Abstract

Shiga toxin-negative Escherichia coli O157 strains of various H types have been associated with diarrhea in children and are considered potentially pathogenic for humans. In this study, we describe non-Shiga toxin-producing E. coli O157 E. coli strains previously obtained from dogs in Argentina. Different E. coli phylogenetic lineages corresponding to flagellar types H16, H29 and H45 were identified. E. coli serotypes O157:H16 and O157:H45 contained intimin subtypes e and a1, respectively. Serotype O157:H45 carried the bfp gene encoding the bundle-forming pilus. Localized adherence-like patterns to HEp-2 cells were observed in O157:H16 strains, while O157:H45 adhered in a typical localized pattern. A total of eight different XbaI-pulse field electrophoresis patterns with more than 74 % similarity were identified among the nine E. coli O157:H16 strains. Our data emphasized the fact that dogs may harbor human pathogenic E. coli O157 which do not correspond to Shiga toxin-producing strains and whose potential human health hazard should not be underestimated.

Keywords

Escherichia coli, O157, non-Stx, dogs.