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**Letter**

**Scabies of the nail unit**

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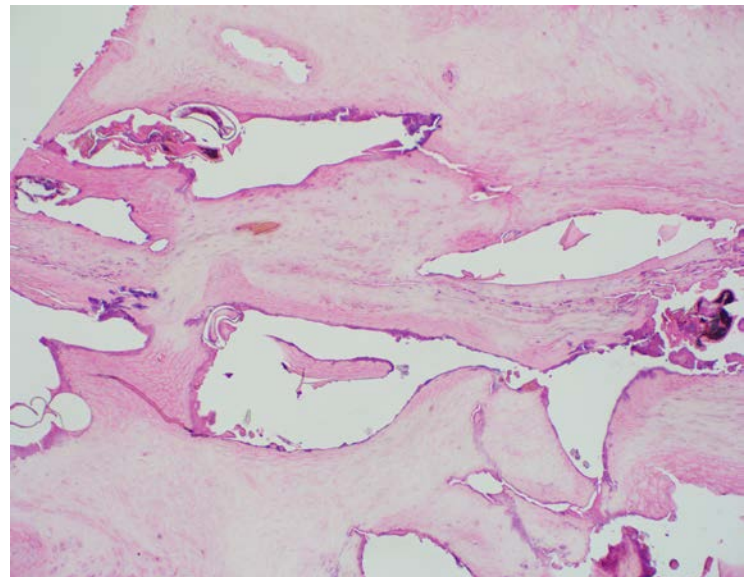
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**Abstract**

Scabies limited to the nail unit is quite unusual, but may persist after treatment of crusted scabies. We present a man with a history of crusted scabies that resolved with treatment, but later the patient reported a chronic problem with crumbly, thickened nails, which were found to be harboring scabies mites.

**To the editor:**

A 66 year-old man presented to the dermatology clinic with a complaint of thick, yellow toenails for over one year. He described the nails as “crumbly” and difficult to cut. He had been previously treated for crusted scabies and that eruption resolved with permethrin and ivermectin. He had a history of diabetes but no other immunosuppression.



**Figure 1. Thickened, yellow toenails Figure 2. Mites may be seen within the nail plate.**

On presentation, all the toenails appeared dystrophic. They were thickened with yellow opacity and subungual debris (Figure 1). Clippings of the nail plate were sent for histologic analysis and revealed numerous scabies mites within the nail plate (Figure 2). A PAS stain for fungal elements was negative. The nails were trimmed, and after one month of treatment with permethrin cream daily a repeat clipping of the nail plate revealed no mites or other scabietic elements.

Crusted (Norwegian) scabies is a clinical variant of scabies in which patients present with a high burden of disease, typically in the setting of immunosuppression or debilitation. Patients with crusted scabies develop diffuse hyperkeratotic erythematous plaques and can be nearly erythrodermic. Crusted scabies may mimic other papulosquamous eruptions including psoriasis [1]. Nail involvement in crusted scabies may be evident clinically as hyperkeratosis, onycholysis, and subungual debris. These nail findings are not unique to scabies and may also be seen in onychomycosis and inflammatory diseases. The diagnosis is based on clinical findings and demonstration of the mite microscopically. Histopathology can be diagnostic of scabies if mites or parts of the mite are identified in the section.

In the conventional form of scabies, the number of mites infesting the human host ranges from 10 to 15. In crusted scabies, the number of mites reaches into the thousands. The risk of contagion is extremely high. Treating crusted scabies can be challenging owing to various factors including the host's compromised immunity, widespread nature of the eruption, the high mite burden, and the limited penetration of the topical agents into the hyperkeratotic lesions, most particularly into the nail beds or nail plates. The nail unit often becomes a reservoir for the parasite and is a frequent source of relapse even after seemingly successful treatment of cutaneous lesions of crusted scabies [2, 3]. Continued dystrophy of the nails after apparent resolution of crusted scabies may be the most important marker of the persistence of this type of infection. No standardized protocols exist for the treatment of scabies involving the nail unit, but topical permethrin and oral ivermectin are most widely used. Dystrophic nails should be trimmed short, with topical scabicide applied around and beneath the nail plate [2]. Resolution of disease can be confirmed with repeat nail clipping.

## References

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