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Current control and treatment of multidrug-resistant *Acinetobacter baumannii* infections.

Karageorgopoulos DE, Falagas ME.

Alfa Institute of Biomedical Sciences, Athens, Greece.

Abstract

Institutional outbreaks caused by *Acinetobacter baumannii* strains that have acquired multiple mechanisms of antimicrobial drug resistance constitute a growing public-health problem. Because of complex epidemiology, infection control of these outbreaks is difficult to attain. Identification of potential common sources of an outbreak, through surveillance cultures and epidemiological typing studies, can aid in the implementation of specific control measures. Adherence to a series of infection control methods including strict environmental cleaning, effective sterilisation of reusable medical equipment, attention to proper hand hygiene practices, and use of contact precautions, together with appropriate administrative guidance and support, are required for the containment of an outbreak. Effective antibiotic treatment of *A baumannii* infections, such as ventilator-associated pneumonia and bloodstream infections, is also of paramount importance. Carbapenems have long been regarded as the agents of choice, but resistance rates have risen substantially in some areas. Sulbactam has been successfully used in the treatment of serious *A baumannii* infections; however, the activity of this agent against carbapenem-resistant isolates is decreasing. Polymyxins show reliable antimicrobial activity against *A baumannii* isolates. Available clinical reports, although consisting of small-sized studies, support their effectiveness and mitigate previous concerns for toxicity. Minocycline, and particularly its derivative, tigecycline, have shown high antimicrobial activity against *A baumannii*, though relevant clinical evidence is still scarce. Several issues regarding the optimum therapeutic choices for multidrug-resistant *A baumannii* infections need to be clarified by future research.

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