

Dermatophytoma: An under-recognized condition

Sir,

Dermatophytoma appears as linear, single or multiple white or yellow bands on the nail plate and can be easily diagnosed from external appearances. Biofilm development is proposed for the pathogenesis of this infection that is composed of a fungal ball formed by abundant fungal filaments and large spores.^[1-3] As the fungal mass firmly attaches to the nail plate and produces an extracellular polysaccharide, it leads to decreased antifungal penetration making the condition resistant to standard antifungal therapy.^[4,5] Oral antifungal treatment alone is not enough to treat this condition^[6] and either chemical or physical debridement is essential to eliminate dermatophytoma.^[7]

General practitioners and non-dermatologist specialists are usually the first to treat fungal nail infections but

their knowledge of dermatophytoma treatment is probably limited. As a first step in developing the clinical practice standard for the treatment of dermatophytoma, we evaluated knowledge about this condition in general practitioners and non-dermatologist specialists at the annual meeting of the Dermatological Society of Thailand in February 2013. We used questionnaires and a short answer pretest, composed of a typical picture of toenail dermatophytoma followed by three questions: What is the diagnosis? How would you assess this patient? What is the appropriate management? [Figure 1]. The questionnaire also asked about the respondent's level of confidence in the management of dermatologic patients. The study was approved by the hospital ethics committee.

This test was taken by 82 (96.5% of those registered) physicians who voluntarily returned their answer sheets. Sixty-six (80.5%) participants were general practitioners while the rest were non-dermatologist specialists. Among the physicians, 59 (72%) were

female. The largest group consisted of 38 (46.3%) physicians aged from 26 to 30 years followed by 24 (29.3%) physicians aged from 20 to 25 years. Our analysis found that 75 (91.5%) physicians provided us with an accurate diagnosis of onychomycosis but 42 (51.2%) physicians did not request a potassium hydroxide (KOH) examination. Interestingly, the self reported level of confidence in managing dermatology cases correlated with the requestioning of investigations for mycological examination. The group of physicians with low and very low confidence sent fewer samples for confirming mycological disease compared with those in the moderately and highly confident group ($P = 0.026$) [Table 1]. Among the 75 physicians who made the right diagnosis, 42 (63.4%) stated they would manage the condition with oral antifungal treatment, 18 (22%) mentioned a combination of topical and oral antifungal treatment and 3 (3.7%) mentioned antifungal drugs but did not specify the route of administration. However, only 2 physicians mentioned the additional requirement of mechanical debridement.

Our study shows that onychomycosis is recognized by both general practitioners and non-dermatologist specialists, but dermatophytoma is not. However, physicians should learn to diagnose dermatophytoma

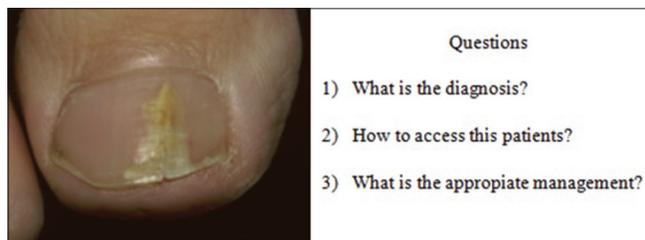


Figure 1: Dermatophytoma. Three short answer questions and typical picture of the toenail dermatophytoma

Table 1: The correlation of the level of confidence in dermatological practice, answer, and the KOH examination request for mycological examination

	Level of confidence (%)		Total (%)	P
	Very low and low	Moderate and high		
Answers of participants				
Onychomycosis	61 (92.4)	14 (87.5)	75 (91.5)	0.338
Incorrect answers	4	2	6 (7.3)	
No diagnosis	1	0	1	
Total	66	16	82	
Investigation				
KOH examination request	27 (41.5)*	11 (73.3)*	80	0.026**

*1 missing vaule in each group.**statistical significant (P value <0.05)

as it requires mechanical debridement in addition to the topical and oral antifungal agents used in regular practice.

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Conflicts of interest

There are no conflicts of interest.

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