Surveillance of enteropathogenic Campylobacter in raw poultry meat and some poultry products in Assiut City

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Abstract:

Campylobacter is considered among the most important pathogens reported as a cause of bacterial enteritis in human. Epidemiological evidence has linked Campylobacter infection in human with poultry and poultry products. One hundred and eighty random samples from broiler carcasses and some poultry products including cecal contents, muscles, liver, gizzard, chicken minced meat and chicken luncheon samples (30 each) were aseptically collected from local poultry slaughter shops and supermarkets at different districts in Assiut province at the period from February to April 2004. These samples were examined for the occurrence of Campylobacter species. The obtained results indicated that Campylobacter species were isolated from 39.17% and 10% of the examined broiler carcasses and poultry products, respectively. Campylobacter species were recovered from muscles, liver and cecal contents with a rate of 53.33%, 20% and 83.33%, respectively. C. jejuni was detected in muscles (16.7%), liver (3.33%), cecal contents (46.7%) and chicken minced meat (20%), meanwhile C. coli was determined in muscles (36.7%), liver (16.7%) and cecal contents (36.7%). Antibiotic resistance patterns were determined for C. jejuni isolates obtained from muscles, liver and chicken minced meat. In addition, plasmid profile were performed to correlate between antibiotic resistance and plasmid carriage among these isolates. It was found that 75% of C. jejuni isolates obtained from muscles, liver and chicken minced meat showed resistance to ampicillin, followed by 50% of the strains were resistant to chloramphenicol in addition 25% of the strains were resistant to erythromycin, gentamycin and tetracycline. Correlation between plasmid profile analysis and antibiotic resistance of the examined strains were discussed. Public health hazard of multiple antibiotic resistant enteropathogenic Campylobacter was discussed and suggestive measures for reduction of Campylobacter in broilers and poultry products were explained.

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