Molecular Characterization of Some Resistance Genes in Some Large Spectrum Beta - Lactamases Producing Enterobacteriaceae

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Abstract

In this work, 25 hospital isolates of Enterobacteria were isolated from the hospital of SETIF, Algeria, and were identified by Api 20E galleries. 10 isolates (40%) belong to Escherichia coli, 5 (20%) were identified as Enterobacter cloacae isolates, while the remaining 40% (10 isolates) belonged to other genera. To study the sensitivity towards antibiotics, the isolated strains were conducted to susceptibility testing. Among isolates, a single E. coli (10%) and only one of Enterobacter showed ESBL (+) phenotype. To confirm the phenotype, susceptibility testing was performed on Muller Hinton + cloxacillin medium which was positive for both strains. ESBL strains (+) were subjected to molecular analysis. Resistance genes were amplified by PCR and then subjected to electrophoresis, the positive smirs were sequenced and aligned in the BLAST database (GenBank, NCBI).

Keywords: Molecular Characterization, Genes, Spectrum Beta, Lactamases producing