

Kinetics of IgA and eosinophils following a low-dose, predominantly *Haemonchus contortus* infection of Boer goats

ABSTRACT

Aims: Most breeds of goat are more susceptible to nematode infection than sheep, and this appears to be a consequence of less effective immune responses. Several papers have considered the effectiveness of eosinophils and immunoglobulin A (IgA) in goats but differences in the induction of responses have not been studied in the same detail. The aim of this study was to look at the induction of eosinophil and IgA responses in Boer goats reared indoors under intensive conditions. **Method and results:** The goats were experimentally infected with a low dose of 2400 *Haemonchus contortus*, *Trichostrongylus* spp. and *Oesophagostomum* spp. at a 6:1:1 ratio. Faecal egg counts (FEC), packed cell volume (PCV), IgA activity against third-stage larvae and peripheral eosinophilia were measured twice a week for eight weeks. The infection generated an IgA response but did not significantly increase peripheral eosinophilia in the 25 infected kids compared with the 4 control animals. FEC was not associated with IgA activity or eosinophilia. **Conclusion:** A detailed analysis of IgA and eosinophil responses to deliberate nematode infection in Boer goats showed that there was an increase in nematode-specific IgA activity but no detectable eosinophil response. In addition, there was no association between increased IgA activity or eosinophilia with egg counts and worm burdens. These suggest that IgA and eosinophils do not act to control nematode infection in goats.