

TITLE: ANTIMICROBIAL SUSCEPTIBILITY PROFILE OF LISTERIA MONOCYTOGENES ISOLATED IN EXPANSION TANK MILK ASSESSED IN ALAGOAS STATE COUNTIES, BRAZIL

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ABSTRACT:

In the treatment of listeriosis, zoonosis caused by *Listeria monocytogenes* which is a psychrotrophic pathogen considered as emerging, most of the drugs used in the fight against gram-positive bacteria are effective, however, there is an increase in resistant strains and this profile has been common isolated strains of food. The objective of this study was to evaluate the antimicrobial susceptibility profile of *Listeria monocytogenes* isolated from milk from expansion tanks in Alagoas - AL. Six strains were obtained from individual expansion tank milks in counties of the dairy Alagoas State were used, stored at the UFRPE Meat and Milk Inspection Laboratory. They were tested by the disk diffusion method Penicillin G (10U), Ampicillin (10µg), Cephalotin (30µg), Chloramphenicol (30µg), Ciprofloxacin (5µg), Erythromycin (15µg), Clindamycin (2µg) and Tetracycline (30µg). Colonies were suspended in 5 ml of sterile saline and diluted to 0.5 on the McFarland scale and the solution was seeded with swab on plates containing Mueller-Hinton agar supplemented with 5% equine blood. After drying, the discs were placed under the agar and incubated at 37°C/24h. The reading and interpretation of the results were performed using breakpoints for *L. monocytogenes* (Cephalothin, Ampicillin, Erythromycin and Penicillin G) and *Staphylococcus* spp. (Clindamycin, Tetracycline, Ciprofloxacin and Chloramphenicol). From the reading of the diameter of the halos, the zones of inhibition were measured and the strains classified as sensitive, intermediate or resistant. It was observed resistance of 83.3% to Clindamycin (5/6), 16.6% to Chloramphenicol (1/6) and 16.6% to Erythromycin (1/6); and intermediate resistance of 16.6% to clindamycin (1/6). In relation to Penicillin, Ampicillin, Tetracycline, Cephalothin and Ciprofloxacin, all strains were sensitive. Antimicrobial resistant strains of *L. monocytogenes* may compromise treatment options for listeriosis. Thus, periodic testing of antimicrobial susceptibility is necessary, since the occurrence of strains resistant to antimicrobials used in the hospital routine represents serious consequences to public health.

Keywords: foodborne diseases, bacterial resistance, listeriosis, pathogenic microorganisms, public health.

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