TITLE: IN VITRO SUSCEPTIBILITY OF *Corynebacterium pseudotuberculosis* FROM GOATS TO ANTIMICROBIALS

AUTHORS: FREIRE, D.P.; DANTAS-JUNIOR, E.M.; SOUZA, N.M.S.; SÁ, M.C.A.; ANDRI, L.C.; VESCHI, J.L.A.; COSTA, M.M.

INSTITUTION: UNIVERSIDADE FEDERAL DO VALE DO SÃO FRANCISCO – UNIVASF, PETROLINA, PE (RODOVIA BR 407, 12 LOTE 543 - PROJETO DE IRRIGAÇÃO NILO COELHO - S/N C1, CEP 56300-000, PETROLINA - PE, BRAZIL)

ABSTRACT

Corynebacterium pseudotuberculosis is a pleomorphic gram-positive bacterium that causes caseous lymphadenitis in goats and sheep. This bacterium is widely distributed in the environment, and its spread the livestock of the herds causes economic losses. Regarding its treatment, the bacterium is sensitive to several classes of antimicrobials; however, as it is encapsulated in the abscesses that form in the lymph nodes of affected animals, it has a protective barrier against antibiotics. The aim of this study was to evaluate the sensitivity profile of three strains of *C. pseudotuberculosis* (two strong biofilm producers and a weak one) to 15 antimicrobials using the Kirby-Bauer disk-diffusion antibiogram technique. Bacteria were cultured in BHI and adjusted to the 0.5 scale of McFarland. The antibiotics used were neomycin (30µg), streptomycin (10µg), tobramycin (10µg), vancomycin (30µg), amoxicillin + clavulanate (30µg), ciprofloxacin (5µg), imipenem (10µg), chloramphenicol, cephalexin (10µg), norfloxacin (10µg), ampicillin (10µg), gentamicin (10µg), ceftriaxone (30µg) and amikacin (30µg) in Mueller-Hinton agar plates enriched with ovine blood. The diameters of the inhibition area were measured in millimeters through a graduated ruler. The strains were classified as resistant, intermediate and sensitive. All strains showed resistance to streptomycin, were intermediates for amikacin, tobramycin, neomycin and gentamicin and were sensitive to ampicillin, chloramphenicol, norfloxacin, ceftriaxone, cephalexin, amoxicillin + clavulanate, ciprofloxacin, imipenem, tetracycline and vancomycin. Despite strains are sensitive to most antibiotics, antibiotic therapy is ineffective for the treatment of caseous lymphadenitis. However, it is necessary to know the sensitivity profile of the bacteria, since the misuse of these drugs promotes the resistance of the microorganism to several classes of antibiotics.

Keywords: abscess, antibiotics, caseous lymphadenitis, resistance, small ruminants

Development Agency: Fundação de Amparo a Ciência e Tecnologia do Estado de Pernambuco - FACEPE