The prevalence of ESBLs producing Klebsiella pneumoniae isolates in some major hospitals, Iran.

Abstract

Aims of this study were to investigate on antibiotic resistance and molecular epidemiology of K. pneumoniae producing ESBLs isolates of respiratory tract infections in some major hospitals in Iran. K. pneumoniae were obtained of patients with RTI. K. pneumoniae producing ESBLs detected by screening, confirming and PCR methods. During the 12-month period, a total of one hundred and thirteen of K. pneumoniae were found from RTI in three cities in different region of Iran which Sixty seven strains (59.2%) were ESBLs producer. In Ilam hospitals, seventeen strains (43.6%), in Milad hospital, thirty-seven strains (74%) and in Emam Reza hospital, thirteen strains (54.2%) were ESBLs producer. The findings showed that among sixty-seven K. pneumoniae producing ESBLs, Sixty-three strains (94%) were positive for blaSHV, eleven strains (16.4%) contained blaTEM and sixteen strains (23.9%) harbored blaCTX-M. Imipenem was found as an effectiveness antibiotic. In the current study, Majority of the ESBLs production had occurred in Milad hospital in Tehran (74%). In conclusion, spreading ESBL-producing strains is a concern, as it causes limitations to the antimicrobial agents for optimal treatment of patients.

Keyword: ESBLs; Klebsiella pneumoniae; BlaSHV; BlaTEM; BlaCTX-M.