PP-014 **Antibiogram of carbapenem resistant *Acinetobacter* (CRA) isolated from a tertiary care hospital**

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Background: *Acinetobacter* has emerged as a significant nosocomial pathogen. It has developed resistance against major groups of antibiotics. *Acinetobacter* resistance to broad spectrum antibiotics like carbapenems posing an additional threat.
Objective: We have conducted this study to find out the antibiotic susceptibility pattern of carbapenem resistant *Acinetobacter* (CRA). This will help our clinicians in prescribing appropriate treatment against CRA.
Place and duration of study: The study was conducted from June 2009 to December 2009 at the Department of Microbiology, Army Medical College Rawalpindi, affiliated with 100 bedded tertiary care hospital.
Materials and Method: Clinical specimens were received form various wards. *Acinetobacter* species were identified by using standard microbiological procedures. *Acinetobacter* species resistant to carbapenems were identified by using Kirby Bauer disc diffusion technique according to Clinical and Laboratory Standard (CLSI) guidelines. Fourteen antibiotics were used against CRA (gentamicin, amikacin, tobramycin, tetracycline, minocycline, doxycycline, tigecycline, levofloxacin, ciprofloxacin, trimethoprim-sufmethoxazole, ceftriaxone, ampicillin-sulbactam, cefoperazone-sulbactam, piperacillin-tazobactam). Antimicrobial susceptibility test was performed according to CLSI guidelines using Kirby-Bauer disc diffusion techniques.
Results: A total of 61 carbapenem resistant *Acinetobacter* were isolated. Majority of the isolates were sensitive to minocycline, tigecycline, tobramycin and cefoperazone–sulbactam. Doxycycline and piperacillin–tazobactam showed moderate activity against majority of CRA. Tetracycline, ciprofloxacin, ceftriaxone and ampicillin–sulbactam were least effective.
Conclusion: Emergence of carbapenem resistant *Acinetobacter* is a challenge for our clinicians. Antibiotics like minocycline, tigecycline, tobramycin and cefoperazone–sulbactam provide effective treatment options against CRA.

PP-015 **Detection of biofilm producing Gram-positive and Gram-negative bacteria isolated from clinical specimens and their antibiotic susceptibility pattern**

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Background: Microorganisms adhere to non-living material or living tissue, and form biofilms made up of extracellular polymers/slime. Biofilm-associated microorganisms behave differently from planktonic organisms with respect to growth rates and ability to resist antimicrobial treatments and therefore pose a public health problem.
Objective: To detect the prevalence of biofilm producers among Gram-positive and Gram-negative bacteria isolated from clinical specimens, and to study their antimicrobial susceptibility pattern.
Place and duration of study: The study was carried out from October 2009 to February 2010, at the Department of Microbiology, Army Medical College/National University of Sciences and Technology, Rawalpindi, Pakistan.
Method: Clinical specimens were received from various wards of a tertiary care hospital. These were dealt by standard microbiological procedures. Gram-positive and Gram-negative bacteria isolated were subjected to biofilm detection by congo red agar method (CRA). Antimicrobial susceptibility testing of those isolates, which showed positive results (slime production), was done according to Clinical and Laboratory Standards Institute (CLSI) guidelines using the Kirby-Bauer disc diffusion techniques.
Results: A total of 100 isolates were tested for the production of biofilm/slime. Among them, 53 isolates showed positive results. From these 53, 22 were Gram positive and 31 Gram negative. All the 53 slime producers showed reduced susceptibility to majority of antibiotics.
Conclusion: Bacterial biofilms are an important virulence factor associated with chronic nosocomial infection and antibiotic failure. Congo red agar is a method that can be successfully used to determine whether an isolate has the potential for biofilm production or not.

PP-016 **Is tigecycline a solution for metallo-β-lactamase producing carbapenem resistant organisms?**

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Introduction: Metallo-β-lactamase (MBLs) producing Gram-negative pathogens and their highly resistant pattern is an emerging threat worldwide. These organisms render most of the antibiotics ineffective so treatment of infections caused by these organisms is a big challenge for clinicians.
Materials and Methods: This descriptive study was carried out over a period of six months in the Department of Microbiology, Army Medical College, National University of Sciences and Technology Rawalpindi, to find out in vitro efficacy of tigecycline against metallo-beta-lactamase producing Gram-negative rods from clinical isolates of a tertiary care Hospital. All clinical samples were dealt by standard microbiological methods, isolated Gram-negative rods were subjected to susceptibility testing against various antibiotics by disc diffusion method as per the Clinical and Laboratory Standards Institute guidelines. Carbapenem resistant isolates were subjected to the detection of metallo-beta-lactamase production by E-test metallo-beta-lactamase strip method. All metallo-beta-lactamase producers were subjected to susceptibility testing of tigecycline by minimum inhibitory concentrations using E-strips. Minimum inhibitory concentrations 50 and minimum inhibitory concentrations 90 were calculated.
Results: Among 50 metallo-beta-lactamase producers, *Acinetobacter baumannii* were the most frequent metallo-beta-lactamase producers followed by *Pseudomonas aeruginosa*. Other organisms that were encountered were *Escherichia coli* and *Providentia rettgerii*. Majority of the metallo-beta-lactamase producers were sensitive to tigecycline. Most of the metallo-beta-lactamase producers were isolated from nasobronchial lavage samples.
Conclusion: Our study suggested that tigecycline can be used as an effective agent against metallo-beta-lactamase producing organisms.

PP-017 **First report in China of a human infection by Alphaproteobacteria using shell vial culture**

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Introduction: Some members of Alphaproteobacteria group have been described as pathogenic agents recent years. In