



INFECTIOUS DISEASES (BACTERIAL, FUNGAL, VIRAL, PARASITIC, INFESTATIONS)

PRIMARY CUTANEOUS NOCARDIAOSIS DUE TO NOCARDIA BRASILIENSIS IDENTIFIED BY MASS SPECTROMETRY IN IMMUNOCOMPETENT INDIVIDUALS

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Background: Primary cutaneous nocardiosis is a rare condition caused by *Nocardia* species. It remains a diagnostic challenge due to its non-specific clinical appearance. Classical biochemical identification of *Nocardia* spp. is laborious and time consuming. Shortening the identification time allows patients to accept effective treatment in time.

Observation: We present two cases of primary cutaneous nocardiosis due to *Nocardia brasiliensis*. Both of the two cases are immunocompetent patients. In the first case, the patient presented with a multiple erythematous lesions with erosions and swelling on his right forearm for 6 months, during which the patient had accepted twice empirical antibiotic therapy with little relief. Punch biopsy specimen was obtained from the right forearm. Tissue culture grew Gram-positive colonies that were immediately identified as *Nocardia brasiliensis* by matrix-assisted laser desorption ionization-time of flight mass spectrometry (MALDI-TOF MS). Treatment with trimethoprim-sulfamethoxazole (TMP-SMX) for 2 months resulted a full remission of lesion. The second patient had nodule, pustule and painful ulceration on the right arm for 20 days. The patient had been misdiagnosed as sporotrichosis and received antifungal treatment without any relief. Pus culture revealed a bacterium that were immediately identified as *Nocardia brasiliensis* by MALDI-TOF MS. the patients were cured with the treatment of TMP-SMX for 2 months.

Key message: primary cutaneous nocardiosis; *Nocardia brasiliensis*; MALDI-TOF MS; trimethoprim-sulfamethoxazole

