

عنوان مقاله:

Verotoxigenic E. coli as an emerging foodborne infection

محل انتشار:

بیستمین کنگره بین المللی میکروب شناسی ایران (سال: 1398)

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نویسنده:

M Bonyadian - Department of Food Quality Control, Institute of Zoonoses Research, Shahrekord University, Shahrekord, Iran

خلاصه مقاله:

Verotoxigenic Escherichia coli (VTEC) or Shiga toxin-producing Escherichia coli (STEC) is an important pathogen that can cause diarrhea or hemorrhagic colitis in humans. Hemorrhagic colitis occasionally progresses to hemolytic uremic syndrome (HUS), an important cause of acute renal failure in children and morbidity and mortality in adults. In the elderly, the case fatality rate for HUS can be as high as 50%. Escherichia. Coli O157: H7 has been recognized as a cause of this syndrome since the 1980s. The reservoirs for STEC O157: H7 are ruminants, particularly cattle and sheep, which are infected asymptotically and shed the organism in feces. Other animals such as rabbits, pigs, and poultry can also carry this organism. Infections with STEC in other serogroups, including members of O26, O91, O103, O104, O111, O113, O117, O118, O121, O128, and O145, are increasingly recognized as causes of hemorrhagic colitis and HUS. Humans acquire STEC by direct contact with animal carriers, their feces, and contaminated soil or water, or via the ingestion of underdone ground beef, other animal products, and contaminated vegetables and fruits. The infectious dose is very low, which increases the risk of disease. There are many studies that showed the prevalence of E. coli O157: H7 is not high in Iran not only in human but also in animals and food animal origins (meat, milk,). But other verotoxigenic E. coli strains than O157 H: 7 are more prevalent in Iran. Thorough cooking of raw meats, pasteurization of milk, treatment of private water supplies, and the avoidance of cross-contamination from raw meats or cattle feces to other foods are the most effective ways of preventing STEC infections. Generally, the detection of STEC is laborious, and currently, there are no simple, inexpensive methods available for routine isolation of all STEC strains. Good hygiene practices at processing plants including monitoring for microbiological indicators (Enterobacteriaceae and in generic E. coli) to determine the effectiveness of those practices is likely to be the most an effective method for reducing the public health risks for STEC infection

کلمات کلیدی:

Escherichia coli, Verotoxin, Foodborne infection

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