

Título: ANTIMICROBIAL RESISTANCE OF *Listeria monocytogenes* ISOLATES FROM SLICED CHEESE AND HAM SOLD IN PELOTAS – RS

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Resumo:

Listeria monocytogenes, an important foodborne pathogen is the causal agent of listeriosis, a disease that affects human and animal worldwide. Considering that *L. monocytogenes* is a ubiquitous bacteria, it have been commonly exposed to low levels of antibiotics, causing a selective pressure favoring the multiplication of isolates with antibiotic resistance profile. The objective of this study was characterize antimicrobial resistance profile of *L. monocytogenes* isolates from sliced cheese and ham sold in Pelotas – RS collected between 2012 and 2014. Antimicrobial resistance of 16 *L. monocytogenes* isolates to 15 antimicrobial were evaluated by disk diffusion method, according to the European Committee on Antimicrobial Susceptibility Testing (EUCAST) international guidelines. The results of the antimicrobial susceptibility revealed that the isolates were sensitive to the most of the antimicrobial analyzed, however, all isolates (100%) were resistant to ceftiofex and nalidixic acid, and four isolates (25%) were resistant to clindamycin. These results are not surprising because *Listeria* spp. have been reported to be naturally resistant to cephalosporins and constitutively resistant to nalidixic acid which the lasted is regularly used in culture selective medium. The high incidence of resistance of food *L. monocytogenes* to clindamycin also was reported by others researches. Clindamycin has a similar action mechanism with erythromycin and chloramphenicol, and sometimes shows cross-resistance with these antibiotics. However, in our study was not observed these. All clindamycin resistant *L. monocytogenes* isolates suggests that the resistance is attributed to the presence of an enzyme that modifies the structure of clindamycin, thereby inactivating the antibiotic. In conclusion, the study showed that *L. monocytogenes* isolates from sliced cheese and ham were susceptible to the antibiotics most commonly used to treat human listeriosis but some isolates showed resistance to clindamycin. The monitoring antimicrobial resistance specially in food products is necessary because an increase in antimicrobial resistance in *L. monocytogenes* is a major public health concern owing to the high mortality rates associated with listeriosis and a potential spread of multi-resistance to others strains. Also genotyping resistance it needs to be studied in future studies to understand the mainly genes involved in the acquisition of antimicrobial resistance to clindamycin.

Palavras-chaves: listeriosis, foodborne pathogen, antibiotic resistance

Agência Fomento: Capes