DEVELOPMENT AND PATTERN OF ANTIBIOTIC RESISTANT: A COMPARATIVE STUDY FROM PAKISTAN

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Statement of the Problem: Bacterial resistant is increasing rapidly. Antibiotic resistance is a global public health problem, more dominant in the developing countries. This study was conducted to analyze the annual increase in the antibiotic resistant.

Methodology& Theoretical Orientation: In this comparative study, the antibiotic susceptibility reports of hospital located in Karachi was analyzed. The data is openly available. Two antibiogram of June-Nov 2011 and June-Nov 2012 were analyzed. The annual increment in bacterial resistant against three strains i.e *Escherichia Coli, Klebsiella* and *Enterobacter* species was determined.

Findings: Escherichia Coli developed additional resistant against amikacin (13%), amoxicillin/clavulanic acid and ceftriaxone (2% each), aztreonam (5%), piperacillin/tazobactam (3%), ceftazidime (14%), co-trimoxazole and gentamicin (7% each) and cefoperazone/sulbactam (17%) in one year. Similarly ceftriaxone, ceftazidime, cefepime, co-trimoxazole and gentamycin (44% each), aztreonam and amikacin (41% each), ampicillin (34%) amoxicillin/clavulanic acid (31%), piperacillin/tazobactum (29%) and cefoperazone/sulbactam (24%) lost its potency against Klebsiella species. Similarly Enterobacter species became more resistant to ampicillin (40%), amoxicillin/clavulanic acid and ceftazidime (36% each), cefepime (34%), aztreonam and ceftriaxone (32% each), ciprofloxacin (28%) and gentamycin (27%). While all three strains have developed a least resistant against polymyxin-B.

Conclusion & Significance: The annual increment in bacterial resistant shows a pan drug resistant in Pakistan. This study recommends a conscious use of antibiotics.

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