

SURVEY AND COMPARISON OF CLINICAL AND LABORATORY FINDINGS AMONG SUBJECTS WITH FINGERNAIL AND TOENAIL ONYCHOMYCOSIS

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Abstract. There are few studies of the clinical and laboratory findings in onychomycosis patients. In this study, we aimed to determine the clinical and laboratory findings among onychomycosis patients and compare them between patients with fingernails and toenail onychomycosis in order to determine if there are differences between these factors. We retrospectively reviewed the charts of patients diagnosed with having onychomycosis at the Department of Dermatology, Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok, Thailand. A total of 1,109 patients were included in the study, composed of 1491 infected nails: 129 (8.7%) were fingernails and 1362 (91.3%) were toenails. The mean age of subjects with fingernail onychomycosis was 52.5 years and of toenail subjects was 62.4 ($p<0.001$). Sixty-five point nine percent of subjects with fingernail onychomycosis were males and 55.7% of subjects with toenail onychomycosis were male ($p=0.025$). The male to female ratio among subjects with fingernail onychomycosis was significantly higher than among subjects with toenail onychomycosis ($p=0.025$). The causative organisms isolated among fingernail onychomycosis subjects were *Trichophyton rubrum* (58.1%) and *T. mentagrophytes* (20.9%) and among toenail onychomycosis were *Neoscytalidium dimidiatum* (32.5%) and mixed infection (12.5%). Fingernail onychomycosis was significantly associated with the presence of tinea faciei ($p<0.001$), tinea corporis ($p<0.001$), tinea manuum ($p<0.001$) and tinea capitis ($p=0.040$). Toenail onychomycosis was significantly associated with tinea pedis ($p<0.001$). Fingernail onychomycosis was significantly associated with younger subjects, males, the causative organism *T. rubrum* and the presence of tinea faciei, tinea corporis, tinea manuum and tinea capitis. Toenail onychomycosis was significantly associated with older subjects, females, the causative organisms *N. dimidiatum* or mixed infection and the presence of tinea pedis. In conclusion, onychomycosis could spread fungal infection to the adjacent skin. Distinct causative organisms between fingernail and toenail infection may lead to different management.

Keywords: fingernail onychomycosis, fungal skin infection, onychomycosis, toenail onychomycosis.

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