An epidemiological study on ovine babesiosis in the Mashhad suburb area, province of Khorasan, Iran

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Abstract

The prevalence of Babesia spp. infection was studied in sheep of the Mashhad area in Iran from 1998 to 2000. A total of 677 sheep originating from 115 flocks were clinically examined and investigated for the presence of Babesia spp. in appropriate blood smears and any tick species on the body of the animals. The study revealed that the infection rate for Babesia ovis and Babesia motasi were 167 (24.6%) and 4 (0.5%), respectively. Double (mixed) infections occurred in 21 (3%) sheep. Differences in infection rates were statistically non-significant between male and female sheep and between different age groups. Seasonally, the prevalence of Babesia spp. infection started to increase in April and reached highest values in August (56%), while a decrease was observed in September, reaching the lowest levels in February and March. The study demonstrated that 1.7% of sheep infected with B. ovis and 50% of sheep infected with B. motasi exhibited clinical signs. Sheep infected with B. motasi showed the highest levels of parasitemia. We found that 550 (73%) of the animals harbored Rhipicephalus sanguineus; 166 (21%) Hyalomma marginatum; 19 (2.5%) Dermacentor daghestanicus; 14 (1.8%) Hyalomma anatolicum; 6 (0.66%) Haemophysalis punctata. The examination of 727 tick haemolymph samples and 52 tick egg smears showed that one sample (0.2%) of haemolymph of R. sanguineus, two (1.2%) haemolymphs of H. marginatum and two (2%) eggs of R. sanguineus harbored kinetes morphologically matching the criteria described for B. ovis.

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