

Clostridium difficile in pork and retail meat in Texas

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Abstract

The incidence and severity of disease associated with toxigenic *Clostridium difficile* (Cd) have increased in hospitals in North America from the emergence of newer, more virulent strains of Cd. Toxigenic Cd has been isolated from food animals and retail meat with potential implications of transfer to humans. The objective of the present study was to determine the prevalence of Cd in pork from sausage manufacturing plants and retail meat in Texas, and to compare two different enrichment techniques for isolation of Cd from meat. We detected 23 Cd isolates from 243 meat samples (9.5%) from three sausage manufacturing plants and five different retail meat outlets from 2004 to 2009. Twenty-two isolates were toxin A+, toxin B+, binary toxin+, and were characterized as toxinotype V, PFGE type-NAP7 or "NAP7-variant". Susceptibilities to 11 antimicrobial agents in this study were similar to those reported previously for toxinotype V isolates, although our results suggested somewhat less resistance than reported for other meat, animal, or human clinical toxinotype V isolates. Comparison of the enrichment techniques demonstrated that an extended enrichment of 15 days produced 23 isolates whereas a 7 day enrichment method produced 11 isolates (P = 0.03).