

Prevalence of Colibacillosis in Goat Kids in Udaipur district of Rajasthan

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ABSTRACT

Colibacillosis is an economically important disease of goat kids. In the present study, total 126 goat kids up to 3 months of age were screened to find out prevalence of colibacillosis in Udaipur district of Rajasthan. The overall prevalence of colibacillosis in goat kids up to 3 month of age was found to be 17.46 percent (22/126). The occurrence of colibacillosis among 70 diarrhoeic kids was found to be 31.43% (22/70). There was highly significant difference in the prevalence of colibacillosis in goat kids in different age groups ($P > 0.05$). The prevalence of colibacillosis was found decreasing with the increase of the age in the kids. The prevalence of colibacillosis was significantly higher in female kids than male kids. ($P \leq 0.05$).

Keywords: Colibacillosis, Goat kids, Prevalence, Udaipur district.

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INTRODUCTION

Goat farming is not only a commercial enterprise but also a mode of life which contributes substantially to farmer's income as well as in national economy (Sarker and Islam, 2011). Goat rearing has the potential to emerge as a very good source of income and employment for the rural youth especially in the adverse environments. According to the 20th Livestock Census, total goat population is 148.88 million, registering an increase of 10.1% over the quinquennial census (Patel *et al.*, 2020). Diseases are the major cause of mortality leading to economic losses to the farmers (Kumar *et al.*, 2003; Dohre *et al.*, 2013).

Among various diseases, diarrhoea is one of the most common causes of mortality in goat kids (15–40%). Diarrhoea is a costly disease causing great economic losses to goat rearers. Economical losses from diarrhoea in goats include decreased performance, high morbidity, mortality and expensive medication and labour to treat sick animals (Sharma and Joshi, 2018). Neonatal diarrhoea is a major cause of morbidity and mortality in goat kids (Todd *et al.*, 2008). Colibacillosis is the most common diarrhoeal disease of kids leading to morbidity and mortality in kids (Raji, 2014; Sahoo *et al.*, 2015). Colibacillosis is an important indicator of poor management practices including poor nutrition, hygiene and environmental contamination (Rosilawati, 2016). Colibacillosis is mainly associated with low concentrations of immunoglobulins (Sharma *et al.*, 2013). Looking into the above facts, present investigation was undertaken to find out the prevalence of colibacillosis in goat kids up to 3 months of age in Udaipur district of Rajasthan.

MATERIALS AND METHODS

In the present study, a total of 126 goat kids up to 3 months of age were screened to find out prevalence of colibacillosis

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in Udaipur district of Rajasthan. 70 out of 126 kids were found Diarrhoeic. Rectal swabs from diarrhoeic goat kids were collected and subjected to isolation and identification of *E. coli* using standard procedures as described by Cowan and Steel (1975). The prevalence of colibacillosis in goat kids was calculated on per cent basis. The effect of age and sex on prevalence of colibacillosis was also studied. The data was analysed using statistical method described by Snedecor and Cochran (1994).

RESULTS AND DISCUSSION

Prevalence of colibacillosis in goat kids

The prevalence of diarrhoea in goat kids up to 3 months of age was found to be 55.56 percent (70/126) in the study area. The overall prevalence of colibacillosis in goat kids up to 3 month of age was found to be 17.46 percent (22/126). The

Table 1: Age group wise prevalence (%) of colibacillosis in goat kids

Age group (months)	Diarrhoeic kids (70)	Colibacillosis (22)
0-1	40% (28)	45.45%** (10)
1-2	28.57% (20)	31.81%** (7)
2-3	31.40% (22)	22.72%** (5)

Figure in parenthesis indicate number; ** highly significant at $P \leq 0.01$

occurrence of colibacillosis among 70 diarrhoeic kids was found to be 31.43% (22/70).

Almost similar prevalence of colibacillosis was reported by Ahmed *et al.* (2010) and Turkyilmaz *et al.* (2014) in goat kids. Hardik (2017) and Tarabees *et al.* (2016) reported higher prevalence of colibacillosis in kids than present study.

Age group wise prevalence of Colibacillosis

The age group-wise prevalence of colibacillosis in goat kids is shown in Table 1. The distribution of colibacillosis in goat kids in different age groups viz. 0-1 month, 1-2 months and 2-3 months was 45.45%, 31.81% and 22.72%, respectively. There was highly significant difference in the prevalence of colibacillosis in goat kids in different age groups ($P > 0.05$). The prevalence of colibacillosis was found decreasing with the increase in the age of the kids.

Similar finding has been reported by Petros *et al.* (2014), Raji (2014), Rosilawati *et al.* (2016) and Hardik (2017). Sharma and Joshi (2018) reported similar findings in calves. Colibacillosis affects goat kids at an age when they have immature immune status, lacks specific antibody and sometimes deprivation of colostrum feeding.

Sex wise prevalence of colibacillosis in kids

The overall prevalence of colibacillosis was higher in female kids (63.64%) than male kids (36.36%). Statistically, there was significant difference in the prevalence of colibacillosis in male and female kids ($P \leq 0.05$).

Zaman *et al.* (2018) reported higher occurrence of colibacillosis in female kids than in male kids. It was concluded that prevalence of colibacillosis in goat kids up to 3 month of age was 17.46 percent in Udaipur district of Rajasthan. The prevalence of colibacillosis was found decreasing with the advancement of age of kids. The prevalence was significantly higher in female kids than male kids.

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