Chapter 7
Epidemiology of *Escherichia coli* Serotype O157:H7

Escherichia coli O157:H7 is a recently recognized pathogen that causes a dysentery-like illness. The disease is typically a bloody diarrhea, often without prominent fever, that can be complicated by hemolytic uremic syndrome. It is primarily found in developed countries. Only one confirmed outbreak has occurred in a developing country–in Swaziland in 1992 affecting 20,000 persons. Other outbreaks have been thought to occur but have not been confirmed.

The major modes of transmission are through undercooked beef, unpasteurized milk, and foods that have come in contact with materials of animal origin. Waterborne outbreaks have been reported, as have outbreaks associated with swimming in contaminated lakes.

The organism produces toxins similar to those produced by *Shigella dysenteriae* serotype 1. Treatment with antimicrobial agents has not been demonstrated to be useful in improving the course or outcome of infection with *E. coli* O157:H7. In fact, treating with some agents may actually worsen the outcome. Since no treatment is recommended, it is not necessary to test the antimicrobial susceptibility of isolates of *E. coli* O157:H7.

Laboratories should be familiar with this organism and should periodically look for it in stools from patients with bloody diarrhea. It is not necessary to examine every stool submitted to the laboratory for *E. coli* O157:H7, but it should be considered in outbreaks of dysentery in which *Shigella* spp. are not isolated from the stools of patients with bloody diarrhea. Laboratory supplies required for diagnosis of *E. coli* O157:H7 are listed in Annex H.

Reference

World Health Organization. Prevention and control of enterohemorrhagic *Escherichia coli* (EHEC) infections. Report of a WHO Consultation. Geneva, Switzerland, 28 April-1 May 1997. WHO/FSF/FOS/97.6.