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LETTERS TO THE EDITOR

Proximal White Subungual Onychomycosis in the Immunocompetent Patient: Report of Two Cases and Review of the Literature

Sir,

Proximal white subungual onychomycosis (PWSO) is the rarest subtype of onychomycosis (1). In PWSO, the infection begins with fungal invasion of the stratum corneum of the proximal nail fold, followed by infection of the deeper portions of the nail plate. This presentation of onychomycosis is most commonly caused by *T. rubrum*; other common causative agents include *T. megninii*, *T. schoenleinii, T. tonsurans*, *T. mentagrophytes*, and *E. floccosum* (1, 2).

The majority of initial cases of PWSO reported were patients with AIDS (1 – 3). In one study, 55 of 62 HIV-infected patients with onychomycosis (83.7%) had PWSO (4). In more than half of these patients (58%), *T. rubrum* was the etiologic agent. PWSO has also been reported in patients with other immunodeficiencies, including a renal transplant recipient on immunosuppressive therapy (5), and a patient with systemic lupus erythematosus on systemic steroids (6). In addition, Baran (7) described a case of proximal subungual candida onychomycosis as a manifestation of chronic mucocutaneous candidiasis. Recently, however, there have been several reports of immunocompetent patients developing PWSO (8 – 10). We now report two immunocompetent patients with proximal white subungual disease, and review the other cases described, emphasizing that not all patients with this presentation are immunodeficient.

CASE REPORTS

Case 1

A 47-year-old female physician without past medical history presented with a 2-month history of erythema and edema around the proximal nail fold affecting the left index finger, associated with nail changes. She noted that she had been handling spoiled food 1 week before the start of her symptoms, but denied a preexisting wound or trauma. Prior to presentation, she was treated with mupurocin ointment and oral dicloxacillin without improvement. Examination revealed mild erythema of the proximal nail fold; the nail plate showed a white discoloration involving the proximal region.

The patient was in good health and noted that, on a recent life insurance work-up, an HIV test was negative. A complete blood count was within normal limits. Culture and culture mount with lactophenol cotton blue showed findings consistent with *Fusarium* species. She was treated with itraconazole 200 mg/daily for 4 weeks with clinical improvement.

Case 2

A 32-year-old Hispanic woman with a history of seizure disorder presented with complaints of nail changes over the previous 4 months. She had no prior history of problems with her nails and no other systemic complaints. She denied recent nail trauma or manicure.

On physical examination, there was proximal onycholysis, whitish discoloration, and subungual debris involving the thumbs, fourth fingers, and great toes bilaterally, and the third left finger (Fig. 1). A fungal culture was sent which grew *Pseudomonas*, but no fungi. An HIV test was performed, which was negative, and a chemistry panel and complete blood count, which were within normal limits.

The patient returned for follow-up 3 weeks later. A repeat fungal culture was performed and grew *T. rubrum*; a nail specimen sent for PAS staining was positive for the presence of hyphae. The patient started pulse therapy with itraconazole 200 mg bid for 1 week each month. At a return visit after two pulses of itraconazole, the patient was noted to have moderately improved.

DISCUSSION

The two cases we report, in addition to the others in the literature, indicate that there is a definite subset of patients with PWSO who are immunocompetent. In patients with PWSO with AIDS, toenail, rather than fingernail, involvement has been reported to be more common (1). In our cases, as well as in some of the other immunocompetent patients, the fingernails are prominent sites of involvement. This may be an important factor in helping to differentiate groups of patients with proximal subungual disease.

We can draw the following conclusions about PWSO. When there is absence of paronychia, PWSO is usually caused by dermatophytes and is seen mainly in immunocompromised patients, especially when many nails are involved. If the patient is not immunocompromised, a local cause of invasion, such as trauma, must be evaluated. PWSO with paronychia is usually a result of mold infection and occurs in both immunocompromised and immunocompetent patients.



Fig. 1. Proximal subungual disease of the left third fingernail.

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Ring-induced Nail Pitting?

Sir,
Nail pitting is a common feature of abnormal texture in nail plates. Here we describe a 24-year-old male Caucasian patient who noticed abnormalities on the surface of the nail plate of his right fourth finger after wearing a new silver ring. Dermatological examination disclosed small, shallow pits in a mainly linear, single row arrangement extending from the lunular to the free margin of the nail plate (Fig. 1). Apart from the cosmetic aspect, the pits caused no apparent inconvenience.

Similar lesions had occurred earlier on his left fourth finger after wearing a new gold ring, which disappeared after removal of the ring. The medical history of the patient and extended family was completely unremarkable.

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Fig. 1. Small, shallow pits presenting in a mostly linear, single row arrangement extending from the lunular to the free margin of the nail plate of the right fourth finger while wearing a ring.