

TITLE: ISOLATION AND RESISTANCE PROFILE OF *ENTEROCOCCUS SP.* ISOLATED FROM FOOD SAMPLES IN PORTO ALEGRE-RS

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ABSTRACT:

The genus *Enterococcus sp.* is a group of microorganisms known as acid-lactic bacteria. *Enterococcus* is a genus of gram-positive, nonspore-forming cocci founded in pairs or short chains. *Enterococcus* are ubiquitous bacteria, present in the intestines of humans and domestic animals, and also in food, water and insects. A characteristic of these microorganisms is the intrinsic resistance to many antimicrobials commonly used in the treatment of gram-positive cocci infections. However, *Enterococcus* has acquired different genetic determinants that confer resistance to several antimicrobials. The aim of this study was to determine the distribution and the antimicrobial resistance profile of *Enterococcus sp.* isolated from different foods purchased in markets of Porto Alegre-RS. Bacteria were isolated from ten different types of foods, such as cassava, beet, potato, sweet potato, parsley, kale, raw meat, pasteurized milk and dairy products, such as colonial cheese and ricotta cheese. Twelve colonies were selected from each food and subjected to morphological, biochemical and molecular identification using the PCR technique. Strains were tested for susceptibility to 12 antimicrobials used in the human or veterinary clinic. A total of 310 *Enterococcus* strains were isolated from food, confirmed by PCR and classified as *Enterococcus faecalis* (n=171), *Enterococcus casseliflavus* (n=103), *Enterococcus hirae* (n=17), *Enterococcus faecium* (n=6), *Enterococcus durans* (n=3) and *Enterococcus sp.* (n=5). The results of antimicrobial susceptibility test showed that strains were resistant to rifampicin (37.4%), tetracycline (27.5%), erythromycin (18%), streptomycin (14.5%), linezolid (6.7%), nitrofurantoin (5.5%), norfloxacin (4.8%), gentamicin (3.5%), ciprofloxacin (1.6%), chlorofenicol (1.3%) and, ampicillin (0.6%), . The data described here demonstrated resistance phenotypes to a range of antibiotics of clinical relevance, which warns us of the importance of the food chain in the dissemination of antimicrobial resistance.

Keywords: Enterococcus, food, antimicrobials.

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