

中文題目：一位發燒的糖尿病患者

英文題目：Unknown fever in a patient with diabetes mellitus

作者：郭育筑<sup>1</sup>，何茂旺<sup>2</sup>，廖偉志<sup>2,3</sup>

服務單位：中國醫藥大學附設醫院<sup>1</sup>內科部，<sup>2</sup>感染科，<sup>3</sup>胸腔暨重症系

### **Case presentation:**

This 54-year-old male trunk driver with the medical history of type 2 diabetes mellitus presented to our out-patient department (OPD) because of a history of 5-week fever.

He had intermittent fever in the last 5 weeks ago. The fever frequently occurred in the afternoon or at night, accompanied with non-productive cough and shortness of breath. He denied headache, abdominal pain, diarrhea, dysuria, or skin lesion. He denied specific travel, contact or cluster history recently. He just discharged from local hospital where amoxicillin-clavulanate potassium and clarithromycin were prescribed and there was no defined cause of fever was told. The fever still intermittently occurred.

At OPD, the physical examination revealed pink conjunctiva, anicteric sclera, no skin lesion, no palpable liver or spleen, nor palpable lymph nodes. His chest radiograph (CXR) showed right perihilar lung mass shadow and right upper infiltration. Chest computed tomography disclosed an irregular central mass noted in right upper lobe of lung with a diameter of 39mm with paratracheal lymphadenopathy. We performed endobronchial ultrasound-guided transbronchial needle aspiration(EBUS-TBNA) for his mediastinal lymphadenopathy, which reported acute suppurative inflammation. The sputum culture yielded *Burkholderia pseudomallei*. Antibiotics with ceftazidime was prescribed, followed by improved fever trend. After completing eight days of intravenous ceftazidime and six months of oral sulfamethoxazole-trimethoprim treatment, the follow-up chest computed tomography disclosed resolution of right upper lobe central mass and paratracheal lymphadenopathy.

### **Discussion:**

Melioidosis is the infection of *Burkholderia pseudomallei*, a Gram-negative bacterium, which is commonly found in soil and groundwater of tropical and subtropical regions, especially in southeast Asia and northern Australia. It often occurs after several environmental conditions such as typhoon, heavy rain, or specific occupations like farmer. The incubation period of acute melioidosis is average nine days (1-21 days). The most common presentation of melioidosis is pneumonia and localized skin infection. Usually, it is a life-threatening infection with septic shock found in about twenty percent of patient infected by *B. pseudomallei*, and

bacteremia found in forty to sixty percent of patients. The mortality of melioidosis is about 10-40 percent, depending on rapid diagnosis and appropriate antibiotic therapy or not. Diabetes mellitus is the major risk factor of melioidosis, as about 23-60 percent patient with melioidosis has diabetes mellitus. Antimicrobial therapy includes initial intensive therapy with intravenous ceftazidime for 10-14 days, according to the severity of infection, and subsequent eradication therapy with oral trimethoprim-sulfamethoxazole for 3-6 months.

In this case, the patient lived in Taiwan, which located at tropical and subtropical regions, near the major epidemic areas. This infection episode developed in middle August, the typhoon season in Taiwan. Besides, he was a trunk driver and had the risk factor of diabetes mellitus. All the things described above are risks of melioidosis. Usually, patient with melioidosis has to be admitted in intensive care unit. Nevertheless, our case has relative stable clinical condition without sepsis and only has to be admitted in general ward. Actually, Taiwan has a similar risk of *B. pseudomallei* infection as that in southeast Asia. Thus, we have to take more awareness of melioidosis in patient with high risk to give appropriate antibiotics earlier in order to prevent the patient from fatality.

**Figures:**

Figure 1. Chest radiograph: right perihilar lung mass shadow and increased infiltration over right upper lung.



Figure 2. Chest computed tomography: an irregular central mass noted in right upper lobe of lung with a diameter of 39mm with paratracheal lymphadenopathy.

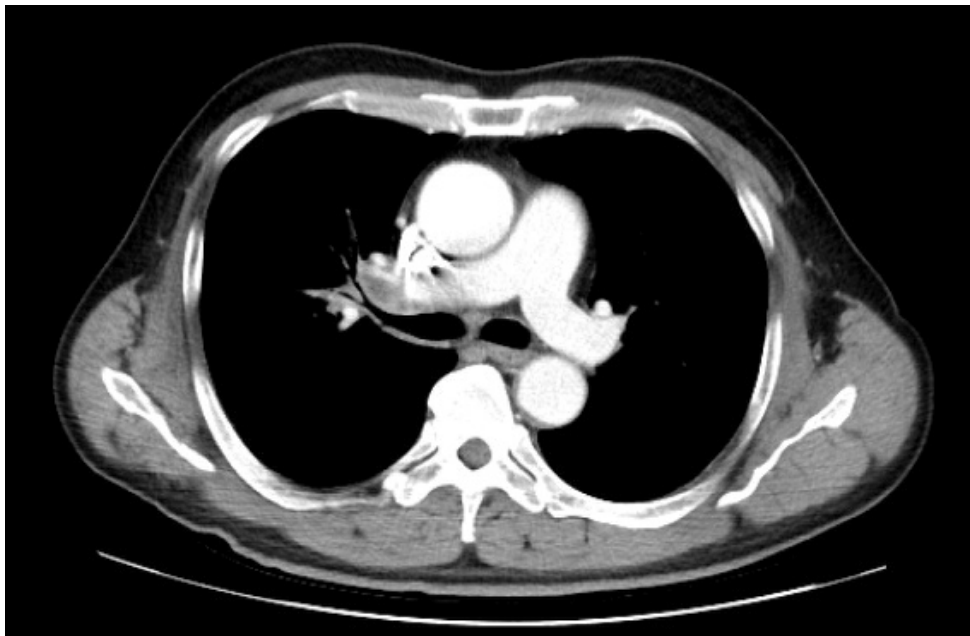


Figure 3. *Burkholderia pseudomallei* on sheep blood agar (left) and ashdown agar (right)

