

Epidemiological survey of melioidosis in Er-Ren river basin

Abstract:

From Nov, 2001 to Aug, 2006, a raised annual incidence of melioidosis (36-125/100,000) was observed in the Er-Ren River Basin, southwestern Taiwan. In this area, sero-surveillance of melioidosis (n=624) indicated the 10.9-36.6 % of sero-positive rate for inhabitants. Using bacterial isolation combined with PCR-based detection of *B. pseudomallei* from soil specimens demonstrated the geographical distribution of this bacterium was targeted at a focus site within the Er-Ren River Basin. The presence of this bacterium in environment tended to be correlated with a higher rate of melioidosis sero-positive individuals. In addition, a questionnaire survey of local individuals (n=624) indicated that sero-positivity was linked to experiencing flooding and walking barefoot on soil; these would seem to be potential risks factors associated with acquiring melioidosis. Results indicated that the Er-Ren River Basin, southwestern Taiwan, is a hyper-prevalent area for melioidosis. This is the first reported hyper-prevalent area located north of $>20^{\circ}\text{N}$ latitude.