

## Abstract

In present study redressal of antimicrobial resistance in various bacteria was checked. Six strains of different bacteria were used against different antibiotics that were *Escherichia coli*, methicillin resistant *Staphylococcus aureus*, *Pseudomonas aeruginosa*, *Acinetobacter baumannii*, *Streptococcus pneumoniae*, and *Klebsiella pneumoniae*. Bacterial strains were isolated from patients of meningitis and sepsis. They were treated with plant extracts of *Achyranthus aspera* and *Callistemon citrinus* seeds. Their resistance before treatment and after treatment was noted. For *Escherichia coli* amoxicillin, ceftazidime, ceftriazone, levofloxacin, imipenem, cefoperazone/sulbactam and amikacin falls in resistant range and after combining them with plant extracts zone of inhibition of levofloxacin, amikacin and imipenem were moved from resistant range to sensitive range. For cefoperazone/sulbactam zone of inhibition falls from resistant to intermediate sensitive. For MRSA ciprofloxacin (6mm), cefoxitin(6mm), co-trimoxazole(6mm) and erythromycin(6mm) were resistant. Three out of four antibiotics was moved from resistant to sensitive range after their treatment with plant extracts. Zone of inhibition for erythromycin was moved from resistant range to intermediate range. For *Acinetobacter baumannii* ciprofloxacin, ceftriaxone, amikacin, piperacillin/tazobactam, doxycycline, ampicillin/sulbactam were resistant. Increased zone of inhibition were noted for ceftriaxone and doxycycline but remain in intermediate ranges. Zone of inhibition for ampicillin/sulbactam, piperacillin/tazobactam and amikacin were moved from resistant to sensitive ranges. In case of *Klebsiella pneumonia* antibiotics remains resistant. Increased zone of inhibition was noted after treatment with plant extracts for imipenem and ceftazidime in *Klebsiella pneumonia* but it still remained resistant. For *Pseudomonas aeruginosa* antibiotics used were resistant originally. Piperacillin/tazobactam and amikacin zone size was moved from resistant to sensitive zones. Ceftazidime zone of inhibition increased but remained intermediate sensitive range. For *Streptococcus pneumoniae* all antibiotics were resistant. Linezolid, levofloxacin and clindamycin moved from resistant range to sensitive range after plant extracts were combined with them. This recent study suggest that for reversal of antibiotic resistance plant extracts can be used which can reverse antibiotic resistance naturally and gives no adverse effects on human body.