An Epidemiological Study on *Anaplasma* Infection in Cattle, Sheep, and Goats in Mashhad Suburb, Khorasan Province, Iran

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**ABSTRACT:** The prevalence of *Anaplasma* infection was studied in cattle, sheep, and goats in the Mashhad area from 1999 to 2002. A total of 160 cattle from 32 farms and 391 sheep and 385 goats from 77 flocks were clinically examined for the presence of *Anaplasma* spp. in blood smears. The study revealed that 19.37% of cattle were infected with *Anaplasma marginale* and 80.3% of sheep and 38.92% of goats were infected with *Anaplasma ovis*. Prevalence of *Anaplasma* infection between male and female and between different age groups of cattle, sheep, and goats were statistically nonsignificant. Seasonally, the prevalence of *Anaplasma* infection in sheep and goats reached its highest level in summer, while a decrease was observed in autumn, and reached the lowest level in winter. The seasonal prevalence of *Anaplasma* infection in cattle was not significantly different. Symptomatic cases were not observed in any of the cattle, sheep, and goats. The ranges of anaplasmatemia in infected cattle, sheep, and goats were 0.005–0.5%, 0.01–3%, and 0.01–3%, respectively.

**KEYWORDS:** epidemiology; cattle; sheep; goat; *Anaplasma*

**INTRODUCTION**

Anaplasmosis of cattle, sheep, and goats is an infectious hemoparasitic disease caused by *Anaplasma* spp. In cattle, severe debility, emaciation, anemia, and jaundice are the major clinical signs. The disease is usually subclinical in sheep and goats. *Anaplasma marginale* is the causative agent in cattle and...