

Answer to October 2011 Photo Quiz

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Answer to Photo Quiz: Disseminated *Penicillium marneffei*

(See page 3449 in this issue [doi:10.1128/JCM.01126-11] for photo quiz case presentation)

Penicillium marneffei is a highly pathogenic fungus that was first isolated in the 1950s from the bamboo rat in central Vietnam. The primary infection with this organism is typically pulmonary, but disseminated infection, including fungemia and dissemination to the liver, spleen, lymphatic system, bone marrow, and skin, can occur. Systemic disease is often fatal (1, 3).

P. marneffei is thermally dimorphic. The “yeast phase,” elongated arthroconidia, is observed at 35 to 37°C. The mold phase of *P. marneffei* is observed at 25°C and appears as flat colonies that are blue, gray, green, or yellow in the center, with a white periphery. The most distinctive feature of the mycelial form is the presence of a diffusible red pigment, as seen in the photograph. Other *Penicillium* species are not considered to be human pathogens; the colonies of these other species are usually green, blue-green, or gray-green, with no diffusible red pigment observed (1).

Isolates of *P. marneffei* have elevated MICs for amphotericin B and fluconazole *in vitro* but lower MICs for itraconazole and voriconazole (2, 3). The course of treatment is typically prolonged, with a common treatment regimen being amphotericin B for 2 weeks followed by itraconazole or voriconazole for 10 weeks or longer. This patient was treated with intravenous amphotericin B for 2 weeks, followed by oral itraconazole for 10 weeks.

During the course of his workup, the patient was found to be HIV positive, with a viral load of 80,000 copies per ml and a CD4 lymphocyte count of 6 cells per μ l. A biopsy specimen taken from his nose lesion was found to be consistent with Kaposi's sarcoma, not *P. marneffei*. A jejunal biopsy specimen

revealed granulomatous inflammation, with intracellular yeast-like organisms, but this specimen was not submitted for fungal culture. This case likely represents a reactivation of latent *P. marneffei* infection secondary to previous exposure in Vietnam. Disseminated *P. marneffei* infection is considered to be an AIDS-defining illness in Southeast Asia; patients with a CD4 lymphocyte count below 100 cells per μ l are at the highest risk for infection (2, 3).

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