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Prevalence and resistance to antibiotics of *Enterobacteriaceae* and non-fermentative bacilli isolated at the military hospital specialized in orthopedics at Algiers (2009-2014)

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The medical community relies on clinical expertise and published guidelines to assist physicians with choices in empirical therapy. ESBL-*Enterobacteriaceae* and non-fermentative bacilli resistant to carbapenems have emerged within the community setting as an important cause of a variety of infections. The aim of this study is to determine the prevalence of these pathogens, to evaluate their level of resistance, the phenotypic characterization of resistance to carbapenems and 3GC and the possibility of horizontal transfer. Also to testByotrol (disinfectant) on selected multi-drug resistant isolates. This work was realized at orthopedic, reeducation and reanimation services on hospitalized and non-hospitalized patients.On a total of 1482 positive samples, *Enterobacteriaceae* were the predominant (44%), followed by *Staphylococcus* sp. (37%), *Pseudomonas aeruginosa* (13%) and *Acinetobacter baumannii* (4%). Even the low rate of isolation of *A.baumannii* it was responsible of high mortality rate (9%). The most isolated species of *Enterobacteriaceae* were *E. coli*, *Klebsiella pneumoniae, Enterobacter cloacae, Proteus mirabilis* and *Serratia marsescens*. Susceptibility to antibiotics showed that isolates have acquired high level of resistance. It concerns nearly all antibiotic families used in therapy. *E. cloacae* was the most ESBL producer followed by *K. pneumoniae* and *E. coli*. ESBLs are plasmid mediated in association with other antibiotics. Resistance of *A. baumannii* to carbapenems was almost due to production of metallo-β-lactamases, and the lost D2 porines. All selected MDR isolates were sensitive to disinfectant tested and colistin. The judicious choice and use of antibiotics and disinfectants may reduce consequently the dissemination of multi-drug resistant clones.

Biography

Aouf Abdelhakim received his Ph.D. degree in Microbiology at Ain Shams university-Cairo (2007), the work was advised by Pr. Bakour Rabah, Pr. Mohamed Sayed Salama and Dr. Hala abouchady, and had participated in two projects at the laboratory of cellular and molecular biology (Faculty of biology-University of sciences and technologie Houari Boumediene) about resistance to antibiotics of Gram negative bacilli. His primary field is Medical and molecular bacteriology with research emphasis on resitance of Enterobacteriaceae and non-fermentative bacilli to antibiotics and disinfectants.

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