

# Melioidosis - A Lethal Trap for the Unwary

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## Introduction

Melioidosis is an infection caused by the facultative intracellular gram-negative bacterium; *Burkholderia pseudomallei*, usually a soil saprophyte. It is a great masquerader of disease presenting in many disguises and mimics. Initially confined to Southeast Asia and Australia [1], it is now being recognized more and more, emerging as a infection with global impact [2]. We present a succinct review of literature on Melioidosis in view of raising the awareness of the reader with regards to this elusive infection.

## Discussion

Melioidosis is an emerging infection, caused by *Burkholderia pseudomallei*. Commonly a soil saprophyte, it is endemic in South East Asia [2]. Melioidosis was the third commonest infective cause of death in Thailand after Human Immunodeficiency Virus (HIV) and Tuberculosis, in 2010 [3]. With increasing awareness about the organism, more and more case has been reported from areas outside the endemic area [4]. Single most important predisposing factor for developing Melioidosis is underlying Diabetes mellitus [5,6] with nearly half of cases infected having underlying diabetes [7].

Melioidosis is well known for its protean and varied manifestations. It can present with septicaemia [8] as well as localized forms such as septic arthritis [9,10] and psoas and gluteal abscess [11], necrotizing fasciitis [12], making its presence felt in orthopedics. Although cases of mediastinal lymphadenopathy secondary to Melioidosis has been also reported [13,14], extensive search of the literature to date has revealed few reported cases of Melioidosis presenting as suppurative inguinal lymphadenopathy [14,15].

Bacterial culture from tissue samples remain the gold standard for diagnosing Melioidosis [16]. We wish to reiterate the importance of sending pus and tissue samples for routine microbiological analysis, in order not to miss the diagnosis [15]. Care must be taken when interpreting microbiological laboratory results though, as microbiologists unfamiliar with melioidosis may report the isolate as *Burkholderia pseudomallei* [15]. We wish to stress on the fact that if Melioidosis is suspected it should be specifically conveyed to the microbiologist, especially in settings where Melioidosis is not endemic. Serological titers, although not confirmatory, are also usual adjuncts to diagnose Melioidosis [17]. Commercial kits have been developed to aid rapid diagnosis of Melioidosis [18]. If histologically examined, Melioidosis may be noted to produce necrotizing inflammation with abscess formation or granulomata with multinucleated giant cells [19], mimicking Tuberculosis closely.

Mortality of Melioidosis remains substantial, significantly worse when associated with septicaemia [20]. Thus, early diagnosis and prompt treatment prior to the development of systemic sepsis is of importance in reducing the mortality associated with Melioidosis.

High index of suspicion is necessary for diagnosing Melioidosis. Having diagnosed successfully, effectively treating this uncommon condition is the next hurdle facing the clinician as *B. pseudomallei* is resistant to most commonly used antimicrobials such as third generation Cephalosporins, Quinolones and Aminoglycosides [21].

Ceftazidime is the drug of choice as it highly efficacious against *B. pseudomallei* [22], although prolonged regimens are necessary [23] to prevent the patient relapsing. Emerging resistance to Ceftazidime has been a concern, and thought to be circumvented by addition of Clavulanic acid to the therapeutic regimen [24].

What does the future hold with respect to treatment of this elusive condition? Recent reports suggest that Glyburide, a compound that has anti-inflammatory effects of on the immune system, may be beneficial in Melioidosis [25]. Recently there has also been interest in surface protein induced vaccine against *Burkholderia pseudomallei* [26].

## Conclusion

We believe that raising awareness among clinicians about this elusive entity can lead to prompt diagnosis and reduction of morbidity, minimizing the delay in diagnosis of this elusive condition.

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