TITLE: SENSITIVITY PROFILE OF STAPHYLOCOCCUS SPP AND ESCHERICHIA COLI ISOLATED FROM HAM TO ANTIBIOTICS OF PHARMACEUTICAL USE

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ABSTRACT:

Ham is considered one of the noble products of the meat industry being widely consumed and appreciated by the world population due to its sensorial characteristics like flavor and aroma. Their demand is growing, as consumers are looking for more and more quality food, fresh and easy to prepare. However, bad conditions in the elaboration, fractionation and storage can make it a food transmitter of pathogenic microorganisms. The development of antimicrobials in the last decades led to the emergence of several drugs with an increasingly broad spectrum of action and the exposure triggered bacterial resistance, restricting the therapeutic options of the infectious processes making fundamental to periodic revaluations in the susceptibility profile. The predominance of increasingly resistant bacterial species is due to the indiscriminate and irresponsible use of antibiotics, human or veterinary. The objective of this study was to evaluate the sensitivity of *Staphylococcus* spp and *Escherichia coli* derived from ham to antibiotics for pharmaceutical use. Of the 40 analyzed samples, *Staphylococcus* spp. Of nine samples and *Escherichia coli* of 12 samples. Bacteria grown on Baird-Parker agar and Methylene Blue Eosin agar, respectively, were transferred to BHI broth and incubated at 36 °C for 48 hours. After the growth, the antimicrobial test was performed by Mueller-Hinton Agar with the following antibiotics for *Staphylococcus* spp: Penicillin G, Amicacin, Cephalexin, Erythromycin, Ampicillin and Rifampicin and for *Escherichia coli*: Amoxicillin, Polymyxin B, Nitrofurantoin, Ciprofloxacin, Gentamicin and Amicacin. The reading methodology was performed by measuring the inhibition halos formed around the disks, measured with pachymeter after 24h of incubation at 37 °C. Of the *Staphylococcus* spp strains, 44.5% presented resistance to Erythromycin, 33.4% to Ampicillin and 22.3% to Gentamicin. Of the strains of *Escherichia coli*, 16.7% presented resistance to Amoxicillin, 25% to Polymyxin B and 33.4% to Gentamicin. *Staphylococcus* spp and Escherichia coli are considered high-incidence food-borne bacteria and the resistance to antimicrobials tested is a concern presenting a significant potential risk to public health, making it difficult to treat human and animal diseases.

Keywords: Bacterial Resistance; Ham; Staphylococcus spp., Escherichia coli