ONYCHOMYCOSIS CAUSED BY TRICHOPHYTON MENTAGROPHYTES: CASE REPORT

Aleksandra Jovanović,[1] Selma Habibović,[2]

[1]Institute for laboratory diagnostic Biomedica, Belgrade, Serbia
[2]Public Health Institute Novi Pazar, Novi Pazar, Serbia

DOI: 10.5937/BatutPHCO24031J

Background: Onychomycosis (tinea unguium) is an infection of the nail plate, the nail unit, caused by a type of fungus. It is a cosmopolitan infection that is localized on the legs in 80% of cases. Distal subungual onychomycosis (DSO) is the most common clinical form of onychomycosis caused by species *T. rubrum, T. mentagrophytes* var. *interdigitale* i *E. floccosum*. Risk factors are older age, gender (usually male), poor hygiene, hyperhidrosis, genetic factors, infection in the family, smoking, associated mycosis (eg. tinea pedis) and other diseases.

Case report: We present a 46-year-old male patient who has had changes in the nail of his right big toe almost two years ago. Patient used many treatments, but no improvement. The nail plate was deformed. In April 2024, the nail shaving (scarified) were processed in the laboratory for dermatophyte molds.

Micelle fibers were found by direct microscopic preparation of nail scarification, and *Trichophyton mentagrophytes* was isolated by culturing on dermatophyte media. Isolate identification was performed on the basis of the microscopic morphology from the culture, the macroscopic appearance of the culture on the dermatophyte isolation media as well as by MALDI – TOF mass spectrometry.

Conclusions: Mycological confirmation of infection of the toenail with the fungus *Trichophyton mentagrophytes* with adequate treatment improves the quality of life.

Oral antifungals are used for the treatment of moderate – severe onychomycosis. Terbinafine and fluconazole is indicated for onychomycosis in Europe. Other oral antifungals such as, ketoconazole and griseofulvin are no longer used for the treatment of onychomycosis due to safety concerns and relatively lower efficacy.

Keywords: onychomycosis; *trichophyton mentagrophytes*; dermatophytes; antifungal therapy