

It is clear from this work that the *Klebsiella* species and *Pseudomonas aeruginosa* were the most prevalent among the Gram negative pathogens (36.9% and 16.5% respectively), followed by *Escherichia coli* (5.8%) and *Proteus* species (2.9%). *Streptococcus pneumonia* was the most prevalent among the Gram-positive organisms identified in (21.3%) followed by *Staphylococcus aureus* and *Streptococcus pyogenes* (11.7 % and 4.9% respectively). These results are approximately in agreement with Okesola and Ige,¹³ but it was different with the finding reported by other researchers^(14,15).

High rates of resistance to AMX and CF were demonstrated by all bacteria, while most isolates were found to be highly susceptible to AN, CIP and TM. In contrast, (CTX, TE, GM and ER) were less effect against most of frequently isolates. Antimicrobial resistance by respiratory tract infections has increased worldwide due to excessive use of antimicrobial agents. However, increasing antibiotic resistance in frequently isolated respiratory tract pathogens complicated the selection process of antimicrobial agents^(7,8). *Klebsiella* species being the high resistance to most of antibiotic agents except AN, CIP and TM were the most potent activity against this strain. This finding is different with respect to what was mentioned by most previous studies^(13,16). *Streptococcus pneumoniae* showed moderate to high resistance against CF, TE and ER, while good effect to other antibiotic agents, which were used in this study. These results are approximately in agreement with other research⁽¹³⁾. TE showed the poor efficacy against *Streptococcus pneumonia* (45.4%). This result was higher than that reported by author⁽¹⁷⁾, while it was lower than that reported by other⁽¹⁸⁾.

Pseudomonas aeruginosa isolates showed complete resistance to each of AMX, CF and TE. This finding was in consistent with study of Levy⁽¹⁹⁾, who proved that some strains of *Pseudomonas aeruginosa* were resistant to most every antibiotic now available. *Pseudomonas aeruginosa* also, showed low resistance to GM, CTX, CIP and TM. These results were in

disagreement with reported by many other studies^(17,20,21). AN showed the most potent activity against *Pseudomonas aeruginosa* (82.3%). This result was compatible with other reported⁽²⁰⁾, while lower prevalent of resistant (10%) to this agent was proved by⁽²¹⁾.

Based on the findings of our study, we conclude that *Klebsiella* species and *Streptococcus pneumoniae* can be considered an important etiology agent of respiratory tract infections, having a high rate of drug resistance. AN, CIP and TM were the most effect antibiotics *in vitro* against tested bacteria. Conversely, no or less effect of other antibiotic agents which were used in this study thus should not be considered the drugs of choice in the treatment of patients with RTI in our study.

References

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