



Emergence of resistance to carbapenems in *Acinetobacter baumannii* in Europe: clinical impact and therapeutic options

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Résumé en anglais

Despite having a reputation of low virulence, *Acinetobacter baumannii* is an emerging multidrug-resistant (MDR) pathogen responsible for community- and hospital-acquired infections that are difficult to control and treat. Interest in this pathogen emerged about one decade ago because of its natural MDR phenotype, its capability of acquiring new mechanisms of resistance and the existence of nosocomial outbreaks. Recent advances in molecular biology, including full genome sequencing of several *A. baumannii* isolates, has led to the discovery of the extraordinary plasticity of their genomes, which is linked to their great propensity to adapt to any environment, including hospitals. In this context, as well as the increasing antimicrobial resistance amongst *A. baumannii* isolates to the last-line antibiotics carbapenems and colistin, therapeutic options are very limited or absent in some cases of infections with pandrug-resistant bacteria. However, a large proportion of patients may be colonised by such MDR bacteria without any sign of infection, leading to a recurrent question for clinicians as to whether antibiotic treatment should be given and will be effective in the presence of resistance mechanisms. The worldwide emergence of *A. baumannii* strains resistant to colistin is worrying and the increasing use of colistin to treat infections caused by MDR bacteria will inevitably increase the recovery rate of colistin-resistant isolates in the future. Current knowledge about *A. baumannii*, including biological and epidemiological aspects as well as resistance to antibiotics and antibiotic therapy, are reviewed in this article, in addition to therapeutic recommendations.

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