IDENTIFICATION AND \textit{IN VITRO} ANTIMICROBIAL SUSCEPTIBILITY OF COAGULASE NEGATIVE STAPHYLOCOCCI ISOLATED FROM BOVINE MASTITIS IN CHILE

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Coagulase negative staphylococci (CNS) have become the predominant pathogens of bovine MASTITIS in many countries, including Chile. Speciation of CNS is uncommon in routine MASTITIS diagnosis and therefore the veterinary significance of each species is not known. When testing for antimicrobial susceptibility accurate identification of CNS is important in order to predict their potential role as MASTITIS pathogens. In Chile there are only a few reports regarding susceptibility of SCN and species identification is usually not done. The objective of this study was to identify and to determine the \textit{in vitro} susceptibility of SCN isolated from bovine MASTITIS to several antimicrobial drugs commonly used for MASTITIS therapy.

Fifty strains of SCN isolated from clinical and subclinical cases from 28 dairy herds from different geographic locations in the XIV Region, Chile were analyzed. All isolates were identified by the API Staph ID 32 test (Biomerieux) and kept at -80 °C in HIB with 20% glycerol until tested. For susceptibility test the Agar Disk Diffusion method was used with 17 different antibiotic disks. For interpretation the criterion recommended by the NCCLS was adopted. In addition, all isolates were tested for β-lactamase production by the nitrocefin test with and without previous induction with oxacillin. Minimum Inhibitory Concentration (MIC) was determined against penicillin, oxacillin, cefoperazone-sulbactam and trimethoprim sulfamethoxazole by the E-test (AB BIODISK).

The API Staph ID 32 correctly identified the following species: \textit{S.chromogenes} (13), \textit{S.intermedius} (10), \textit{S.simulans} (3), \textit{S.xylosus} (3), \textit{S.warneri} (3), \textit{S.haemolyticus} (2), \textit{S.hominis} (1), \textit{S.hyicus} (1). Resistance was detected in 24(48%), 23(46%), 20(40%), 19(38%), 4(8%), 3(6%), 3(6%), 2(4%) and 2(4%) strains against lincomycin, amoxicillin, penicillin, ampicillin, streptomycin, cloxacillin, cefoperazone, pirlimycin, spiramycin and novobiocin, respectively. β-lactamase was produced by 18 (36%) strains and 2 isolates were found to be MR-SCN. MIC (mcg/mL) that inhibited 90% of the strains tested were: 1.5, 0.75, 2 and 0.19 for penicillin, oxacillin, cefoperazone-sulbactam and trimethoprim sulfamethoxazole, respectively.

The high resistance to penicillin plus the presence of MR strains found in this study emphasize the importance of CNS identification when isolated from bovine MASTITIS.

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