Abstract
diarrhea is one of the important cause of disease and mortality in newborn and young calves and is considered as cause of economical loss depression, decrease of exploitation and production, increase of mortality and incidence of disease. *E. coli* is one of the most common factor of diarrhea in newborn and young calves. Among the strains associated with diarrhea, STEC and ETEC can more important. Stx₁ and Stx₂ are main virulence factors of STEC and K99 is a acuity factor of ETEC strain. The aim of this study was to collect data about bovine *E. coli* infections leading effective and efficient control in dysentery syndrome of calves and its damages in Sistan province of Iran. 50 stool samples of healthy calves and 50 stool samples of calves with diarrhea were collected in a 6 months period, from September 2015 to February 2016. The samples were randomly collected from cow farms of Sistan of Iran. After culturing of stool samples and isolation of *E. coli*, the presence and frequency of mentioned genes was evaluated by using specific primers. The incidences of Stx₁ were 24% and 8% in diarrheal and healthy calves, respectively, and the difference was significant. The incidences of Stx₂ were 16% and 14% in diarrheal and healthy calves, respectively, and the difference was not significant. The frequency of K99 gene in healthy and diarrheal calves was observed zero. The frequency of Stx₁ gene was higher in diarrheal calves compared to healthy ones that might be due to the presence of higher numbers of bacteria in diarrheal calves because of their immune system weakness and proliferation of bacteria. Also, the incidence of Stx₂ gene was higher in diarrheal calves since they usually have higher percentages of risk factors because of infective factors and also acuity factors comparing with healthy calves. The frequency of STEC is also higher in diarrheal calves. The reason of negative frequency of K99 gene might be due to antibiotic therapy. The frequency of this gene was not consistent with other regions. The incidence is usually different in different areas. With regards to predisposing factors of dysentery in calves, it is possible that using Precautionary management in farms is effective in decreasing diarrhea between newborns.

Keywords: *E. coli*, healthy calves, diarrheal calves, stool, Stx₁, Stx₂, K99
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Prevalence of *Escherichia coli Stx*<sub>1</sub>, *Stx*<sub>2</sub> and *K99* virulence factors isolated from healthy and diarrheic cattle feces.

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