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Phaeohyphomycosis Due to *Exophiala oligosperma* in an Immunocompromised Host

HIROFUMI NISHIKAWA , MD; YOSHINORI TANIGUCHI , MD; Department of Endocrinology, Metabolism, Nephrology and Rheumatology, Kochi Medical School Hospital, Nankoku, Kochi, Japan. Address correspondence to Dr. Y. Taniguchi, Department of Endocrinology, Metabolism, Nephrology and Rheumatology, Kochi Medical School Hospital, Kochi University, Kohasu, Oko-cho, Nankoku, Kochi 783-8505, Japan. E-mail: yoshii.tan@gmail.com. The authors obtained the patient's written informed consent to publish the material and received ethics board approval by the institutional review boards of Kochi Medical School Hospital (approval no. 22–78). J Rheumatol 2019;46:652; doi:10.3899/jrheum.180774

Exophiala is a genus of saprophytic fungi that have been isolated from hot, humid, and oligotrophic environments. Phaeohyphomycosis encompasses a heterogeneous group of infections caused by dematiaceous fungi including *Exophiala* species in immunocompromised hosts, in whom they could cause infection through a minor scratch^{1,2,3}.

An 86-year-old woman with adult-onset Still disease, who was under clinical remission with prednisolone and tacrolimus, presented with a 2-month history of fever. She had often scratched her forearms in the past year. Physical examination revealed cutaneous granulomatous lesions, indicating abscesses, on the right forearm (Figure 1A). Blood examination showed elevated C-reactive protein (CRP; 0.53 mg/dl) and β -D-glucan (60.8 pg/ml), a fungal cell wall polysaccharide that can be released into the peripheral blood in patients with fungal infections. Pus samples were cultured, producing olivaceous black colonies in 5 days (Figure 1B). The fungal strain was identified as *Exophiala oligosperma* based on rDNA sequence analysis. The isolate grew at temperatures < 35°C but failed to grow at > 37°C, suggesting that a characteristic feature of this fungal infection is that it is cultured at low temperatures. The patient received drainage, local hyperthermia, and antifungal therapy (itraconazole and flucytosine). Subsequently, CRP and

β -D-glucan levels normalized, and skin lesions resolved completely. *Exophiala* species are generally treated with azoles⁴. Although immunosuppression by tacrolimus was a possible infective factor in this case, synergistic effects of tacrolimus and azoles are also often reported⁵. The black necrotic lesions could be misinterpreted as active vasculitis in some patients under immunosuppressants and hence we suggest the importance of considering phaeohyphomycosis and obtaining appropriate histology.

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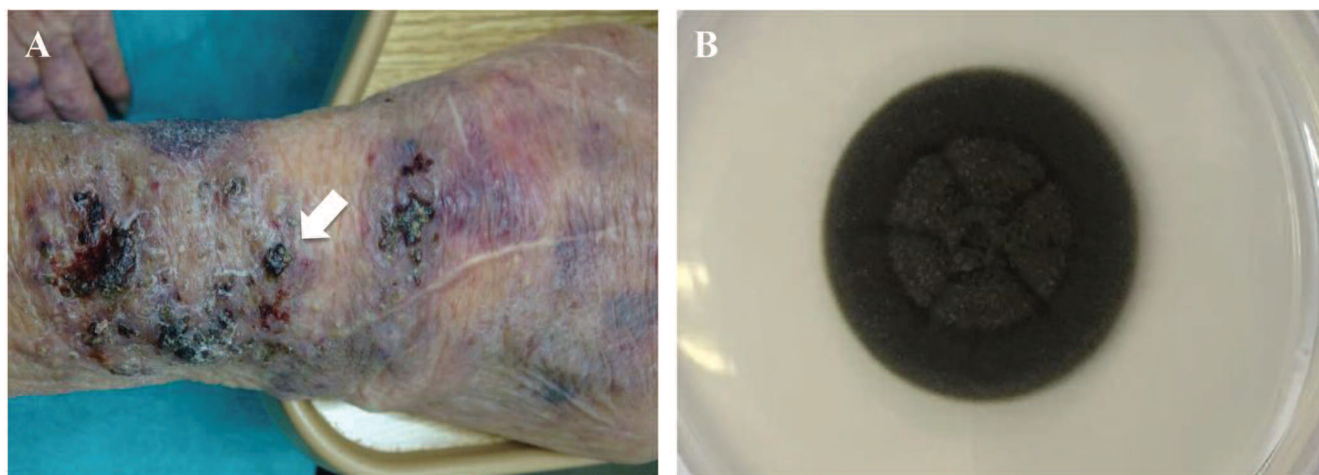


Figure 1. A. The gross appearance of the right forearm. Physical examination revealed cutaneous granulomatous lesions, indicating abscesses (white arrow). B. Pus samples were cultured on potato dextrose agar medium at 28°C, producing olivaceous black colonies in 5 days.