

Antimicrobial Susceptibility of *Clostridium difficile* isolated from meat

Tsuchiya, A.C.¹, Kabuki, D.Y.², Kuaye, A.Y.¹

¹Laboratory of Hygiene and Legislation, Department of Food Technology, Faculty of Food Engineering, University of Campinas, Campinas - Sao Paulo. ² Food Microbiology Laboratory I Department of Food Science, Faculty of Food Engineering, University of Campinas, Campinas - São Paulo (Rua Monteiro Lobato, 80 - UNICAMP - Barão Geraldo, Campinas, SP, Brazil, CEP: 13083-862)

Clostridium difficile is an anaerobic bacillus responsible for intestinal disease associated with the antimicrobial therapy, which changes the intestinal microbiota, favoring its colonization and multiplication. Infections are related to the contamination in hospitals, but recent research suggests a possible association with consumption of contaminated foods because *C. difficile* has been isolated from foods animal. We evaluated the antimicrobial susceptibility of cultures of *C. difficile* (n=22) isolated from beef and chicken against 8 antimicrobial (tetracycline, ceftriaxone, metronidazole, clindamycin, vancomycin, ampicillin, moxifloxacin, ceftizoxime), by minimum inhibitory concentration (MIC) technique using E-test strips on Brucella Blood Agar supplemented with hemin and vitamin K. The results were compared with the antimicrobial breakpoints suggested by the Clinical Laboratory Standards Institute for anaerobic bacteria. We observed that 77.3% and 86.4% of isolates were sensitive to metronidazole and vancomycin, respectively - the antimicrobials most used in the treatment of diseases associated with *C. difficile*. The resistance to clindamycin and ceftizoxime were observed in 86.4% and 63.6%, respectively. All isolates were sensitive to ampicillin. Sixteen (72.7%) isolates were susceptible to ceftriaxone. For moxifloxacin, no isolate showed resistance, 13.6% had intermediate sensitivity and 86.4% were sensitive. For tetracycline, 50.0% of the isolates showed sensitivity, 9.1% were intermediate and 40.9% were resistant. No isolate was susceptible to all antimicrobials. Multidrug-resistant was observed in 36.4% of the isolates. Only one isolate showed multidrug-resistant to 4 antimicrobials (vancomycin, tetracycline, clindamycin and metronidazole). Thus, these results are relevant to elaborate therapies in cases of infection by strains of the emerging *C. difficile* resistant to antimicrobial agents.

Key- words: multidrug resistant, meat, diarrhea, infection.

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