Bacteriological analysis of ESBL producing gram negative bacilli from clinical samples

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From National Conference on Natural Products as therapeutics, Medical Microbiology, Nanobiology and System biology: Current Scenario & Emerging Trends, 'NATCON-2014'.
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18-19 September 2014.

American J of Bio-pharm Biochem and Life Sci 2014 September, Vol. 4 (Suppl 1): P 05

ABSTRACT

Drug Resistant bacteria are emerging worldwide and their presence in a clinical infection can result in treatment failure, if the wrong drugs are used. ESBL are a group of enzymes that mediate resistance to extended spectrum (3rd generation) cephalosporin and monobactam. β-lactamases are produced by several Gram negative organisms, the most important single mechanisms of resistance to penicillins and cephalosporins. Detection of ESBL producing Gram negative bacilli by using various methods. Analysis of ESBL prevalence in a Tertiary care hospital – CHRI. ESBL detection by phenotypic methods. 6672 (1 year) 4272 – urine samples. 1176 – Showed significant bacteriuria. Organisms isolated were *E.coli 735*, *Klebsiella spp* 111 , *Acinetobacter spp 76*,*Pseudomonas spp 80*, *Citrobacter spp* 64, *Proteus spp 69* and *Enterobacter spp 41*. Of the 1176 isolates, 80 were detected to be ESBL producers. Of the 1759 Exudate samples tested, 846 samples showed significant growth of which, *E.coli* 164 *Klebsiella spp* 129 *Acinetobacter spp 106 Pseudomonas spp 245 Citrobacter spp* 108 *Proteus spp 68* and *Enterobacter spp 26.* Of the 846 samples, 43 showed as ESBL. Of the 641 Sputum samples tested, 344 samples showed significant growth of which34 were *E.coli*, *Klebsiella spp* 79, *Acinetobacter spp 84*, *Pseudomonas spp 105*, *Citrobacter spp* 32. With in this 18 strains are showed as ESBL producers. The ESBL detection was carried out following by (NCCLS-2000) National committee for clinical laboratory standards.

Published: September 2014.