RESUMO SIMPLES - ECTOPARASITOS: SISTEMÁTICA, EPIDEMIOLOGIA E CONTROLE

TICK-KILLING EVALUATION OF FLURALANER FOR RHIPICEPHALUS LINNAEI IN ARTIFICIALLY INFESTED DOGS

Carlos Eduardo Marques De Oliveira Filho (caducd12@gmail.com)

Ygor Henrique Da Silva (ygorhenrique97@hotmail.com)

Fabio Scott (scott.fabio@gmail.com)

Iury Brum (iurybrumvet@gmail.com)

Thaís Ribeiro Correia Azevedo (thaisrca@gmail.com)

Lais Sperandio Cassani (lais_cassani@hotmail.com)

Roxanne Marina Da Silva Roque (ROXANEMARINA@HOTMAIL.COM)

Ramon Da Luz Bezerra (ramon.bezerraa@gmail.com)

Ester Oliozi Marré (esterom17@outlook.com)

Brena Gava Guimarães (brenagava@hotmail.com)

Rhipicephalus sanguineus sensu lato, commonly known as the red dog tick, is an ixodid belonging to the phylum Arthropoda, subphylum Chelicerata, class Arachnida, order Ixodida and family Ixodidae, a group that includes ticks commonly referred to as hard ticks. Within this family, the genus Rhipicephalus is one of the most relevant to veterinary medicine, as it includes 12 species with wide distribution and difficult morphological distinction within the Rhipicephalus sanguineus complex. Although dogs are recognised as the primary host, ticks

from this complex can also parasitise other animals. Molecular studies have revealed the existence of at least two genetically distinct lineages within R. sanguineus sensu lato, the tropical lineage and the temperate lineage. These phylogenetic analyses, associated with morphological characteristics, led to the proposal that the tropical lineage represents the species Rhipicephalus linnaei and the temperate lineage represents R. sanguineus s.s., which have different biological, vectorial and susceptibility characteristics to different classes of acaricides. With the growth of the pet market in Brazil, new challenges for the control of these vectors arise every day. Thus, the present study aims to evaluate the tickicidal efficacy of Fluralaner against R. linnaei when administered orally to artificially infested dogs. To conduct this study, 20 Beagle dogs of both sexes, older than 2 months and weighing more than 2 kg, were selected and housed in individual kennels at the Centre for Clinical Research and Technological Innovation in Veterinary Medicine – Laerti Grisi/DPA/IV/UFRRJ, formerly LQEPV, under protocol CEUA No. 2211090525. On day D-9, the dogs were infested with 50 unfed adult ticks of the species R. linnaei, 25 males and 25 females. On day D-7, the animals were combed to assess parasite retention, which should be at least 20% of attached ticks. After counting the ticks on day D-7, the dogs were randomised into two groups of eight animals each: CONTROL, which would receive a placebo; and TREATED, medicated with a palatable tablet formulation containing fluralaner (CEVA – experimental formulation). On day D-2, the dogs were weighed and infested with ticks again. On day D0, the dogs in the TREATED GROUP were medicated with fluralaner at a minimum dose of 10mg per kg orally and in a single administration, according to their body weight range. The animals in the CONTROL GROUP received the placebo at the same dose and via the same route as the treated group. After treatment, the animals were infested with ticks on days D+5, D+12, D+19, D+26, and D+33 and combed to assess efficacy on days D+2, D+7, D+14, D+21, D+28, and D+35. The data were submitted to comparative statistical analyses between the control and treated groups, at a significance level of 95% ($P \leq 0.05$). Thus, the arithmetic means for the counts in the CONTROL GROUP were observed to be D-7 = 37.63; D+2 = 35.50; D+7 = 43.38; D+14 = 35.00; D+21 = 32.88; D+28 = 38.50; and D+35 = 35.63; and for the TREATED GROUP, D-7 = 38.63; D+2 = 0.00; D+7 = 0.00; D+14 = 0.00; D+21 = 0.13; D+28 = 0.00; and D+35 = 0.13. Thus, presenting an average efficacy of 99.88%. The formulation under test proved to be effective in removing adult R. linnaei and preventing reinfestation for 35 days after treatment. This project was funded by the CNPq MAIDAI programme, which

aims to encourage cooperation between universities and industry. In this case, the proposal to develop an innovative formulation for the control of R. linnaei proved successful in controlling this parasite.

Palavras-chave: ectoparasites; isoxazolines; parasite control; dog tick; in vivo test.