

EVALUATION OF SOME ANTIBIOTICS' RESISTANCE BY DIFFERENT TYPES OF ORAL BACTERIA IN PATIENTS WITH GINGIVITIS AND PERIODONTITIS

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ABSTRACT

Background

Periodontal diseases are highly prevalent in Iraq. They may become serious conditions if they faced by unsuitable treatment and resulting in particularly cardiovascular systemic disorders. Further, antibiotic resistance in general has been witnessed prevalence, which may lead to failure of periodontal disease treatment. **The aim** of this study is evaluation of susceptibility and resistance to different antibiotics by dental plaque bacterial isolates.

Material and methods

Thirty seven infected patients were included in this study. From their dental plaque, samples were taken aseptically then bacteria has been isolated as well as antibiotic susceptibility tests agar diffusion methods had been applied.

Results

Among three types of bacteria, *Streptococcus mutans* occupied the largest percentage (62%) in dental plaque isolates. Imipenem registered profound susceptibility 78.3% via *Streptococcus mutans* followed by each of erythromycin, ciprofloxacin, and ceftriaxone (60.9%). This pathogen isolates showed resistance to amikacin, chloramphenicol, tetracycline and amoxicillin. *Pseudomonas aeruginosa* appeared the highest susceptibility to chloramphenicol and ceftriaxone by 90% while *Staphylococcus aureus* had been existed complete susceptibility to imipenem 100% followed directly by tetracycline and chloramphenicol by about 75% of each. The lowest susceptibility was resulted toward amoxicillin, amikacin, and ciprofloxacin with 25%. Generally speaking, amoxicillin exposed to highest resistance 70.3% in comparison to others, whereas both of imipenem and ceftriaxone witnessed highest susceptibility 67.6% by the same pathogens.

Conclusions

Amoxicillin occupied the first position in bacterial resistance, this may support the assumption that improper administration of amoxicillin will lead to therapy failure.

KEYWORDS: Antibiotics, Gingivitis, Periodontitis, Resistance, Susceptibility