

## **Molecular Identification of Enteropathogenic Escherichia coli (EPEC) in Children with Diarrheal in the Ardebil**

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### ***ABSTRACT***

**Background and objectives:** Infectious diarrhea is one of world leading causes of morbidity and mortality, resulting in about two million deaths per year. Enteropathogenic Escherichia coli (EPEC) are one of the pathotypes causes diarrhea. In the present study the EPEC isolates will be investigated by PCR among diarrheal children with diarrhea.

**Materials and methods:** The 363 stool samples directly were cultured on TSB (Tryptic soy Broth) and after cultured on Mac conkey plates, and finally were confirmed as E.coli by IMVIC(Indol,MR,VP,Citrat)test. The DNA was extracted from the E.coli isolates and were subjected to PCR for molecular detection of EPEC.

**Results:** In total, 194 of 363 strains (53.15%)were identified as E.coli. The PCR was performed during 2 stages: first stage with escv primers, those were positive with this gene were subjected to second round of PCR with bfpB primers. On the basis of PCR analysis EPECs were classified as typical (escv+ bfpB+) or atypical (escv+ bfpB- ). In this study, atypical EPEC was diagnosed in 28(14.5%) isolates and typical EPEC strains were isolated from 2(1%) isolates.

**Conclusion:** while typical EPEC have been regarded as one of the leading cause of infantile diarrhea in developing countries, atypical EPEC is the causative agent in industrialized countries. Resent data suggests that atypical EPEC are prevalent among diarrheal patient and more epidemiological studies in this regard are required to be performed in other regions.

**Key words:** diarrhea, EPEC, PCR