TITLE: RESISTANCE TO FLUOROQUINOLONE IN *CAMPYLOBACTER JEJUNI* AND *CAMPYLOBACTER COLI* STRAINS ISOLATED FROM FOOD PRODUTION ANIMAL IN RIO DE JANEIRO AND MINAS GERAIS, DURING 2008-2016

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ABSTRACT:

Campylobacter is an important foodborn zoonotic pathogen, and one of the leading causes of human foodborne illnesses (Campylobacteriosis) worldwide, with two thermotolerant species *Campylobacter jejuni* and *Campylobacter coli* being the most common isolated in human infections. When antimicrobial therapy has been indicated, the drugs of choice are the macrolides (e.g., erythromycin) and fluoroquinolones (e.g.,ciprofloxacin). In the last years, antimicrobial resistance, including multidrug resistance (MDR), has been frequently reported in *Campylobacter* spp. In this study, we evaluated the antibiotic resistance profiles of the *C. jejuni* and *C. coli* strains isolated from food production animal in Rio de Janeiro and Minas Gerais states, during 2008 - 2016. Were isolated a total of 71 *Campylobacte*r spp. strains, being 65 (91.5%) of *C. jejuni* and 6 (8.5%) of *C. coli,* which were confirmed by PCR (Polymerase Chain Reaction) method. The methodology used for the antibiotic susceptibility testing was the disk diffusion method and the inhibition zone diameter was interpreted according by the Clinical and Laboratory Standards Institute. This study showed that 87.7% of the strains of *C.jejuni* were resistant to nalidixic acid and ciprofloxacin while in *C.coli* strains were 100%. For the tetracycline *C. coli* showed greater resistance than *C.jejuni* strains 83.3% and 52.3%. The *C.jejuni and C.coli* strains showed susceptibility to gentamicin in more 50%. All the strains had susceptibility to erythromycin. In this study, high levels of resistance to tetracycline, nalidixic acid and ciprofloxacin were observed but no resistance to erythromycin was found. In conclusion, the variations in susceptibility observed the need for continued public health monitoring of *Campylobacter* resistance in Brazilian strains from food production animal.

Keywords: *Campylobacter jejuni*, *Campylobacter coli*, food prodution animal and fluoroquinolone resistance.