**ID: 2195**

**Congress:** The First International Congress of Medical Bacteriology

**Title:** Detection of Amp C beta lactamase producing bacteria isolated from a tertiary care hospital

**Authors:** Afreenish Hassan

**Abstract:**

**Introduction:**

Amp C class beta lactamases are cephalosporinases that are poorly inhibited by clavulanic acid. They differ from other extended spectrum beta lactamases in their ability to hydrolyze cephamycins in addition to extended spectrum cephalosporins. Plasmid mediated Amp C beta lactamases differ from chromosomal AmpCs in being non-inducible and are typically associated with broad multi drug resistance. There is a need to address this issue as much as the detection of ESBLs. Objective: The objective was to assess various detection methods for Amp C beta lactamase producing bacteria.

**Methods:** The study was carried out at the Department of Microbiology, Army Medical College/ National University of Sciences and Technology, Rawalpindi, Pakistan. Clinical specimens received from various wards were dealt and the organisms were identified by standard microbiological procedures. Screening of the isolates was done by using cefoxitin disc. Screen positive organisms were subjected to three dimensional extract test (standard phenotypic test), Amp C Etest, Amp C saline disk test and Amp C disk test (phenyl-boronic acid) for detection of Amp C beta lactamases.

**Results:**

From a total of 150 isolates, we evaluated 96 screen positive isolates for Amp C production. Out of these 96, 68 (71%) showed the presence of Amp C beta lactamase by standard phenotypic test. The Amp C saline disk test detected 47 isolates as Amp C beta lactamase producers. By boronic acid disc test Amp C beta lactamase production was observed in 55 isolates. By Amp C Etest, only 31 isolates were found out to be Amp C beta lactamase producers. 

**Conclusion:** The sensitivity, specificity and accuracy of Amp C Etest was more than that of other Amp C saline disk test and Amp C boronic acid test. Amp C Etest an easy to do method can be reliably used in laboratories to detect Amp C beta lactamase producing bacteria.

**Keywords:**

Amp C Etest, Amp C beta lactamase producing bacteria, Three dimensional extract test, Amp C disk test

**Presentation:** Poster