

# Melioidosis-Related Acute Cholangitis and Septic Arthritis

Sir,

Melioidosis is a potentially fatal infectious disease caused by the Gram-negative bacterium *Burkholderia pseudomallei*. Its clinical presentation can range from asymptomatic infection to acute pneumonia, septicemia, and abscess formation.<sup>[1]</sup> Acute cholangitis is an inflammation of the bile ducts due to bacterial infection, typically caused by enteric Gram-negative bacteria. Acute cholangitis as a manifestation of melioidosis is an extremely rare occurrence.<sup>[2,3]</sup>

A 51-year-old male with underlying hypertension presented with a 1-month history of fever, tea-colored urine, left foot pain, and swelling, as well as right upper abdominal pain for 1 week. He also noticed jaundice 3 days before admission. On examination, the patient was afebrile and had stable vital signs. His sclerae were jaundiced, and he had tender hepatomegaly, but Murphy's sign was negative. The cardiovascular and pulmonary examinations were both normal. His left ankle was mildly swollen, tender, and had a limited range of motion, raising the possibility of septic arthritis.

Initial blood tests revealed a high white cell count ( $19.8 \times 10^3/\mu\text{L}$ ) and cholestasis: elevated total bilirubin ( $78.9 \mu\text{mol/L}$ ), direct bilirubin ( $49.7 \mu\text{mol/L}$ ), and ALP ( $567 \text{ U/L}$ ). The aspartate transaminase (AST) and alanine transaminase (ALT) levels were normal at 36 and 27.8 U/L, respectively. The chest radiograph was normal. Abdominal ultrasound revealed hepatomegaly with no focal lesion or dilatation of the intrahepatic biliary tree. The gallbladder was distended without calculi, and the common bile duct was normal in size. There were no abscesses in the spleen or prostate.

A bedside joint aspiration of the left ankle was performed, and fluid culture revealed no growth. The blood culture revealed *B. pseudomallei*. Due to worsening ankle pain, a left ankle arthrotomy and washout were performed. *B. pseudomallei* was isolated in intraoperative joint fluid and was sensitive to imipenem, trimethoprim-sulfamethoxazole, and ceftazidime. The patient was given intravenous ceftazidime for 6 weeks, followed by 20 weeks of oral trimethoprim-sulfamethoxazole. By the second week of ceftazidime treatment, his symptoms had resolved and his liver function tests had returned to normal. The patient was followed up in the outpatient clinic and was found to be in good health, with no signs of infection relapse.

The co-occurrence of melioidosis and acute cholangitis is rare, with only a few cases reported in the literature.<sup>[2,3]</sup> The pathogenesis of cholangitis in melioidosis is not well

understood, but it is thought to involve several factors. One important factor is the ability of *B. pseudomallei* to survive and replicate within host cells, including biliary epithelial cells. This can lead to damage and inflammation of the bile ducts. *B. pseudomallei* is also capable of producing several virulence factors, such as lipopolysaccharides and exotoxins, which can contribute to the inflammatory response and tissue damage.<sup>[4]</sup> Another factor that may contribute to cholangitis in melioidosis is the host immune response. *B. pseudomallei* is capable of evading the host immune system by various mechanisms, including inhibition of phagocytosis and antigen presentation. This can lead to the persistence of the bacteria within the host, which can further exacerbate the inflammatory response.<sup>[5]</sup>

The rarity of melioidosis-related acute cholangitis can make it a challenging diagnosis to consider. Clinicians in endemic areas should be aware of the possibility of melioidosis in patients with acute cholangitis, particularly in those with risk factors.

## Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given his consent for his images and other clinical information to be reported in the journal. The patient understands that his name and initials will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed.

## Research quality and ethics statement

The authors followed applicable EQUATOR Network (<https://www.equator-network.org/>) guidelines, notably the CARE guideline, during the conduct of this report.

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Nil.

## Conflicts of interest

There are no conflicts of interest.

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