

EVALUATION OF THE ANTIBIOTIC RESISTANCE OF CAMPYLOBACTER JEJUNI STRAINS ISOLATED FROM INDUSTRIAL AND ECOLOGICAL CHICKENS.

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INTRODUCTION

Antibiotic resistance is a very important problem today, since most bacteria pathogenic to humans are resistant to one or more of the antibiotics that could be used to treat the corresponding disease. It is estimated that, if the current rate is maintained, by 2050 it will be the leading cause of death (with 10 million deaths). An example is *Campylobacter jejuni*, which is isolated mainly in poultry meat. If the raw material is contaminated, it can cause an illness characterised by severe diarrhoea, if consumed and, if the etiological agent contains antibiotic resistance genes, these can be transferred not only to the bacteria of the microbiota but also to those of the environment. As a result, it becomes more difficult to treat diseases of bacterial origin.

METHODOLOGY

In this study, samples obtained from chickens from industrial farms are compared with other samples from organic chickens to demonstrate the possible presence of *C. jejuni* strains and, if obtained, to evaluate their resistance to different antibiotics. In order to isolate the samples, they are enriched with Bolton broth and then sowed on CASA agar, which is a selective medium for the detection of *Campylobacter*. The bacteria is then transferred to blood Agar for colony isolation and to perform the oxidase test and the hydrolysis of sodium hippurate. Finally, with Müller Hinton agar, antibiograms are performed to test tetracycline, ceftiofur, gentamicin, trimethoprim-sulfamethoxazole, streptomycin, meropenem and enoxacin.

RESULTS

Colonies compatible with *C. jejuni* were isolated from both types of sample. Once the antibiograms were performed to evaluate the possible resistance to different antibiotics, it was observed that strains resistant to some of the antibiotics tested were isolated in the two types of chicken. It should be noted that there was a greater number of resistant strains in the industrial chicken samples than in the organic ones.

DISCUSSION

This reflects the fact that organic chickens have better sanitary conditions than industrial chickens. This may be associated with the fact that industrial chickens live under more stressful conditions and with a large accumulation of faeces.