

Session: P080 Non-tuberculous mycobacteria now!

**Category: 2a. Tuberculosis and other mycobacterial infections**

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**Bacteraemia caused by *Mycobacterium avium* complex species and antimicrobial susceptibility of the isolates**

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**Background:** Advanced molecular typing methods have greatly expanded the taxonomy of *Mycobacterium avium* complex (MAC) species; however, little is known about the epidemiology and clinical features of bacteraemia caused by different species of MAC species.

**Material/methods:** In this study we investigated the clinical characteristics of patients treated for MAC bacteraemia in our institute during the period 2008 to 2014. Isolates were identified to the species level by sequencing the *rpoB* gene and the internal transcribed spacer region of the 16S-23S rRNA genes.

**Results:** Among 30 patients with bacteraemia due to MAC species, the majority (n=26) had concomitant HIV infection. Of the 30 isolates obtained from the patients, 24 were *M. avium* subspecies *hominissuis*, 4 *M. colombiense* and 2 *M. intracellulare*. All 4 *M. colombiense* isolates were from HIV-infected patients. Bacteraemia due to *M. colombiense* was associated with higher 30-day mortality than bacteraemia due to *M. avium* subspecies *hominissuis* (2/4 (50%) vs 1/24 (4%),  $P = 0.045$ ). All 4 *M. colombiense* isolates were susceptible to clarithromycin, moxifloxacin and linezolid. Among the five patients who received ethambutol treatment and four patients who received fluoroquinolone treatment for various durations between positive MAC cultures, two and three, respectively, had isolates with ethambutol and fluoroquinolones MIC values significantly increased ( $\geq 4$  folds).

**Conclusions:** *M. colombiense* was the second leading causative pathogen of MAC bacteraemia, comprising 15.4% of all MAC isolates obtained from patients with HIV infection. Monitoring the susceptibility of MAC isolates to ethambutol and fluoroquinolones is warranted in patients with persistent MAC bacteraemia.