Title: ISOLATION AND DETERMINATION OF RESISTANT *Staphylococcus aureus* IN DENTAL CLINIC OF BARRETOS

Authors: Amoroso, P.[1], Benevides, V. P.[1], Euzébio, J. C.[1]

Institution: [1]UNIFEB – Centro Universitário da Fundação Educacional de Barretos
(Av. Roberto Monte Frade, 389 - 14783226 - Barretos-SP)

Summary:

There is risk of contamination in the dental clinic environment for pathogens. This situation can generate direct or cross-infection for health professionals and patients. *Staphylococcus aureus* is mainly associated with skin and mucosal infections, but when it penetrates into tissues can causes serious diseases, such as, osteomyelitis, sepsis, pneumonia, endocarditis and meningitis. *Staphylococcus aureus* can exemplify better than any other human pathogen the adaptive evolution of bacteria in the antibiotic era. It has a unique ability to quickly respond to each new antibiotic with the development of a resistance mechanism, starting with penicillin and methicillin, until the most recent, linezolid and daptomycin.The permanent monitoring of susceptibility profile of this microorganism in dental clinic environment is essential due to indiscriminate antimicrobials use. This contributes to selecting *Staphylococcus* sp resistant to antibiotics used in clinical practice. This study was conducted for evaluating the *Staphylococcus aureus* resistance profile after isolation of samples from dental clinics of Barretos-SP. A total of 14 samples were collected from dental clinic environment and were isolated 22 strains of *S. aureus*. The samples identification was performed by Gram staining, evidence of coagulase, clotting in blade and pipe, catalase, mannitol fermentation, and deoxyribonuclease (DNase) and was conducted susceptibility testing to antibiotics by Kirby-Bauer method. The *Staphylococcus aureus* strains isolated from the environmentand dental equipment were sensitive to antimicrobial ciprofloxacin (95.46%), vancomycin (95.46%) and resistant to oxacillin (22.72%), erythromycin (13.63%), sulfazotrim (18.18%) and chloramphenicol (9.09%). The colonization of clinical environment by *S. aureus* maybe a potential risk of microorganism transmission to patients. Preventive measures, such as hand hygiene, rational use of antimicrobials and guidelines for the health care team were necessary to inhibit transmission and dissemination of these microorganisms.

Keywords: bacteria,resistance profile, antibiogram, microorganism, antimicrobials