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Select Abstract:

Outbreak of Listeriosis Associated with Imported and Cross-Contaminated Cheeses — Multiple States, March–October 2012

Authors: Michael Gronostaj, K.E. Heiman, B. Garalde, M. Adams-Cameron, S. Beam, L. Joseph, Z. Kucerova, J. Lando, P. LeBlanc, M. Metz, G. Ray, E. Ricotta, A. Sabol, A. Saupe, H. Waechter, A. Wellman, R. Tauxe, P.M. Griffin, B. Silk

Background: Listeriosis causes ~255 U.S. deaths annually. In July 2012, a case was reported to Allegheny County (Pennsylvania) Health Department. *Listeria monocytogenes* was isolated from two different soft cheeses from the patient's refrigerator and one at a retail outlet. PulseNet identified four patient isolates with indistinguishable pulsed-field gel electrophoresis (PFGE) patterns. CDC, FDA, and health officials investigated to identify the source and prevent further illness.

Methods: We defined cases as *Listeria* infection with the outbreak strain during March–October 2012. We compared patients' food exposures reported on standard questionnaires with those of patients with sporadic listeriosis reported to CDC during 2008–2012. We reviewed retail inventories to prioritize cheese testing. Isolates were characterized by using PFGE and multilocus variable-number tandem-repeat analysis (MLVA).

Results: Fourteen states reported 22 cases (4 deaths, 1 fetal loss). Soft-cheese consumption was reported more commonly among outbreak-associated than sporadic patients (odds ratio = 17.3; 95% confidence interval: 2.0–825.7); no specific cheese was initially reported by ≥ 2 patients. In follow-up interviews, 10/11 (91%) patients reported consuming 10 different cut and repackaged soft cheeses. The outbreak strain was isolated from four cut and repackaged cheeses from wholesale, retail, and residential locations, and from multiple intact wheels of Italian ricotta salata cheese. Fourteen (78%) of 18 patients interviewed were linked to ≥ 1 soft cheese; seven were directly linked to the ricotta salata. FDA issued an import alert, and the U.S. distributor recalled the cheese. Four outbreak-related PFGE subtypes were indistinguishable by MLVA.

Conclusions: Imported ricotta salata was the outbreak source. Cross-contamination of cut and repackaged cheeses expanded the outbreak. This first U.S. listeriosis outbreak associated with cross contaminated cheeses led to a multinational recall.

Keywords: listeriosis, *Listeria*, foodborne diseases, cheese