

Phenotypic Characterization of *Listeria* Spp Isolated from Chicken Carcasses Marketed in Northeast of Iran

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Abstract : *Listeria* infections occur worldwide in variety of animals and man. *Listeriae* are widely distributed in nature. The organism has been isolated from the feces of humans and several animals, different soils, plants, aquatic environments and food of animal and vegetable origin. *Listeria monocytogenes* is recognized as important food-borne pathogens due to its high mortality rate. This organism is able to growth at refrigeration temperature, and high osmotic pressure. Poultry can become contaminated environmentally or through healthy carrier birds. In recent decades, prophylactic use of antimicrobial agents may be lead to emergence of antibiotic resistant organisms, which can be transmitted to human through consumption of contaminated foods. In this study, from 200 fresh chicken carcasses samples which were collected randomly from different supermarkets and butcheries, 80 samples were detected as contaminate with *Listeria* spp. and 19% of the isolates identified as *Listeria monocytogene* using multiplex PCR assay. Conventional methods were used to differentiate other species of the *listeria* genus. The results showed the most prevalent isolates as *L. monocytogenes* (48.75%). Other isolates were detected as *Listeria innocua* (28.75%), *Listeria murrayi* (20%), *Listeria grayi* (3.75%) and *Listeria welshimeri* (2.5%). The Majority of the isolates had multidrug resistance to commonly used antibiotics. Most of them were resistant to erythromycin (50%), followed by Tetracycline (44.44%), Clindamycin (41.66%), and Trimethoprim (25%). Some of them showed resistance to chloramphenicol (17.65%). The results indicate the resistance of the isolates to antimicrobials commonly used to treat human listeriosis, which could be a potential health hazard for consumers.

Keywords : *listeria* species, *L. monocytogenes*, antibiotic resistance, chicken carcass

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