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Nosocomial spread of class-1 integron-carrying extensively drug-resistant *Pseudomonas aeruginosa* isolates from an University Hospital in Fatih, Turkey

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In the past few decades, *Pseudomonas aeruginosa* has been recognized as a pathogen in variety of infections and also as an emerging nosocomial pathogen: *Pseudomonas aeruginosa* is a Gram-negative opportunistic pathogen that is an important cause of various life-threatening infections associated with hospitalisation. *Pseudomonas aeruginosa* is intrinsically resistant to many antibiotics and has been known to acquire novel resistance genes via horizontal gene transfer. The role of integrons in the spread of antibiotic resistance has been well established. The aim of this study was to investigate the prevalence of class-1 integrons and their associated resistance gene cassettes of multiple antibiotic-resistant *Pseudomonas aeruginosa* isolates. The genetic relationship among the integron-positive isolates was also determined. 45 non-duplicate multi-resistant isolates of *Pseudomonas aeruginosa* from an University Hospital Center in Fatih, Turkey were investigated for their antimicrobial susceptibility via the Kirby-Bauer method, presence of class-1 integrons and arrangement of gene cassettes through the PCR method as well as their genetic relationships by Pulsed-field gel electrophoresis (PFGE). All isolates were classified as extensively drug-resistant *Pseudomonas aeruginosa* (XDR-PA). 35 isolates (80%) were found to carry class-1 integrons. Amplification of the variable regions of class-1 integrons revealed seven diverse bands ranging in size from 0.7 kb to 7.0 kb.

Biography

Christine Rasoandrainy is a PhD student in Istanbul University, Istanbul, Faculty of Medicine, Department of Medical Microbiology. She is doing her research sudies in the Laboratory of Bacteriology and her researches are focused on the mechanisms of antimicrobial resistance.

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