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Pathogenic *Yersinia enterocolitica* in retailed raw meat products in the Czech Republic

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Yersinia enterocolitica is the most common cause of human yersiniosis and undercooked pork has been suggested as its primary source. Nevertheless, data on the prevalence of pathogenic *Y. enterocolitica* in foodstuffs are limited. A total of 93 samples of minced meat containing pork, 50 pig tongues and 50 pig hearts purchased at nine retail outlets in Brno (Czech Republic) were examined for the presence of pathogenic *Y. enterocolitica*. Using the real time PCR, 45 (23.3%) samples were positive for the presence of the species-specific *ail* gene which occurs only in pathogenic *Y. enterocolitica*. The highest prevalence was found in pig tongues (40%), followed by pig hearts (18.0%) and minced meat samples (17.2%). *Ail*-positive samples were examined by culture methods to obtain isolates of pathogenic (*ail*-positive) *Y. enterocolitica* for their further characterization. A total of 35 isolates was obtained from pig tongues (n=7) only. All isolates belonged to biotype four, two serotypes were identified: O:3 (71.4% of isolates) and O:9 (28.6%). All isolates were susceptible to ceftazidime, imipenem, meropenem, chloramphenicol, tetracycline, colistin, tobramycin, trimethoprim/sulfamethoxazole, nalidixic acid, ciprofloxacin, norfloxacin and enrofloxacin. Intermediate resistance to cefotaxime (17.1%) and cefepime (5.8%) was observed. All isolates were resistant to ampicillin, resistance to gentamicin was found in 20% of isolates, one isolate (2.9%) was intermediately resistant. Our results indicated that raw pork products could be a source of pathogenic *Y. enterocolitica* at the retail level in the Czech Republic. Sufficient heat treatment and prevention of cross-contamination during preparation should be recommended.

Biography

Alena Lorencova has completed her PhD at the University of Veterinary and Pharmaceutical Sciences Brno (Faculty of Veterinary Hygiene and Ecology) in 2004. She works at the Veterinary Research Institute (Brno, Czech Republic) in Department of Food and Feed Safety as a Specialist Research in the field of Food Microbiology, Food Safety and Food Technology. Another subject of her interest is "Animal nutrition, especially the impact of different types of alternative feed additives (e.g., humic substances) on animal health and performance". She participates in teaching to students at the University of Veterinary and Pharmaceutical Sciences Brno and Masaryk University, Brno, Czech Republic.

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