Multidrug Resistant *Acinetobacter* Infections

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Acinetobacter spp. are common commensals and ubiquitous organisms widely distributed in nature. In addition to factors involved in their virulence, resistance to a wide variety of antimicrobials makes these organisms effective opportunistic nosocomial pathogens. Although resistance patterns may differ among different clones, multidrug-resistant (MDR) strains are usually not affected by all beta-lactams including carbapenems, aminoglycosides, and quinolones. *A. baumannii* has emerged as a cause of numerous global outbreaks. In epidemiological studies, respiratory tract was found the most frequent site of isolation, followed by bacteraemia and urinary tract infection and patients residing in the ICU were more frequently infected. Infections related with this pathogen have been described in patients with imunosuppression or with serious underlying diseases, those subjected with a variety of invasive procedures and in those receiving previous broad-spectrum antibiotic therapy. Community-acquired infections have been well-described in war-related wounds and also in patients with various risk factors such as chronic alcoholism, diabetes and chronic obstructive lung diseases.

MDR *A. baumannii* including carbapenem-resistant strains are endemic throughout Turkish institutions. In a retrospective, case-controlled study we compared 88 patients with *Acinetobacter* bacteraemia with 180 control cases without any bacteraemia. Multivariate regression analysis indicated that intubation, accompanying culture positivity and previous antimicrobial use were independently related with occurrence of *Acinetobacter* bacteraemia. 91% of isolates had MDR pattern in which imipenem resistance was 67%. No colistin resistance was detected. For mortality, staying in ICU and intubation were independent risk factors. The rate of mortality was 48,6% after drawing the first blood culture. Sixty one% of isolates were found to harbour OXA-58 and 32% PER-1.

Polymyxins are usually effective for treating MDR *Acinetobacter* infections, but emerging resistance has already been described and is a cause of concern in some countries. Another unresolved issue is whether colistin should be used in mono or combination therapy. Tigecycline is another effective antibiotic for treatment, however low serum concentrations may compromise its efficacy and determination of *in vitro* susceptibility for *Acinetobacter* is cumbersome.

Suggested reading

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