The prevalence of diarrheagenic *Escherichia coli* Pathotypes in patients with gastroenteritis infection referred to Shiraz teaching hospitals

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**Abstract**

**Introduction:** *Escherichia coli* can be an innocuous resident of the gastrointestinal tract; it also has the pathogenic capacity to cause significant diarrheal and extra intestinal diseases. Pathogenic variants of *E. coli* pathotypes cause much morbidity and mortality worldwide. The seriousness of pathogenic *E. coli* is exemplified by dedicated national and international surveillance programs that monitor and track outbreaks; unfortunately, this surveillance is often lacking in developing countries. This comprehensive review highlights recent advances in our understanding of the intestinal pathotypes of *E. coli*.

**Materials and Methods:** In this study, the prevalence of diarrheagenic *Escherichia coli* (DEC) from patients with gastroenteritis infection referred to Shiraz University of Medical Science hospitals were evaluated. The polymerase chain reaction (PCR) was used to detect six pathotypes of DEC.

**Results:** In 1050 patients with diarrhea, 306 DEC infections were detected. Diffusely adherent *E. coli* (DAEC) (59.7%) was the most common pathotype. Enterotoxigenic *E. coli* (ETEC), (UPEC), Enteroaggregative *E. coli* (EAEC), enterohemorrhagic *E. coli* (EHEC) and enteroinvasive *E. coli* (EIEC) were found in 46.53%, 22.9%, 17.4%, 12.5% and 4.9% of cases, respectively. Enteropathogenic *E. coli* (EPEC) was not detected.

**Conclusion:** Our research has highlighted that two pathotypes of DAEC and ETEC are two most important strains have role in diarrhea. In this study, we provide a clinical perspective on the management of patient’s infection or colonized with different type of *E.coli*. 