Occurrence of Listeria spp. in retail meat and dairy products in the area of Addis Ababa, Ethiopia.

Background. Listeriosis, a bacterial disease in humans and animals, is mostly caused by ingestion of Listeria monocytogenes via contaminated food and/or water, or by a zoonotic infection. Globally, listeriosis has in general a low incidence but a high case fatality rate. Objective. The objective of this study was to investigate the occurrence, antimicrobial profiles, and genetic relatedness of L. monocytogenes from raw meat and dairy products (raw milk, cottage cheese, cream cake), collected from the capital and five neighboring towns in Ethiopia. Methods. Two hundred forty food samples were purchased from July to December 2006 from food vendors, shops, and supermarkets, using a cross-sectional study design. L. monocytogenes were isolated and subjected to molecular serotyping. The genetic relatedness and antimicrobial susceptibility patterns were investigated using pulsed-field gel electrophoresis (PFGE) and minimum inhibitory concentration determinations. Results. Of 240 food samples tested, 66 (27.5%) were positive for Listeria species. Of 59 viable isolates, 10 (4.1%) were L. monocytogenes. Nine were serotype 4b and one was 2b. Minimum inhibitory concentration determination and PFGE of the 10 L. monocytogenes isolates showed low occurrence of antimicrobial resistance among eight different PFGE types. Discussion and Conclusions. The findings in this study correspond to similar research undertaken in Ethiopia by detecting L. monocytogenes with similar prevalence rates. Public education is crucial as regards the nature of this organism and relevant prevention measures. Moreover, further research in clinical samples should be carried out to estimate the prevalence and carrier rate in humans, and future investigations on foodborne outbreaks must include L. monocytogenes.

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