

A Case of Ceftazidime and Trimethoprim-Sulfamethoxazole Resistant Melioidosis

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Melioidosis is a potentially fatal infectious disease caused by *Burkholderia pseudomallei*. Reportedly, the overall mortality rate was <10% in patients with intensive treatment but 37% with bacteremia. Between 2003 and 2014, 11 cases of melioidosis were reported in Korea, all known to have visited South-East Asia where melioidosis is endemic. The overall mortality rate was 36.4%, with one fatality secondary to ceftazidime-resistant *B. pseudomallei* infection. We report a case of *B. pseudomallei* bacteremia with resistance to both ceftazidime and trimethoprim-sulfamethoxazole(TMP-SMX) but was successfully treated. A 61-year-old man, resident of Cambodia for 22 years, presented with fever and headache for 3 days and dysuria for 10 days. Physical examination showed neck rigidity and lower abdominal distention. Residual urine volume was 600cc. Initial laboratory test suggested bacterial infection; malaria rapid diagnostic test, blood smear exam, and polymerase chain reaction results were negative. Cerebrospinal fluid evaluation findings were unremarkable. Abdominopelvic CT revealed prostatitis and abscess formation, and the patient was empirically treated with intravenous (IV) ceftriaxone 2g every 24 hours and IV ciprofloxacin 400mg every 12 hours. Blood culture studies yielded *B. pseudomallei* on the 7th day, and antibiotic therapy was switched to IV ceftazidime 2g every 8 hours and oral TMP-SMX 320/1600mg twice a day. Despite overall clinical improvement, an antibiotic susceptibility test revealed resistance to ceftazidime and TMP-SMX; therefore, IV ceftazidime was switched to IV meropenem 1g every 8 hours. Following a 21-day course of IV meropenem, the patient was discharged with oral amoxicillin-clavulanic acid 500/125mg thrice a day and doxycycline 100mg twice a day. Amoxicillin-clavulanic acid and doxycycline administration was continued at the time of outpatient follow-up, and treatment was terminated without relapse. This is the first Korean case report with successful treatment of ceftazidime and TMP-SMX resistant *B. pseudomallei* bacteremia. In this case, a combination of amoxicillin-clavulanic acid and doxycycline was used as an eradication therapy regimen.

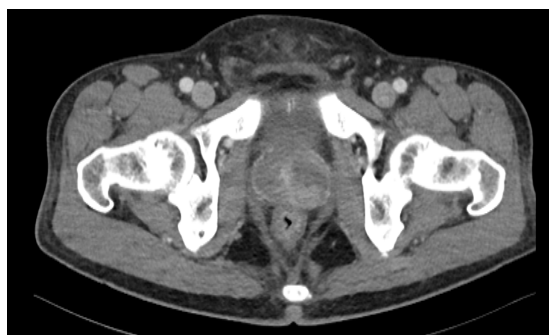


Figure 1. Abdominopelvic CT scan of the patient showing prostatitis with probable abscess formation.



Figure 2. Abdominopelvic CT scan follow up after 14 days showing slightly improved of prostatitis and slightly decreased size of abscess.

<i>Burkholderia pseudomallei</i>		
Antibiotics	Interpretation	MIC(μg/ml)
Ceftazidime	R	>16
Imipenem	S	<1
Cotrimoxazole	R	4/76
Tetracycline	S	<4

Table 1. Resistance to ceftazidime and trimethoprim-sulfamethoxazole was reported on the 14th day of hospitalization

;MIC, Minimum inhibitory concentration; R, Resistant; S, Susceptible