

# Melioidosis: an unusual cause of infective endocarditis: a case report

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## Introduction

As a causal organism in infective endocarditis, *Burkholderia pseudomallei* is rare. *Burkholderia pseudomallei* is intrinsically resistant to aminoglycosides but a gentamicin-susceptible strain was discovered in Sarawak, Malaysian Borneo in 2010. We report the first occurrence of infective endocarditis due to the gentamicin-susceptible strain of *B. pseudomallei*.

## Case presentation

A 29-year-old man presented with pneumonia and melioidosis septicaemia. His condition was complicated with infective endocarditis and septic emboli to the brain. Despite difficulties in reaching a diagnosis, the patient was successfully treated using intravenous gentamicin and ceftazidime and was discharged well.

## Discussion

The role of gentamicin in the treatment of the gentamicin-susceptible strain of *B. pseudomallei* remains unclear.

## Keywords

Melioidosis • Infective endocarditis • Gentamicin • *Burkholderia pseudomallei* • Case report • Bintulu • Sarawak • Malaysia • Borneo • Gentamicin susceptible strain

## Learning points

- *Burkholderia pseudomallei* is an unusual cause of infective endocarditis.
- *Burkholderia pseudomallei* is known to be resistant to many antibiotics, including aminoglycosides. A strain of *B. pseudomallei* that is gentamicin-susceptible was found in Sarawak in Malaysian Borneo in 2010.
- The standard intensive phase therapy using carbapenem or ceftazidime can be instituted together with intravenous gentamicin for its synergistic effect in the treatment of infective endocarditis caused by the gentamicin susceptible strain of *B. pseudomallei*.

## Introduction

Melioidosis is caused by the bacterium *Burkholderia pseudomallei*. It is endemic in many regions in Southeast Asia and Northern Australia.<sup>1</sup> It is also increasingly reported in other tropical countries.<sup>1</sup> It has a high mortality rate due to its systemic involvement and intrinsic resistance to a myriad of antibiotics.<sup>2</sup> A novel strain of gentamicin-susceptible *B. pseudomallei* was recently reported to be predominantly found in the central region of Sarawak in Malaysian Borneo.<sup>3</sup>

Infective endocarditis causes significant morbidity and mortality.<sup>4,5</sup> Complications of infective endocarditis include thromboembolic events, which could be life-threatening. Treatment of infective endocarditis requires the administration of an effective intravenous (IV) antibiotic over a prolonged duration.<sup>6</sup> Common organisms identified for infective endocarditis are *Streptococci* and *Staphylococci*, both of which contributed to 80% of cases.<sup>6</sup>

We report the first occurrence of infective endocarditis due to the gentamicin-susceptible strain of *B. pseudomallei* in a tertiary hospital in central Sarawak of Malaysian Borneo.

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