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Onychomycosis in Tehran: Mycological study of 220 persons with nails disorder in 2016

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Onychomycosis is a fungal infection of nails, which is caused by three groups of fungi include dermatophyte, saprophytic mold and yeast that lead to almost 30% of all fungal skin infections. Diagnosis of the onychomycosis is only possible by direct microscopic examination and culture. Diagnosis and differentiation of dermatophyte onychomycosis and saprophytic onychomycosis is not easily performed thus we should use other criteria, such as clinical signs and risk factors associated with this disease. By performing a careful examination, these criteria can be statistically determined and clinical symptoms, direct examination and culture as diagnostic criteria can be used for saprophytic infections from dermatophytic onychomycosis. The subject of this research has been chosen in order to reduce the wrongful laboratory diagnosis of saprophytic onychomycosis. Nail lesions were also sampled in appropriate laboratory conditions, specimens were tested by direct microscopic examination using potassium hydrochloride (KOH) 15% and culturing on Sabouraud's agar containing chloramphenicol (SC). Then the results were analyzed by the SPSS software. Out of 220 patients referring to the laboratory, 35 men (41.7%) and 49 women (58.3%) were positive for onychomycosis. 66 cases (78.6%) were positive for both direct examination and culture. Out of 84 cases of onychomycosis, 47.6% were caused by yeasts, 28.6% were infected by dermatophytes and 23.8% by saprophytic molds. Of the 20 cases of saprophytic onychomycosis: Five cases (14.2%) were male and 15 cases (30.6%) were female. 15 cases (75%) were in toe nail (5 men, 10 women) and 5 cases (25%) were in finger nail (5 women). 30% of cases (the highest number of patients) were observed in the age group of 41-50 years old. Four cases (20%) had diabetes and one case (5%) had cardiovascular disease and one case (5%) had a history of immune suppressive drug use. 9 cases (45%) had a history of trauma to nail. 18 cases (90%) had one nail involvement. All of 20 cases were negative for the lesion around the nail. 18 cases (90%) had clinical form of DLSO and 2 cases (10%) were observed with the clinical form of WSO.

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