

Isolation, Identification and Antibiotic Resistance Profile of *Listeria Monocytogenes* Strains in Red Meats

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Abstract

Background and Objective: *Listeria monocytogenes* is a bacterium transferred by foods and is the agent of many sporadic and epidemic diseases in humans. This study aimed to investigate the prevalence of *L. monocytogenes* and to determine their antibiotic resistance profile in red meats.

Material and Methods: this cross-sectional study was performed on 400 red meat samples obtained from industrial slaughterhouses placed in Kerman, Iran. First, the samples were enriched with Simultaneous Enrichment Broth (SEB), and then plated onto Palcam agar and Tryptic Soy Broth Yeast Extract Broth (TSAYE). After identification of the isolates based on biochemical tests and PCR, the isolates were checked for their antibiotic resistance profile using disk Diffusion

Results: of 400 samples, 12 samples (3%) were contaminated with different species of *Listeria*. Using PCR, *hly* gene was recognized in eight samples (2%) of *L. monocytogenes*. Furthermore, there was a significant difference in isolation rate of lamb samples compared to cow ones. While all of the isolates were resistant to clindamycin, amikacin and chloramphenicol, they were sensitive to penicillin.

Conclusion: in spite of low rate of infection in red meat samples in Kerman city, due to high risk of *Listeria* contamination in red meats, we recommend applying a routine screening to identify this bacterium in our county.

Keywords: *Listeria Monocytogenes*, *Hly Gene*, Red Meat, Antibiotic, Kerman