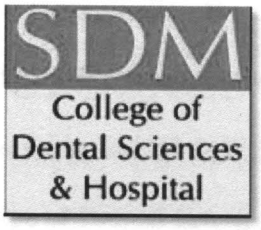
SUSCEPTIBILITY OF *A.actinomycetemcomitans* AND *P.gingivalis* TO ANTIBIOTICS IN PATIENTS WITH PERIODONTITIS



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ABSTRACT

Background and objectives: Antibiotic resistance is an emerging health problem that can be life threatening. Systemic antibiotics used in periodontal therapy have shown geographic variations in their resistance profile. Therefore, the present study aimed to evaluate the susceptibilities of *P.gingivalis* and *A.actinomycetemcomitans* in chronic periodontitis patients to four antibiotics.

Material and methods: 75 patients with chronic periodontitis, in the age range of 20-45 years having at least 14 natural teeth present and presence of probing pocket depth more than 5 mm at ≥30% of sites were included. Subgingival plaque samples were collected and checked for the presence of *P.gingivalis* and *A.actinomycetemcomitans*. Following isolation of the bacteria, they were subjected to antimicrobial susceptibility using broth dilution method. The antibiotics assessed were amoxicillin, doxycycline, metronidazole and moxifloxacin.

Results: A total of 75 patients with chronic periodontitis were included in the study, out of which 36(48%) were males and 39(52%) were females. From the 75 patients, a total of 50 bacterial colonies were identified. Least resistance ie. *A.actinomycetemcomitans* (19.0%) and *P.gingivalis* (24.1%) was shown against moxifloxacin compared to the other antibiotics. However, *A.actinomycetemcomitans* showed similar resistance profile (19.0%) to doxycycline as well.

Conclusion: Both *P.gingivalis*, *A.actinomycetemcomitans* demonstrated resistance to all the four antibiotics assessed. However least resistance was demonstrated to moxifloxacin by both the pathogens.

Keywords: Antibiotics, antimicrobial resistance, broth dilution, minimum inhibitory concentration, *P.gingivalis*, *A.actinomycetemcomitans*