

BABESIOSIS AND ANAPLASMOSIS IN CAMELS (*Camelus dromedarius*) OF SAUDI ARABIA

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ABSTRACT

An epidemiological study was conducted on the occurrence of babesiosis and anaplasmosis infection in camels (*Camelus dromedarius*) in the Taif region of Saudi Arabia. A total of 102 blood samples were collected from apparently healthy camels, of varying ages and sex, from three different areas of the Taif region. The blood samples were investigated using Giemsa-stained blood smears and species-specific Polymerase chain reaction (PCR) (targeting 18S rRNA and the major surface protein-1 β encoding genes for *Babesia* and *A. marginale*, respectively). The overall prevalence was 64.70% with a higher infection rate of *Anaplasma* (46.10%) than *Babesia* sp. (18.62%). In addition, there is a co-infection of both pathogens with prevalence rate 19.70%. According to age: the infection rate was highly significant in the younger animals (≤ 5 years) (33.33% and 58.97%) than older animals (> 5 years) (9.52% and 38.09%) for *Babesia* and *Anaplasma*, respectively at $p > 0.05$. On the other hand, according to gender, the infection rate in males (29.73% and 72.97%) was higher than in females (12.31% and 30.77%) for *Babesia* and *Anaplasma* sp., respectively at $p > 0.05$. In conclusion, the present study adds insight into the epidemiology of babesiosis and anaplasmosis in the Taif region, Makkah Province of Saudi Arabia that needs control strategies to focus on the livestock.

Key words: *Anaplasma*; *Babesia*; *Camelus dromedarius*; prevalence; Saudi Arabia