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The major risk factors and outcomes of extensively drug-resistant *Acinetobacter baumannii* acquisition in a Moroccan surgical intensive care unit

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Introduction & Aim: *Acinetobacter baumannii* has emerged as an important nosocomial pathogen causing worldwide hospital outbreaks. This micro-organism can cause a wide range of infections, including bacteremia, pneumonia, urinary tract infection, peritonitis, etc. The aim of this study was to determine the risk factors and outcomes related to the acquisition of extensively drug-resistant *Acinetobacter baumannii* in a Moroccan surgical intensive care unit (ICU).

Method: This study was conducted from March 2015 to February 2016, in a 10-bed clinical and surgical tertiary ICU of Ibn Tofail University Hospital Mohammed VI in Marrakesh, Morocco. The adult patients with a first clinical episode of infection were included in the study. The level of antibiotic resistance has been studied by the agar diffusion method, the choice of antibiotic susceptibility testing and interpretation criteria were made as recommended by the Antibigram Committee of the French Microbiology Society (AC-FMS) and standards of the European Committee on Susceptibility (EUCAST, 2015).

Result: Obtained results showed that among 225 isolated bacteria, 85 of these isolates were represented by *Acinetobacter baumannii* and all *Acinetobacter baumannii* strains were resistant to Imipenem, which represented 72% of the multidrug resistant bacteria. The increasing and alarming antibiotic resistance levels were observed with Gentamicin 94%, Tobramycin 93%, Ciprofloxacin 95%, Amikacin 75% and only 48% were resistant to Trimethoprim-Sulfamethoxazole. However, all *Acinetobacter baumannii* tested strains were sensitive to colistin.

Conclusion: The study also shows that infections associated to these deadly bacteria were mainly represented by Pneumonia 48%, catheter-related bloodstream infection 30% and bacteremia 17%. These findings suggest the requirement of constant monitoring of MDR *Acinetobacter baumannii* in order to decide which patients need isolation and prevent the transmission of this pathogen bacterium in the ICUs.

Biography

Adel Elmekes is currently a PhD student at Cadi Ayyad University, Faculty of Sciences Semlalia, Marrakesh, Morocco. His thesis focuses on the study of the clinical and epidemiological risk factors of infections due to multi-drug resistant bacteria in an adult intensive care unit of University Hospital Center (UHC) in Marrakesh, Morocco and the screening of new antimicrobial agents against hospital multidrug resistant bacteria from actinobacteria isolates. He is responsible for Hospital Hygiene Unit and Active Member of the committee against nosocomial infections.

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