



P 18 Feeding tick lesion in dogs immunized with the antigen Bm86 and challenged to adults of *Rhipicephalus sanguineus* Latreille, 1806 (Acari: Ixodidae)

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Recent molecular phylogeny studies showed that the *Rhipicephalus* genus includes all 5 *Boophilus* species. The objective was to investigate the host cell influx at the *Rhipicephalus sanguineus* feeding lesion on dogs immunized with Bm86. Mongrel dogs (n=8), 4 m.o., were divided into 2 groups of 4 animals each: non-vaccinated and vaccinated individuals. The latter was given twice 50 µg of antigen Bm86 (Gavac®, Heber-Biotec, Cuba) at a 21-day interval; the other group was given placebo. Each animal was challenged to 55 adults (25 females + 30 males) 21 days after the last dose, and tick feeding lesion biopsies were taken 96 and 144 h post-attachment (PA) with a 5-mm diameter punch, fixed in 10% buffered formalin, processed through routine histology and sections of 4 µm thickness stained with H.E. and Giemsa for general features and cell counts, respectively. The counting areas (0.0052 mm²) were delimited by an integrating graticule (Austria/PK 6.3X) and results expressed as number of cells/mm². In general, histopathology revealed epidermis hyperplasia, tick cement cone, and an inflamed dermis including an inflammatory cell infiltrate constituted overwhelmingly by neutrophils in vaccinated dogs at first and eosinophils and lymphocytes in non-vaccinated hosts. Average numbers of cells in vaccinated dogs were 2019 neutrophils and 577 lymphocytes at 96 h PA and 904 eosinophils, 711 neutrophils, 288 macrophages, and 231 plasma cells at 144 h PA. Average numbers of cells in non-vaccinated dogs were 865 eosinophils, 731 lymphocytes, 154 neutrophils, 135 plasma cells, and 192 basophils at 96 h PA and 1346 eosinophils, 3010 neutrophils, and 96 macrophages at 144 h PA. Overtime, the number of inflammatory cells decreased in vaccinated dogs while the number of eosinophils and neutrophils increased in non-vaccinated dogs. It can be concluded that the antigen Bm86 administered to dogs interferes on the *R. sanguineus*-induced inflammatory cell influx.