

# Multidisciplinary management of melioidosis, acute renal failure, and metastatic prostatic carcinoma in hospital keningau: A case study on the syndemic intersection in a district hospital setting in Malaysia

Chan Wah Loong<sup>1</sup>, Reshmi Prem Nair<sup>1</sup>, Noor Deanna Binti Abdul Raof<sup>1</sup>, Siti Fitriwati Khazis Binti Ismail<sup>2</sup>, Lee Heng Gee<sup>3</sup>

<sup>1</sup>Jabatan Perubatan, Hospital Keningau, <sup>2</sup>Jabatan Radiologi, Hospital Keningau, <sup>3</sup>Unit Kawalan Infeksi, Jabatan Perubatan, Hospital Queen Elizabeth

## ABSTRACT

**Introduction:** Melioidosis is a potentially fatal tropical infection caused by *Burkholderia pseudomallei* which is commonly found in soil in endemic areas. We report a case of disseminated melioidosis presenting with sepsis, acute kidney injury, and metastatic prostatic carcinoma diagnosed in a Malaysian district hospital. **Case Description:** A 62-year-old Malay farmer with history of chronic kidney disease, hypertension and benign prostatic hyperplasia, presented with fever, cough, shortness of breath and loss of appetite for four days. On examination, he was febrile, tachycardic, tachypneic but hemodynamically stable. Investigations revealed leukocytosis, anemia, acute kidney injury, metabolic acidosis and elevated liver enzymes. Blood culture grew *Burkholderia pseudomallei*. Imaging showed heterogenous opacities in the right lung, hepatomegaly with liver lesions, prostatic enlargement with infiltration, and a right lentiform nucleus brain lesion. Liver biopsy confirmed metastatic prostatic carcinoma. The patient was treated with parenteral meropenem for 2 months followed by oral maintenance antibiotics. He required urgent hemodialysis and nephrostomy tube placement. Multidisciplinary care was provided by internal medicine, infectious disease and urology teams. **Discussion:** This case highlighted the importance for having high index of suspicion of melioidosis in patient with risk factors such as chronic kidney disease and occupational exposure to soil. This can enable prompt initiation of appropriate antibiotics. Carbapenems are the treatment of choice for the intensive phase, followed by oral eradication therapy. Melioidosis can cause disseminated infection with multi-organ involvement. Multidisciplinary approach should be practised although in district setting. In addition, the co-occurrence of melioidosis and prostate cancer warrants future research.