

# Uncommon Manifestations of Opportunistic Infections in an HIV Infected Patient

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## Abstract

A case of an HIV infected patient complicated with *Penicillium marneffei* and *Rhodococcus equi* infection is reported. He presented with chronic ulcer as pyoderma gangrenosum-like on his right calf and submandibular lymphadenitis as scrofuloderma-like. *Penicillium marneffei* and *Rhodococcus equi* were isolated from the ulcer and lymph node respectively

*Penicillium marneffei* is a dimorphic fungal pathogen and endemic in Southeast Asia especially among human immunodeficiency virus infection. The skin lesions can be found in about 71 per cent, most commonly molluscum-like lesions<sup>(1)</sup>. Presentation as a chronic ulcer is uncommon<sup>(2)</sup>. *Rhodococcus equi* is an aerobic, gram-positive, pleomorphic bacillus mainly infecting patients infected with the human immunodeficiency virus<sup>(3-5)</sup>. Pneumonia and lung abscess are the most common manifestations. We have diagnosed disseminated *P. marneffei* infection presenting as pyoderma gangrenosum-like and *R. equi* infection as scrofuloderma-like in an HIV-infected patient.

## CASE REPORT

A 34 year-old-Thai-man presented with a chronic painless ulcer on his right calf and multiple submandibular masses for 4 months and 10 days respectively. Three months previously, he was admitted to the hospital because of fever, hoarseness, cough and skin ulcer. The investigations showed positive anti-HIV antibody and a lung abscess on the left lower lobe. He received cefotaxime 4 g/d for 3 weeks. The fever went away after 4 days of treatment. The ofloxacin 800 mg/d was prescribed for another 2 weeks. The patient denied further admission and did not come back for a follow-up. Ten days before this admission, he had fever, cough which was occasionally blood-stained

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Fig. 1A. Two submandibular lymph nodes.

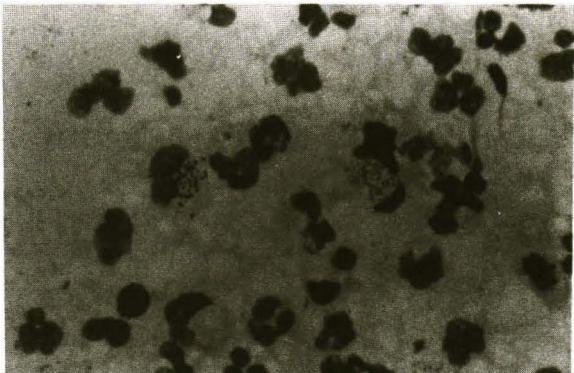


Fig. 1B. Pus from cervical lymph node showing intracellular coccobacilli (Acid fast staining, original magnification X1000).



Fig. 2. Round ulcer with granulomatous base on right calf.

and multiple tender submandibular masses. The physical examination revealed moderate fever (38°C), two tender submandibular lymph nodes with cystic consistency, 2 and 3 cms in diameter (Fig. 1A). A 5-cm round ulcer, granulomatous base, sharp edge without discharge was also seen on his right calf (Fig. 2). The histopathology of the ulcer showed granulomatous inflammation filled with intracellular yeast cells. The organism showed positive GMS staining and binary fission. The skin culture was positive for *Penicillium marneffei*. Incision and drainage were performed on the left submandibular lymph nodes. The sputum and pus from the lymph node showed gram-positive pleomorphic coccobacilli. The acid fast bacilli and modified acid fast bacilli stainings were also positive (Fig. 1B). The sputum and pus cultures were positive for *Rhodococcus equi*. Rifampicin 600 mg/d, erythromycin 2 g/d, and itraconazole 400 mg/d were prescribed. The fever went away after a week of treatment. The ulcer and submandibular lymph nodes were resolving after 10 days of treatment.

## DISCUSSION

*Penicillium marneffei* infection is a common fungal infection in HIV infected patients in the Northern part of Thailand, although it is still rare in Western countries. It has been isolated

from bamboo rat and soils which may transmit to humans(6-10). The common presenting signs are fever, anemia, hepatomegaly and skin manifestation such as a molluscum-like lesion(1,2). This fungus shows yeast cells that reproduce by binary fission microscopically and produce a diffusible red pigment in the culture(2,11). *Rhodococcus equi* has been recognized as an animal pathogen and is increasingly recognized as an opportunistic infection in HIV-infected patients(3-5). It is a gram-positive

and weakly acid-fast coccobacillus. Inhalation of contaminated soil associated with herbivore manure is the major route of inoculation. The most common manifestation is pulmonary infection. Only a few cases have been reported of presenting with lymphadenopathy or skin lesions<sup>(4,5,12-16)</sup>. This patient was diagnosed as *P. marneffei* and *R. equi* infections by characteristic microscopically features and cultures. The patient responded well to

itraconazole<sup>(17)</sup>, erythromycin and rifampicin<sup>(18)</sup> as reported.

It is of interest that scrofuloderma-like lymphadenopathy which is most likely caused by mycobacterium infection may be caused by *R. equi*. The pyoderma gangrenosum-like ulcer caused by *P. marneffei* has never been reported. Both diseases are in the group of animal-associated opportunistic infections.

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## ลักษณะผิวหนังที่พบได้น้อยจากการติดเชื้อจุลทรรศน์ 2 ชนิดในผู้ป่วยติดเชื้อเอชไอวี 1 ราย

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รายงานนี้เป็นรายงานผู้ป่วยติดเชื้อเอชไอวี 1 รายที่เกิดภาวะติดเชื้อแทรกซ้อนจากเชื้อ *Penicillium marneffei* และ *Rhodococcus equi* โดยผู้ป่วยมาพบแพทย์ด้วยอาการแผลเรื้อรังที่ขาขาดลักษณะคล้ายกับที่พบในโรค *pyoderma gangrenosum* และต่อมน้ำเหลืองใต้คางโดยคล้ายกับที่พบในโรค *scrofuloderma* จากการตรวจทางห้องปฏิบัติการพบว่าเกิดจากการติดเชื้อ *Penicillium marneffei* และ *Rhodococcus equi* ตามลำดับ

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