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## Tinea of the nails underdiagnosed in children



Two doctors from Hospital del Mar in Barcelona and UAB professors have observed, through a research carried out during the past 9 years, an increase in the number of children affected by tinea of the nails, as well as an underdiagnosis of this affection by paediatricians.

In Europe, Tinea unguium has an incidence rate between 0 and 2.6% (average 0.3%) in general population. The symptoms of tinea of the nails are generally well tolerated by patients, causing a delay in medical consultation. Together these two factors represent a challenge for a pediatrician faced with diagnosis and treatment of tinea of the nails.

An increase in the number of cases of tinea of the nails was observed in our Pediatric Unit in Barcelona. From 1976 to 1984, one patient was diagnosed with tinea of the nails (4), whereas this number has augmented considerably in the past 9 years, in which 12 patients have been diagnosed with this pathology.

Etiologic evaluation was carried out by: a) direct examination with 40% KOH at 400X; b) culture in specific medium; c) macro/micro morphologic evaluation of the colonies. Twelve cases of T. unguium were identified, of which four patients were 12 years old or younger, seven presented onycholysis and five demonstrated enlargements and change of color of the affected nails. The average duration of disease before diagnosis was 21.6 months (range 2-60 weeks). In eight

patients, tinea of the nails coincided with tinea pedis. The etiology in 10 patients was *T. rubrum* and in 2 patients was *T. tonsurans*.

Although *T. unguium* is a disease that presents itself at all ages, it is more frequent among the adult population, leading pediatricians to overlook *T. unguium* as a possible diagnosis. Possibility of *T. unguium* occurring in younger children should not be discarded. In our study, three patients with *T. unguium* were 4-8 years old. A susceptible host is necessary for infection to proceed, and susceptibility can arise from external as well as endogenous factors.

We believe that *T. unguium* is frequently underdiagnosed by pediatricians. A pediatrician should be aware of the following: 1) tinea of the feet could coincide as well as predispose to tinea of the nails, as was observed in 66.6% of patients in the present study, 2) environmental epidemiological factors, and 3) broken, hyperkeratinized nails with color change or uneven structure, especially on the first and/or fifth toe(s) suggest *T. unguium* infection. In these situations, it is paramount to conduct an etiologic study to establish proper diagnosis and treatment.

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## References

"Twelve cases of tinea unguium in a pediatric clinic in 9 years", Martínez Roig, Antonio; Torres Rodríguez, Josep Maria. *European Journal of Pediatrics*, 166 (9): 975-977 Sep 2007.

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