

## First Ray Osteomyelitis with *Burkholderia Pseudomallei*

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### INTRODUCTION:

Melioidosis is an infectious disease that predominately exist in tropical climates country, especially in Southeast Asia. *Burkholderia pseudomallei* is a Gram-negative bacterium that causes the infectious disease melioidosis. The infection can spread to various organs, leading to the formation of abscesses. In this case report, we present a rare occurrence of *Burkholderia pseudomallei* infection in the first metatarsal bone in a patient.

### REPORT:

A 54 y.o lady with underlying diabetes mellitus and hypertension had history of admission for melioidosis with lung infection treated with antibiotics 6 months prior to the presentation. She had develop pain and redness over the first metatarsal bone of left foot for 1 month duration prior to admission where no medical intervention was done. Patient presented when the pain which was worsening and had develop swelling over the first metatarsal bone(MTB) together with pus discharge from a small punctum of the swelling. Patient also had on and off fever during the episode. Patient was compliance to the previous antibiotic treatment and was recovering well from lung infection. Upon further examination, there was diffuse swelling over the anteromedial part of the left foot, erythematous, warm and tender. There was a wound over the medial aspect of swelling with pus discharge. Evaluation of the blood parameters showed mild leukocytosis with slight raised in CRP level. Initial radiograph imaging(Figure 1) showed that presence of soft tissue swelling and osteolytic bone with cortical lucency suggesting to osteomyelitis of the left first metatarsal bone. Patient was planned for wound debridement and sequestrectomy of the left first metatarsal bone. Intraoperatively bone and tissue was send for culture and sensitivity. Empirically patient was then started with broad spectrum antibiotics before changing to culture sensitive. It noted that

*Burkholderia pseudomallei* was cultured from tissue and bone. Patient was treated with IV Ceftazidime for 2 weeks and was discharge with T.Bactrim according to culture sensitivity. Patient was progressing well in ward with wound showed no sign of infection.



**Figure 1** : Left foot x-ray showing osteomyelitis changes of 1<sup>st</sup> MTB.

### CONCLUSION:

Given the unusual presentation of melioidosis in the first metatarsal bone, it is important to consider the possibility of atypical manifestations of the disease in individuals who is immunocompromised. This case highlights the importance of considering *Burkholderia pseudomallei* as a potential causative agent in cases of bone infection, even in unusual locations.

### REFERENCES:

1. Selvam K, et al. Burden and Risk Factors of Melioidosis in Southeast Asia: A Scoping Review. *Int J Environ Res Public Health*. 2022 Nov 22;19(23):15475.