Pseudo-Clubbing Complicated by Dermatophyte Onychomycosis

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Dear Editor:

The frequent presence of *Candida albicans* in chronic paronychia is well known. Patients with chronic mucocutaneous candidiasis, involving the nail plate and proximal nail fold, can show chronic paronychia with a pseudo-clubbing or 'chicken drumstick' appearance¹. Here, we described a case of chronic paronychia without any *Candida* species involved, but complicated by onychomycosis, caused by *Trichophyton rubrum*.

A 46-year-old woman presented with a 3-year history of swelling of the right hand's third and fourth nail folds, and a 1-year history of nails alteration. The patient stated that the dermatoses had never been treated, and there was no history of trauma, or family onychomycosis. Dermatological examination showed that most nails of the involved fingers were lost (Fig. 1A), and the proximal and lateral nail folds were obviously swollen, and developed a pseu-

do-clubbing (Fig. 1B). No other nails and skin were affected. The woman was otherwise healthy. Direct microscopic examination of nail clippings revealed branching fungal hyphae. Culture growth and slide culture showed *T. rubrum* (Fig. 2A, B). Those of the nail folds were negative. Histopathological examination showed squamous cell hyperplasia, with parakeratosis and chronic inflammation in the dermis (Fig. 2C, D). The radiograph of fingers revealed soft tissue swelling, and no abnormality of the bones. A diagnosis of chronic paronychia, complicated by onychomycosis caused by *T. rubrum*, was made. Itraconazole 200 mg twice daily for one week, and topical triamcinolone acetonide acetate cream 0.05% on the nail folds twice daily for one month, were prescribed. Mycological examination after one month was negative, but there was no obvious progress of the swelling lesions, and no new nail grown out. She was disappointed, and sub-

Fig. 1. Dermatological examination revealed most nails of the involved fingers were lost (A), and the proximal and lateral nail folds were obviously swollen, and developed a pseudo-clubbing or 'chicken drumstick' appearance (B).

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Fig. 2. (A) Macroscopic features of colony: white, cottony fungal colony, with a port wine burgundy on the reverse. (B) Microscopic view of the slide culture revealed hyaline and small tear-shaped microconidia (lactophenol cotton blue stain, $\times 400$). (C) Skin biopsy revealed squamous cell hyperplasia, parakeratosis, chronic inflammation in the dermis and the PAS stain was negative (H&E, $\times 40$). (D) The periodic acid-schiff stain was negative ($\times 40$).

sequently lost to follow-up.

Chronic paronychia is an inflammatory disorder of the proximal nail fold, reactive to irritants and allergens^{2,4}. When the cuticle separates from the nail plate, the region between the proximal nail fold and nail plate is vulnerable to infection by bacterial and fungal pathogens³. Colonization with *C. albicans* or bacteria may occur in the lesion^{2,4}. Paronychia is associated with 84.2% of candidal onychomycosis; the initial paronychia leads to nail discoloration, and then, dystrophy ensues⁴. Patients with chronic mucocutaneous candidiasis involving the nail plate and proximal nail fold can show swelling of the proximal nail fold, with considerable expansion of the terminal phalanx, and develop a pseudo-clubbing, or 'chicken drumstick' appearance^{1,5}.

In our case, dermatophyte onychomycosis may be the result of chronic paronychia, which destroyed the skin barrier, altered the quality of nail, and led to nail loss.

Treatment with antifungal agents was effective, and the pa-

tient quickly achieved mycological cure, after oral itraconazole pulse therapy for 1 month. This may be because a little nail was preserved, and the fungal load was low.

Our case presents an appearance of pseudo-clubbing, which is one feature of chronic mucocutaneous candidiasis, but with no clinical evidence of *Candida* species infection. This case suggests to us that chronic paronychia may be an initial factor, playing a role of mechanical trauma, permitting the fungus to infect the nail.

REFERENCES

1. Elewski BE. Onychomycosis: pathogenesis, diagnosis, and management. Clin Microbiol Rev 1998;11:415-429.
2. Baran R. Common-sense advice for the treatment of selected nail disorders. J Eur Acad Dermatol Venereol 2001;15:97-102.
3. Tosti A, Piraccini BM, Ghetti E, Colombo MD. Topical steroids versus systemic antifungals in the treatment of chronic paronychia: an open, randomized double-blind and double

- dummy study. *J Am Acad Dermatol* 2002;47:73-76.
4. Gupta M, Sharma NL, Kanga AK, Mahajan VK, Tegta GR. Onychomycosis: clinico-mycologic study of 130 patients from Himachal Pradesh, India. *Indian J Dermatol Venereol*

Leprol 2007;73:389-392.

5. Hay RJ, Baran R, Moore MK, Wilkinson JD. Candida onychomycosis—an evaluation of the role of Candida species in nail disease. *Br J Dermatol* 1988;118:47-58.

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Disseminated Cryptococcosis with Widespread Necrotizing Fasciitis and Cryptococemia Occurring in an Immunosuppressed Patient

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Dear Editor:

Cryptococcosis is an unusual opportunistic infection, and is characterized by a high mortality rate, especially among those with cryptococcaemia¹. Cryptococcal skin lesions are often polymorphous in appearance. However, widespread cutaneous lesions and necrotizing fasciitis (NF) have rarely been reported. Here, we present a case of disseminated cryptococcosis with widespread cutaneous lesions, NF and cryptococemia, occurring in an immunosuppressed patient.

A 41-year-old woman was transferred to our hospital, with a history of skin necrosis on the right lower limb and high fever for 17 days, and erythemas, indurations, and abscesses on the other three limbs for 14 days. She was diagnosed as NF in another hospital, and treated with mero-

penem empirically, but without noticeable effect. She suffered from chronic glomerulonephritis, chronic renal insufficiency, and was receiving maintenance immunosuppressive therapy with prednisone (30 mg/d).

On examination, black necrotic skin, bare subcutaneous tissue and multiple abscesses, mainly situated on the right leg, were the most obvious clinical manifestation (Fig. 1). Multiple erythemas, indurations and abscesses could be found on the other three limbs. Chest x-ray demonstrated

Fig. 1. Black necrotic skin, bare subcutaneous tissue and multiple abscesses on right leg.

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