Screening of Extended Spectrum Beta lactamase Producing Gram Negative Bacilli Isolated from Clinical Cases

Abstract

Background and objectives: Extended Spectrum Beta lactamase producing (ESBL) strain is one of the emerging health related problems in the world recently. Some of the species of the gram-negative bacilli including Klebsiella Pneumonia & Escherichia Coli are well known ESBL producing among bacteria, and they cause uncontrollable infections. This Cross-sectional study was designed to assess the ESBL producing gram negative bacilli among inpatients of Shohada-ye- Ashayer hospital (Khorram Abad).

Materials and methods: Samples were processed with routine laboratory methods. ESBL producing gram negative bacilli were screened with MacConkey Agars containing 4 mg/liter Ceftazidime and confirmed with double disk synergy method as recommended by national standard laboratory institute.

Results: Fifty-three cases (23.55%) of 225 isolated gram negative bacilli are positive for ESBL. The most isolated species of ESBL are 20 Klebsiella pneumonia (8.88%), 10 Escherchiia coli (4.44%) and 10 pseudomonas aeruginosa (4.44%). The most ESBL producing gram-negative bacilli were isolated from urine samples (21 cases; 39.62%), and ten cases (18.86%) from pulmonary samples.

Conclusion: The Results indicate that ESBL producing gram-negative bacilli are frequently isolated from Shohada-ye-Ashaier Hospital. Regarding the high resistance of these strains against many of the antibiotics and even against Carbapenems, health-care providers need to plan controlling policies for such strains.

Key words: Escherichia coli, Klebsiella Pneumoniae, Extended Spectrum Beta lactamase, Khorram Abad.