

عنوان مقاله:

PHENOTYPIC AND GENOTYPIC CHARACTERISTICS OF THE FIRST ESCHERICHIA COLI FECAL ISOLATES REPORTED FOR SEROGROUPS O55, O104 AND O118 ISOLATED FROM LIVESTOCK IN KHUZESTAN, IRAN

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خلاصه مقاله:

Background and Aim: STEC strains as zoonotic agents are public health concern around the world and domestic livestock are among the most important reservoirs of these strains. Determination of serogroup of isolates can be a useful tool in preventing and treating infections caused by these strains, as well as epidemiological studies. Methods: A total of 42 STEC were obtained from 205 calves (healthy and diarrheic) and dairy cows. Determination of serogroup, phylogenetic group, class I integron, some of the virulence factors and ESBLs production of these isolates were performed separately by PCR method. Phenotypic ESBL-producing E. coli was determined using the double disk diffusion method too. Results: Only 5, 4 and 1 isolates were serogroup O55, O104 and O118, respectively. The phylogenetic group B1 was dominant and one O118 isolate from the cow was ESBLs positive and had the blaCTX-M-1 gene alone. All isolates had astA gene and no one had aerobactin and enterohemolysin genes. Two isolates had class I integron gene too. Conclusion: It seems to be the first report of the presence of these serogroups in Iran. According to the importance of serotype O104:H4 in the development of sudden diarrhea epidemics in the European population such as Germany, the close genetic similarity between serogroup O55 and O157 and the role of serogroup O118 in the case of calf disease, more studies in order to identify the abundance and recognize the characteristics of these serogroups, is recommended.

کلمات کلیدی:

Escherichia coli fecal isolates, serogroups, livestock

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