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Abstract (publication only)

Is it worthwhile to take skin samples from feet for tinea unguium?

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Objectives: The main complications of tinea pedis are bacterial cellulitis and fungal invasion of the toenails. The aim of this study is to know the tinea pedis incidence in patients with suspected onychomycosis and to calculate feet skin sampling cost. **Methods:** Five hundred eleven patients with suspected onychomycosis submitted from primary care to the Miguel Servet Teaching Hospital Microbiology Laboratory for toenail sampling were included in this study. Toenail sample and lateral interdigital spaces and foot skin sample were taken and direct microscopic examination (potassium hydroxide-calcofluor) and culture were performed. Samples were cultured in Sabourad dextrose agar, Potato Dextrose agar and Dermatophyte Test Media (DTM) and were incubated at 30°C for four weeks. Microbiological data were retrospectively reviewed from the 1st June 2011 to the 1st May 2012. Sampling cost was calculated from remuneration tables and commercial catalogues. **Results:** Feet and toenail sample culture and direct microscopy were performed in the 511 patients. In 135 (26.42%) cases dermatophyte's growth was positive in at least one sample; both samples resulted positive in 74 cases. Fungal identification was only possible in the interdigital space skin sample in 10 cases with nail culture negative, in these patients nine *Trichophyton rubrum* and one *T. mentagrophytes* var. *interdigital* were isolated. The incidence of tinea pedis was 16.4% (84/511). Considering the cost of culture media and the personnel involved in sample collection and identification, if only toenail sampling was performed, €4865 would have been saved (470 euros in culture media and 4395 euros in human source). **Conclusions:** Topic treatment is valuable in managing tinea infections of the skin. However, topic treatment alone is rarely effective in curing onychomycosis and systemic antifungal are necessary. In the light of this study, interdigital space skin sampling is not cost-effective when oral treatment is going to be prescribed.