

عنوان مقاله:

Molecular characterization of enterotoxigenic Escherichia coli isolated from neonatal calves diarrhea

محل انتشار:

گفتمان پژوهش دامپزشکی، دوره 10، شماره 1 (سال: 1398)

تعداد صفحات اصل مقاله: 6

نویسندگان:

Zahra Yadegari - *Department of Microbiology and Immunology, Faculty of Veterinary Medicine, University of Tehran, Tehran, Iran*

Gholamreza Nikbakht Brujeni - *Department of Microbiology and Immunology, Faculty of Veterinary Medicine, University of Tehran, Tehran, Iran*

Reyhaneh Ghorbanpour - *Department of Microbiology and Immunology, Faculty of Veterinary Medicine, University of Tehran, Tehran, Iran*

Farhad Moosakhani - *Department of Microbiology, Faculty of Veterinary Medicine, Branch of Karaj, Islamic Azad University, Karaj, Iran*

Samad Lotfollahzadeh - *Department of Internal Medicine, Faculty of Veterinary Medicine, University of Tehran, Tehran, Iran*

خلاصه مقاله:

Enterotoxigenic Escherichia coli (ETEC) produces different virulence factors allowing the bacterium to colonize and develop watery diarrhea. Proteomics studies have also introduced new protein belonging to the secretion pathways, antigen ۴۳ (Ag۴۳), which plays important role in E. coli pathogenesis. The objective of this study was to investigate O-types and virulence factors of E. coli isolates from neonatal calves diarrhea. Total of ۱۲۰ isolates from diarrheic calves were genotyped for their O groups and the presence of virulence genes K۹۹, F۴۱ and STa as well as Ag۴۳. The predominant O-type was O۱۰۱ (۵۱.۰۰%) and the prevalence of K۹۹, F۴۱ and STa was ۷ (۵.۸۰%). The Ag۴۳ was detected in all samples with three different allelic patterns. Our results indicated that K۹۹ positive isolates certainly have one of each ۲۲۰۰ bp or ۱۸۰۰ bp or both copies of Ag۴۳ passenger domain, while negative K۹۹ isolates lack the Ag۴۳. The results reported here provide informative data regarding the prevalence of E. coli O-types and their virulence factors in enteric colibacillosis. The Ag۴۳ that was more found in K۹۹ positive isolates might be associated with diarrhea-causing E. coli strains in neonatal calves.

کلمات کلیدی:

Antigen ۴۳, Calf, Diarrhea, Enterotoxigenic Escherichia coli, O-type

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1818608>



