails affect all ages, but are more frequent in middle aged and in older people. This prevalence may be even higher among risk groups such as patients suffering from diabetes mellitus, obliterative atherosclerosis, HIV infection, organ transplant recipients and patients taking immunosuppressive agents such as corticosteroids and cytostatic drugs. There are further risk factors for the otherwise healthy population: working and sporting in warm, steamy conditions, swimming, using common baths, wearing tight shoes or training shoes and living under bad social-hygienic conditions could increase the incidence of the disease.

Onychomycosis is several times more common in toenails than in fingernails (80% and 20%). It may be a primary infection or a secondary fungal involvement in a previously damaged nail. Clinical types of onychomycosis are defined by the mode of invasion of the nail unit by the fungus. It can be divided into four types: distal and lateral subungual onychomycosis (DLSO), proximal subungual onychomycosis (PSO), white superficial onychomycosis (WSO), and total dystrophic onychomycosis (TDO) [2]. The latter may be developed from the three other types or it could be observed primarily in chronic mucocutaneous candidiasis.

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Onychomycosis may be caused by dermatophytes, non-dermatophyte filamentous fungi, yeasts, and there are also mixed infections. Dermatophytes cause 90% of toenail infections and about 50% of fingernail infections, *Trichophyton rubrum* is the principal pathogen [3]. Non-dermatophyte moulds such as *Scopulariopsis brevicaulis, Aspergillus* and *Acremonium* species are almost always associated with toenail dystrophy and secondary nail infection. They often infect nails in combination with dermatophytes [4]. Onychomycosis caused by yeasts is most commonly seen in fingernails, particularly in association with paronychia. *Candida albicans* is the most common pathogen in this group.

Onychomycosis must be differentiated from other nail diseases such as nail involvement in psoriasis, lichen ruber planus, alopecia areata, bacterial infections such as *Pseudomonas* nail infection, traumatic changes, subungual tumours, viral warts, and onychodystrophy caused by peripheral neuropathy or atherosclerosis.

Onychomycosis is not only a cosmetic problem. It is a chronic infection without tendency to spontaneous regression and can interfere with the normal function of the hands and feet. It could be painful, could spread to the surrounding areas of the skin, and could have potentially serious complications such as cellulitis, erysipelas, or even osteomyelitis. The modern era in the treatment of onychomycosis arrived in the 1990s with the introduction of safe and highly potent oral antimycotic drugs (fluconazole and itraconazole in the azole group, and terbinafine in the allylamines) [5, 6, 7]. Recently introduced topical treatments include nail lacquer formulations, but these and the previous topical antifungal agents are less efficient without concomitant oral therapy.

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