LETTERS TO EDITOR

BURKHOLDERIA PSEUDOMALLEI RECOVERED IN AN HIV-POSITIVE INDIVIDUAL

Dear Sir,

Melioidosis caused by *Burkholderia pseudomallei* is an emerging infectious disease in India.^[1] This disease is referred to as "a great imitator" because of its wide spectrum of clinical presentations, ranging from mild subclinical infection to fatal septicemia. It can be chronic, localized or disseminated. Symptomatic infections are associated with a high morbidity and mortality rate.

The true incidence of this disease is not known in India. In the last few years, a larger number of case reports on this disease are found to be increasing. Diabetes is the most common comorbidity seen in patients with melioidosis. Others risk factors include thalassemia, alcoholism and renal impairment. Human immunodeficiency virus (HIV) infection does not seem to be a risk factor for melioidosis.^[2] A world wide literature review revealed the incidence of very few HIV-infected individuals affected with B. pseudomallei infection.

A 34-year-old male presented with a 2-month history of significant loss of weight and fever with chills and 1 month of progressive pain and swelling with restriction of movements of the left elbow joint. The patient had tested positive for HIV 1 elsewhere while undergoing evaluation for these symptoms. He was a known type II diabetic on diet control for the last couple of years. On a general physical examination, the cardiovascular, respiratory, abdominal and central nervous systems were normal except for an elevated temperature. He had swelling, redness and painful restriction of all movements of his left elbow joint.

Lab findings revealed a hemoglobin value of 12 g/dL, total WBC count of 7000/cumm and fasting and post-prandial sugar values of 154 and 245 mg/dL respectively. The alkaline phosphate value was 333 u/L. Other liver functions, renal parameters, blood cultures, bone marrow examination, chest X-ray and ultrasound examination of the abdomen were all normal. The HIV enzyme-linked immunosorbent assay was reactive. The synovial fluid analysis from the left elbow joint showed 320,000 cells/cumm. The synovial fluid culture grew B. pseudomallei, which was susceptible to ceftazidime, cotrimoxazole and carbapenem and resistant to ampicillin, gentamicin and chloramphenicol.

He was diagnosed with septic arthritis of the left elbow joint. He was treated with needle aspiration followed by 6 weeks of intravenous ceftazidime 2 gm thrice daily on which he improved. Sequential therapy with cotrimoxazole was given for an additional 6 months to prevent relapse. Subsequently, a CD4 count was found to be 221 cells/uL, with a viral load of 405,333 RNA copies/mL. He was started on antiretroviral therapy with lamivudine, zidovudine and nevirapine. The patient has been followed-up for the last 3 years, without relapse of the melioidosis. CD4 cell counts performed 2 years after the antiretroviral therapy were 458 cells/uL

and the viral load was undetectable.

It is a widely believed fact that HIV infection is not a risk factor for melioidosis. Coinfection was detected in only eight of 524 (1.5%) adults with melioidosis in northeast Thailand. There was no difference in the outcome of the melioidosis as well as no altered disease severity of melioidosis in HIV and non-HIV-infected patients.^[3] In another study^[4] on the changing pattern of bloodstream infections associated with the rise in HIV prevalence in northeastern Thailand, only eight of the 286 patients (2.8%; 95% confidence interval 0.8-4.7%) tested were HIV positive, a proportion not significantly different from that in apparently healthy potential blood donors. Further, in a preliminary survey for HIV infections in 121 melioidosis patients in an endemic area, not even a single case of HIV was detected.^[5] A literature search revealed no report of an HIV-positive individual coinfected with B. pseudomallei in India.

Septic arthritis is a well-recognized manifestation of melioidosis. However, it is difficult to diagnose melioidotic septic arthritis clinically as it presents similar to any other causative agent.^[6] Patients with diabetes mellitus, renal impairment, cirrhosis, and malignancy are at a greater risk. Compared with non-melioidotic septic arthritis, B. pseudomallei septic arthritis has been reported to have a significant correlation with diabetes mellitus (optical density [OD] 15.7) and with the involvement of an upper-extremity joint (OD 4.51).^[7] Since 1995, the Christian Medical College and Hospital has 82 cultureproven cases of melioidosis; of this total, five patients had septic arthritis and one had aseptic arthritis.^[8] Of these six patients, four were diabetic.

The antimicrobial profile of (n = 82) these isolates reveals complete resistance to ampicillin and gentamicin, whereas 30% were resistant to cefotaxime. A gradual increase in ciprofloxacin resistance over the years has been noted. None of the isolates recovered from the patients at our center were resistant to ceftazidime and carbapenems.

This case highlights the following important points:

- While coinfection with HIV infection and melioidosis is not common, it is important to suspect B. pseudomallei as the cause of pyrexia of unknown origin in HIV-positive individuals with good CD4 counts and diabetes mellitus. Tuberculosis and nontyphoidal salmonella are the standard differential diagnosis of bacterial infections in these patients.
- The outcome and severity of melioidosis does not vary between HIV-infected and non-HIV-infected patients.
- Melioidosis can occur at any stage of HIV infection and is not an indicator of the stage of HIV infection.

V. BALAJI, K. RAJIV¹, O. C. ABRAHAM² Departments of Clinical Microbiology, ¹Infectious Disease and ²General Medicine, Christian Medical College and Hospital, Vellore, India.

Correspondence: Dr. V. Balaji Department of Clinical Microbiology, 8th Floor ASHA Building, Christian Medical College and Hospital, Vellore - 632 004, India. E-mail: vbalaji@cmcvellore.ac.in DOI: 10.4103/0019-5359.48457

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