

CASE REPORT

MELIOIDOTIC OTITIS MEDIA

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Melioidosis is an important cause of morbidity and mortality in certain areas of the tropics, in particular Southeast Asia. The clinical manifestations of melioidosis in man range from subclinical disease to protean and overwhelming disease (Dance, 1991; Leelarasamee and Borvornkitti, 1989). Infection by *Pseudomonas pseudomallei* can occur in any organ, however otitis media caused by this organism has not so far been reported.

A 25-year-old Myanmar man presented with fever of 4 days onset. Blood smear revealed ring forms of *Plasmodium falciparum*. After anti-malarial treatment for 3 days, the patient was afebrile and a parasitemic. On day 7 of admission, the patient had a draining left ear without otalgia. The patient reported hearing loss; however, he denied headache, mastoid pain, fever, recent flu symptoms. Past history revealed he had previous otorrhea, 3 episodes in 1 year prior to admission and was treated at private clinics. He had no previous history of ear or head trauma or near drowning. The patient was a farmer in Myanmar before migration to Thailand. Physical examination revealed yellow pus exuding from the pinhole perforated tympanic membrane of the left ear. The tympanic membrane showed no redness or bulging. Other physical examination was unremarkable.

Laboratory data revealed: hemoglobin 9 g/dl, white blood cell count 5,000/mm³, neutrophils 57% lymphocytes 36%, atypical lymphocytes 1%, monocytes 4%, basophils 1%, eosinophils 1%, and platelets 277,000/mm³. Pus gram stain from the left ear showed gram-negative safety-pin bacilli. No acid-fast bacilli were seen on Zeihl-Neelsen staining of the pus. Pus culture grew *P. pseudomallei*, while hemoculture revealed no growth. Auditory testing showed a conductive hearing loss in the left ear and normal hearing in the right. Plain films and computerized tomography of the mastoid were slightly hazy, but there was no evidence of bone

destruction. Paranasal sinus and chest films were normal.

Treatment with oral cotrimoxazole (6 mg/kg/day) was commenced. The pus drainage had ceased on day 7 after treatment. Antibiotic was continued for another 7 days and at follow-up 1 month later he still had pinhole perforation of the tympanic membrane. Unfortunately he did not attend any subsequent follow-up.

Otitis media, an inflammation of the middle ear, is one of the most common diseases of children after upper respiratory tract infections, the leading cause of hearing loss in children, and the most frequent indication for antimicrobial or surgical therapy in children. It is also a not infrequently made diagnosis in adults (Kenna, 1993). Many bacteria contribute to otitis media (Kenna and Bluestone, 1986), however, there has been no reported case of otitis media caused by *P. pseudomallei*. The clinical findings of the present patient with middle ear effusion without pain, redness, or bulging of tympanic membrane indicated chronic otitis media with effusion rather than acute otitis media. Although the route of otologic infection from *P. pseudomallei* has not been elucidated in this patient, eustachian tube spread from nasopharyngeal colonization may be the most likely route of infection (Bluestone *et al*, 1974). Investigation of otorrhea with gram stain and culture would allow for diagnosis and treatment of the disease. Although *P. pseudomallei* otitis media is rare, clinicians should be aware of the possibility of the disease, particularly in patients living in endemic areas of melioidosis, who present with otorrhea.

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