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ePoster Session

News on the diverse mycobacterial infections

### Acquisition of *Mycobacterium abscessus* among ventilator-dependent patients in Taiwan chronic respiratory care facilities

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**Background:** The mode of acquisition and persistence of *Mycobacterium abscessus* among ventilator-dependent patients in respiratory care wards (RCWs) have not been thoroughly investigated

**Material/methods:** We prospectively recruited 115 ventilator-dependent patients who were treated in five RCWs in northern Taiwan during the period January to August 2012. Respiratory specimens from each patient were cultured for mycobacteria at three different time points: on day 1 (D1), at three months (M3), and six months (M6) after enrollment. Subspecies differentiation was done by sequencing the *erm* (41), *rpo B* and *hsp65* genes. Randomly amplified polymorphic DNA (RAPD) patterns generated by arbitrarily-primed PCR were utilized for genetic typing.

**Results:** Of the 115 patients, 16 (13.9%) had a culture positive for *M. abscessus* on day 1 and 72 had cultures for mycobacteria taken at all three time points. The proportion of patients with a culture positive for *M. abscessus* increased from 15.3% (11/72) on D1, to 30.6% (22/72) at M3, and 38.9% (28/72) at M6. We found that once patients had a culture positive for *M. abscessus* complex, the isolates tended to persist throughout the study period. Of the 27 available isolates, 11 were identified as *M. abscessus* subspecies *abscessus* and 16 as *M. abscessus* subspecies *massiliense*. Two *M. abscessus* subspecies *abscessus* isolates obtained at the same RCW had identical RAPD patterns.

**Conclusions:** Our study reveals that acquisition of *M. abscessus* is common among ventilator-dependent patients in RCWs. Once *M. abscessus* is present in respiratory specimens, it tends to persist for more than six months. The majority of the isolates belonged to different strains, indicating limited cross transmission of the isolates in the chronic RCWs.