Traveller's molluscum

Introduction

This article reports an imported case of penicilliosis in a 29-year-old south-east Asian traveller who presented at a central London teaching hospital with advanced human immunodeficiency virus (HIV) infection. Penicilliosis is a rare opportunistic infection in the UK. Its presentation is non-specific and should be considered in HIV-infected patients with a history of residence in, or a relevant travel history to a high prevalence region. Mortality is high if untreated so prompt diagnosis and treatment are essential.

Discussion

Penicilliosis was first isolated in bamboo rats in Vietnam in 1956 and the first natural human infection was reported in 1973. It has emerged as an important pathogen affecting HIV-infected persons in south-east Asia, and cases have been reported in the UK among HIV-infected returning travellers from the Far East and south-east Asia (Hall et al, 2013).

The route of infection is inhalational and has been associated with a history of occupational or other exposure to soil, particularly in the rainy season in Thailand (Chariyalertsak et al, 1997). It is associated with characteristic molluscum-like skin lesions, which occur in <30% of cases (Wu et al, 2008).

In most cases penicilliosis presents non-specifically with an undifferentiated fever, with or without respiratory symptoms, and the diagnosis should be considered in patients with advanced HIV with or without a rash and who have a relevant travel history to affected regions.

Penicilliosis should be considered as a differential diagnosis to cryptococcosis, histoplasmosis and pneumocystis pneumonia in HIV-infected patients with an appropriate travel history who present

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Figure 1. Chest radiograph showing bilateral perihilar infiltrates.

Case Report

A 29-year-old south-east Asian woman presented with weight loss, fever and a productive cough. Examination revealed haemodynamic instability, umbilicated facial lesions, hepatosplenomegaly and cervical lymphadenopathy. A diagnosis of HIV was made with a baseline CD4 count of 30 cells/μl and viral load of 300 000 copies/ml. Blood investigation revealed hypoxaemia and cytopaenia with haemoglobin of 9.8 g/dl and platelets of 46 x10^9/litre. A chest radiograph showed perihilar inflammatory infiltrates and a presumptive diagnosis of pneumocystis pneumonia was made (*Figure 1*). An induced sputum specimen was obtained and the patient was commenced on empirical high-dose co-trimoxazole. The patient's condition did not improve over the next 7 days.

In view of the two-lineage cytopaenia bone marrow aspiration was performed. This revealed atypical yeast-like bodies within marrow histiocytes. Microscopic examination of the induced sputum sample for bacteria and mycobacteria was negative: cytological examination using Grocott–Gomori staining showed no *Pneumocystis jirovecii*, prolonged blood cultures grew a green mould on Sabouraud dextrose agar with diffusible red pigment at 30°C and a yeast at 37°C, characteristic of *Penicillium marneffei* (*Figure 2*). The patient rapidly improved on intravenous liposomal amphotericin 3 mg/kg daily, and was discharged after 2 weeks to continue maintenance treatment with oral itraconazole solution 200 mg twice daily, with a view to commencing antiretroviral therapy during this phase.

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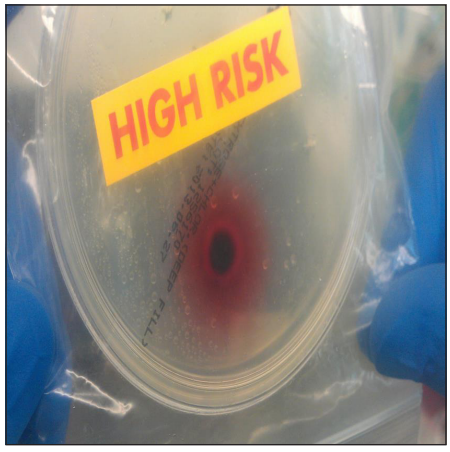

Figure 2. Reverse of Sabouraud agar plate: mould phase of* Penicillium marneffei*; Sabouraud dextrose agar at 30°C, displaying classic diffusing red pigment.

with non-specific fever with or without respiratory symptoms. Skin and lung lesions may be diverse in presentation and the classical facial or truncal umbilicated, molluscum-like lesions occur in only 30% of cases (Wu et al, 2008).

As in this case, microbiology and histology are the mainstay of diagnosis. It is essential to notify the local laboratory when dimorphic fungi are suspected so that specimens are processed in a safety cabinet and Sabouraud plates are incubated at 30°C and 37°C to demonstrate pathognomonic thermal dimorphism (*Figure 2*).

Disseminated penicilliosis has a high mortality if untreated and treatment is in two phases: an induction phase with intravenous liposomal amphotericin 3–5 mg/kg/day for 2 weeks, followed by a maintenance phase of oral itraconazole 200 mg twice daily for 10 weeks (Centers for Disease Control and Prevention, 2009). There are no data to guide the duration of secondary prophylaxis, but those who do not receive secondary prophylaxis or combination antiretroviral therapy have a 60% risk of relapse in 6 months (Supparatpinyo et al, 1998). The optimum timing of combination antiretroviral therapy initiation is unknown and there is a balance between the risks of HIV/AIDS-associated mortality and immune reconstitution syndrome. In addition, there are multiple drug–drug interactions between azole antifungals and combination antiretroviral therapy. Their significance should be established to guide choice of combination antiretroviral therapy. www.hiv-druginteractions.org and www.hivclinic.ca/main/drugs_interact.html are both useful resources for establishing this information. **BJHM**

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LEARNING POINTS

- Although penicilliosis classically presents with a molluscum-like lesion, in most cases the clinical appearance is non-specific.
- Penicilliosis should be considered in HIV-infected patients with a history of residence in or travel to high prevalence regions.
- In cases where penicilliosis is suspected, the diagnosis is confirmed microbiologically by blood culture on Sabouraud dextrose agar.
- In the UK liposomal amphotericin is recommended for all dimorphic fungal infections.
- There are significant drug–drug interactions between azole antifungals and combination antiretroviral therapy which will influence the choice of combination antiretroviral therapy regimen.

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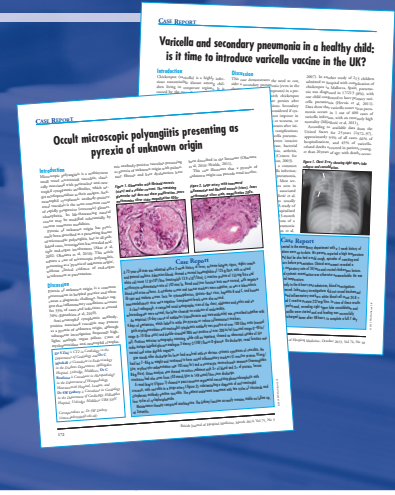

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