

# The epidemiology and clinical analysis of melioidosis outbreak in Taiwan, 2005

## Abstract

Melioidosis is an infectious disease caused by soil saprophyte bacillus *Burkholderia pseudomallei*. People usually acquire the infection by cutaneous contact through traumatic skin or inhalation or, rarely, by ingestion. Clinical manifestations are variable, ranging from localized cellulites, to severe and fatal, septicemia. Melioidosis was seen as endemic to Southeast Asia and northern Australia; however, sporadic cases have been reported in Taiwan since the first case reported in 1985. Seventy-four cases, the most number ever, were reconfirmed last year.

In demographic data, male (70%) and old-aged (73 % in 51~80 years old groups) accounted for mostly; most patients were Taiwanese and resided in southern Taiwan, especially around the Er-Ren river basin. In addition, only six (8%) patients had occupational exposure to soil or water. Most cases were indigenous because few of them had international travel history. In other important risk factors, few patients had the history of exposure to soil or water or skin injury. Beside, most of cases appeared right after attacks of two strong typhoons last summer, therefore, we suspected that most patients were infected via inhalation of dust contaminated with *B. pseudomallei* which were brought out by the flood.

Most patients had chronic diseases, especially DM (57%). The most common initial symptoms were fever (89%)、chills (46%) and cough (53%) and the most common clinical manifestations were septic shock (32.4%) and pulmonary infection (20.3%). The mortality rate was 27%. In our review, we found that the appropriate parenteral antibiotic was seldom given initially because it's hard to get culture result at first. Moreover, it was common that patients didn't have right regimen and duration of maintenance antibiotics treatment. That might result in relapses in the future.

A total of 47 strains analyzed further by PFGE showed 5 subtypes and the S1 accounted for majority. In serology study, positive finding could be expected in 10.8 ( $\pm 6.7$ ) days after symptom onset and the positive reaction would persist at least for 7 months.

Keyword: melioidosis、epidemiology、clinical analysis