

عنوان مقاله:

Prevalence and Antibiotic Resistance Pattern of Diarrheagenic Escherichia coli Pathotypes Among Children under 5 Years in Khuzestan, Iran

محل انتشار:

میکروبیولوژی بالینی و عفونت، دوره 10، شماره 2 (سال: 1402)

تعداد صفحات اصل مقاله: 6

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خلاصه مقاله:

Background: Diarrhea is a life-threatening cause of high mortality, especially among children living in areas with poor sanitation. Enterobacteriaceae is one of the serious causes of bacterial diarrhea in children and adults. In this family, infection with diarrheagenic Escherichia coli (DEC) pathotypes in children is associated with extensive health risks and is of particular importance. In this study, we compared the distribution of pathotypes, epidemiological patterns, and antibiotic resistance of DEC in two diarrheal and non-diarrheal groups among children less than 5 years. Methods: In this study, 303 stool samples were collected from patients admitted to Golestan hospitals in Ahvaz and Dr. Ganjavian in Dezful, Khuzestan. To this end, 201 samples from children with diarrhea (case group) and 102 samples from healthy children (control group) were examined. DEC was characterized by polymerase chain reaction (PCR) for each stool sample, and DEC isolates were tested with antibiotic resistance tests against different antibiotic agents to identify the prevalence of multidrug-resistant (MDR) strains in both groups. Results: DEC was found in 24% (48 out of 200) of the children with diarrhea and 3.8% (4 out of 103) of the healthy children. Enterotoxigenic E. coli (EPEC) was the DEC most frequently associated with diarrhea (32 out of 48, 66.6%), which was followed by enteropathogenic E. coli (EPEC) 22.9% (11 out of 48, 22.9%), and enterotoxigenic E. coli (ETEC) (5 out of 48, 10.4%) from children with diarrhea. Four DEC isolates were identified in healthy children: EAEC (2 out of 4, 50%) and EPEC (2 out of 4, 50%) in the healthy group, but no enteroinvasive E. coli (EIEC) or enterohemorrhagic E. coli (EHEC) strains were found in both groups in this study group. In general, DEC isolates exhibited high resistance to ceftriaxone and cefotaxime, and 33 (63.4%) isolates of DEC were MDR. Conclusion: A high prevalence of DEC strains was observed in the group of children with diarrhea and healthy children. Accordingly, further attention should be paid to continuous monitoring of the prevalence and pattern of antibiotic resistance of diarrheal bacterial isolates among children and the whole community.

کلمات کلیدی:

لینک ثابت مقاله در پایگاه سیویلیکا:

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