

Prevalence and Antimicrobial Susceptibility of Thermophilic Campylobacter Strains Isolated from Humans and Poultry in Batna

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Abstract : Campylobacter are among the most common human bacterial gastroenteritis cases in many countries, and poultry meat is considered as a major source of human campylobacteriosis. This study is conducted, on one hand, to determine the prevalence of infection with thermotolerant Campylobacter both in broiler flocks and men, and to study their sensitivity to antibiotics, and secondly for comparing the two methods of isolation of Campylobacter thermotolerant: technique of passive filtration and selective isolation technique using the Karmali medium. This study examined 310 samples, 260 of avian origin and 50 of human origin, during the period from June 2011 to March 2012. Detecting Campylobacter thermotolerant is conducted using the standard ISO 10272. The results show that 66% (95% CI : 60-72%) of avian samples are contaminated with C. TT (172/260). The study of antibiotic susceptibility revealed that all strains (100%) are resistant to ampicillin and amoxicillin/clavulanic acid, 90% to erythromycin, 66.3% to tetracycline, 53.3% to chloramphenicol and 46.7% to enrofloxacin. However, no resistance is noted to gentamycin. In human samples, three strains of C. thermotolerant are detected, with a contamination rate of 6%. The results of the statistical analysis using the chi-square test (χ^2) showed that Campylobacter infection, on the one hand, had seasonal variation with a summer peak ($p < 0.05$) and, on the other hand, are not influenced by the size of the herd.

Keywords : thermotolerant campylobacter, broiler, man, Karmali

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