SHORT COMMUNICATION

# Fatal Talaromyces marneffei Infection in a Patient with Autoimmune Hepatitis

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**Abstract** *Talaromyces marneffei*, previously known as *Penicillium marneffei*, is the most important pathogenic thermally dimorphic fungus causing systemic mycosis in Southeast Asia. Traditionally, *T. marneffei* infection in human was mainly associated with acquired immunodeficiency syndrome caused by HIV infection. In recent years, there has been an increasing number of *T. marneffei* infections reported in non-HIV-infected patients with other immunocompromised conditions, including autoantibodies against interferon-gamma, systemic lupus erythematosis, solid organ transplantation, Job's syndrome, hematological malignancies, and use of novel targeted therapies. In this article, we describe the first case of fatal *T. marneffei* infection in a patient with underlying autoimmune hepatitis, presented as fever without localizing features. The diagnosis of talaromycosis was confirmed with the identification of the fungi isolated from the blood culture specimen by conventional methods and using matrix-assisted laser desorption–ionization time-of-flight mass spectrometer. This case shows the importance of a high index of suspicion, particularly for such a highly fatal but potentially treatable fungal infection.

**Keywords** *Talaromyces marneffei* · Fatal infection · Autoimmune hepatitis · Matrix-assisted laser desorption–ionization time-of-flight mass spectrometer

## Introduction

*Talaromyces* (*Penicillium*) *marneffei* is the most important pathogenic thermally dimorphic fungus causing systemic mycosis in Southeast Asia [1–3]. *T. marneffei* infection is endemic in tropical regions, especially Thailand, Vietnam, northeastern India, Southern China, Hong Kong, Taiwan, Laos, Malaysia, Myanmar, Cambodia, and Laos [1]. Bamboo rats (*Rhizomys* spp. and *Cannomys* spp.) and soil from their burrows are considered to be important enzootic and environmental reservoirs of *T. marneffei*, respectively [4–7]. Historically, *T. marneffei* infection in human has been considered to be exclusively associated with

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acquired immunodeficiency syndrome (AIDS) caused by human immunodeficiency virus (HIV) infection [1, 8]. In some regions such as Hong Kong and southern China, T. marneffeiinfection has long been considered as one of the top three AIDS-defining opportunistic infections, alongside tuberculosis and cryptococcosis [2, 9].

## Discussion

The above vignette highlights the importance of T. marneffei as a cause of severe infection in febrile immunocompromised patients resident in or returning from endemic areas. Infections due to T. marneffei are most often described in patients with advanced HIV, but it is also of emerging importance in patients with various non-HIV immunosuppressive conditions. Some of the most common non-HIV conditions associated with T. marneffei infection include autoantibody against interferon-gamma, systemic lupus erythematosis, post-transplant immunosuppressive states, Job's syndrome, hematological malignancies, and use of novel targeted therapies [1

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Compliance with Ethical Standards

Conßict of interest The authors declare that they have no conflict of interest.

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