

## Epidemiology, presentation and outcome of patients with melioidosis in a tertiary care center

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### Introduction

Melioidosis, caused by the Gram negative bacterium *Burkholderiapseudomallei*, is transmitted to humans through direct contact with contaminated soil and water. This research study aimed to describe the epidemiology, presentations and outcome of patients with melioidosis

### Methods

Surveillance was carried out from 1st December 2014 to 30th June 2017 and included all culture and antibody positive patients. In the absence of a positive culture, patients with antibody levels >40 were included if clinical evidence of melioidosis was present. Data were collected from the patients and clinical notes.

### Results

Melioidosis was diagnosed in 47 patients during this period of whom 36 (77%) were males. The 41-60 year age group were the most affected (n=25, 53%) with only 3 paediatric (<10 years) and 13 elderly (> 60 years) patients. All the patients were from the Southern Province of Sri Lanka, more than 50% giving a history of constant soil exposure and 6 had been affected by floods. Eighteen (39%) patients were diagnosed by isolation of the bacterium from blood, sputum, pus or urine, with or without a positive antibody test. Twenty nine patients were identified only by a positive antibody test with a compatible clinical presentation. Blood culture was positive in 15 patients. A total of 32 (68%) patients had comorbidities of whom 20 (42%) were diabetic. One was pregnant and one had post-partum pneumonia. Lungs were commonly affected with 12 (26%) presenting with severe pneumonia and 10 (21%) with lung abscess. There were 4 patients with liver abscess, 4 with septic arthritis and 2 cases of endocarditis. Other presentations included deep seated abscesses, cellulitis and urinary tract infection. A focus could not be identified in 5 patients. Case fatality rate was 11%. Thirty three patients completed the eradication phase with no relapses while 6 are still undergoing treatment.

### Discussion and Conclusions

In this study population, melioidosis had a male predominance and affected the middle aged and elderly with comorbidities including diabetes. A high index of suspicion led to meticulous investigation and early diagnosis, especially among patients with a history of high risk exposure to soil and water.

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