Title: SENSITIVITY TO ANTIMICROBIAL AGENTS IN DIFFERENT SPECIES OF COAGULASE-NEGATIVE *STAPHYLOCOCCI* ISOLATED IN SHEEP'S MILK

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Abstract:

Mastitis is an inflammation of the mammary gland and may cause microbiological and physical-chemical changes in milk and of glandular breast tissue, interfering in weight gain of the lamb. The objective of the study was to investigate the antimicrobial sensitivity coagulase-negative *Staphylococci* (CNS) isolated of sheep's half mammary. The samples of milk were taken from a flock located in a center region in State of São Paulo, formed by animals of Santa Inês, Texel, Ile-de-France and Dorper breed. The preliminary diagnostic of mastitis was realized by the California Mastitis Test (CMT) and the physical exam of the half mammary. After the antisepsis of the ostium papillary with cotton and alcohol 70%, milk samples of each mammary were taken in sterilized tubes, duplicated, and sent to Embrapa Pecuária Sudeste in Sao Carlos, SP for microbiologic exams. The biological identification followed the morphotinctorial and biochemical characteristics of the microorganism. Fermentation of carbohydrates were used for CNS species differentiation, submitted to *in vitro* sensitivity test as of the in disc diffusion technique with 12 antimicrobial active principles: cefepime (30µg), ciprofloxacin (5µg), clindamycin (2µg), chloramphenicol (30µg), cotrimoxazole (25µg), erythromycin (15µg), gentamicin (10µg), oxacillin (1µg), penicillin (10IU), rifampin (5µg), tetracycline (30µg) and vancomycin (30µg). Sixty three CNS originated of 414 sheep were investigated, which *S.xylosus* (79.3%) being the most frequent, followed by *S. saprophyticus* (14.3%) and *S. simulans* (1.6%). Some species were not identified (4.8%). *S. xylosus* presented the biggest percentage of sensitivity to ciprofloxacin, gentamicin, cefepime and cotrimoxazole (100.0%, 98.0%, 96.0% and 96.0%, respectively) and the biggest percentage of resistance were penicillin, clindamycin, oxacillin and vancomycin (28.0%, 22.0%, 22.0% and 20.0%, respectively). *S. saprophyticus* and *S. simulans* were sensitive to all active principles tested. The species not identified were resistant (33.3%) to the same antimicrobial *S. xylosus*. Despite of the reduced percentage of resistance to the active principles tested, the realization of the *in vitro* sensitivity test for the selection of a suitable antimicrobial to the mastitis treatment may prevent the appearance of multiresistant strains and facilitate the disease healing.

Keywords: milk, microorganism, resistance.

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