Prevalence of *Theileria* spp. infection in sheep in South Khorasan province, Iran

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**Abstract**

The prevalence of *Theileria* spp. infection was studied in sheep in the South Khorasan province in Iran from 2003 to 2004. A total of 840 sheep from 34 flocks were clinically examined and investigated for the presence of *Theileria* spp. in the appropriate blood smears and any tick species on the body of the animals. In this study, 11.9% of sheep were infected with *Theileria* spp., with a parasitemia of 0.02–0.1%. Differences in the infection rates were statistically significant among different areas of the South Khorasan province. The highest prevalence was found in the Ferdows area (31.4%) and the lowest rate in the Nehbandan area (0.7%). The prevalence of *Theileria* spp. infection in males and females and between different age groups of sheep were not statistically significant. Seasonally, the prevalence of *Theileria* spp. infection in sheep reached its highest level in June (26.3%), whereas it decreased in July and August. It was found that 50.5% of the animals harbored *Rhipicephalus sanguineus*, 48.5% harboured *Hyalomma anatolicum* and 0.89% harboured *Hyalomma dromedari*.

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1. **Introduction**

*Theileria* infection in small ruminants is due to the presence of at least four parasitic species. *Theileria lestoquardi* is a highly pathogenic parasite of sheep and goats. Non-pathogenic or mildly pathogenic *Theileria* spp. of small ruminants include *Theileria separatata*, *Theileria ovis* and *Theileria recondita*. However, there is considerable confusion in the taxonomy of non-pathogenic theileriases of small ruminants (Uilenberg, 1995). According to Hashemi-Fesharaki (1997), two species of *T. lestoquardi* and *T. ovis* cause ovine theileriosis in Iran. *T. lestoquardi*, which is a causal agent of malignant sheep and goat theileriosis (Hooshmand-Rad and Hawa, 1973a) was more highly reported from the south and south-east of Iran (Hashemi-Fesharaki, 1997; Razmi et al., 2003a). According to Hashemi-Fesharaki (1997), *T. ovis* is widespread throughout the country. However, there is no epidemiological study about this species. Indeed,