Tropical Vet. 19 (2) 58-59 (2001)

Anthropophilic Nature of the Brown Dog Tick, *Rhipicephalus Sanguineus* in Ibadan, Nigeria: A Case Report

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Keywords: Anthropophilic, human ehrlichiosis, epidemiology, *Rhipicephalus Sanguineus*

Running Title: Anthropophilic nature of *R. Sanguineus*

Abstract

A case of human infestation by the brown dog tick, *Rhipicephalus sanguineus* (Latereille, 1806) is reported from a reclaimed area of land for human dwellings. The infestation is attributed to non-availability of rodents, other game animals and reduced number of dogs used for gaming.

Introduction

Throughout most of its range, the brown dog tick *Rhipicephalus sanguineus* prefers dog as a host. It feeds primarily on dogs but can feed also on other mammals and humans (Hooker *et al.*, 1912; Dipeolu, 1975). *R. sanguineus* has been reported as the predominant ticks of dog in Nigeria (Dipeolu and Akinboade, 1982; Ugochukwu and Nnadozie, 1985). There have been reports of *R. sanguineus* infesting man in United States of America, where it is the most prevalent tick of dog (Nelson, 1969; Anonymous, 1987). However, there have not been such report in Nigeria. The reports of human ehrlichiosis believed to be caused by *Ehrlichia canis,* a rickettsial agent that causes (canine ehrlichiosis) and transmitted by *R. sanguineus* (Fishbein *et al.*, 1987, Maeda *et al.*, 1987). make it imperative to report the infestation of human with *R. sanguineus* and the probable epidemiological consequences of such infestation in Nigeria..

Case Report

Ibadan is an urban city in the rain-forest region of Western Nigeria and its rural extensions are fast developing for human dwelling. One of these extensions: Idi-Ahun in the Ibadan Southwest Local Government area was being used for farming and gaming before bush clearing was carried out on a large area of land for buildings. In July 2000, reports of arthroped infestation came from the workers (labourers, bricklayers and carpenters) in this area. They reported that some arthropods crawled in the sleeves of their shirts, trousers and skirts, biting and causing discomfort. A total number of 35 ticks were collected from 8 people and identification showed that 22 were larvae, 10 were nymphs and 3 were adult females of *Rhipicephalus sanguineus.*

Investigation revealed that human infestation occured after bush clearing and became pronounced at the commencement of the rains since people had to pass through bush paths to far distant areas with their dogs for gaming. It was confirmed that the ticks did bite and fed on human. However, the infested human hosts did not allow the ticks to feed to engorgement stage, since the ticks were removed immediately they were noticed.

Discussion

The cosmopolitan brown dog tick, *Rhipicephalus sanguineus* is probably the most prevalent ixodid species (Hoogstraal, 1956) and one of the few that can breed inside houses. It has a few alternative hosts in the United States (Anonymous, 1987). Aeschlimann (1961) reported 3 instances of *R. sanguineus* collected on human in the Ulanga district of Tangayika, in East Africa.

In our report, it was observed that bush clearing and the consequent absence of rodents and other wild animals which act as hosts for the developmental stages and adults of the tick led to its anthropophilic nature. This agrees with the report of Oduye and Dipeolu (1976) who observed an increase in the reproductive activities of *R. sanguineus* during rainy season in Nigeria. Nelson (1969) reported that *R. sanguineus* did not readily attach to human in his host - preferred study and that the brown dog tick apparently prefers non-human host for completion of its development.

Although, Goddard (1989) collected 15 *Rhipcephalus sanguineus* from human, and in all cases, the ticks were firmly attached and 10 of the ticks were actively feeding at the time of removal. Nine ticks were partially engorged and one was fully engorged but the infested human host at Idi Ahun did not allow the ticks to feed to engorgement stage. This human parasitism by *R. sanguineus* may indicate that the species is becoming more anthropophilic and it has serious epidemiological implication. Several pathogenic organism of human and animals are transmitted by the tick (Hoogstraal, 1981) especially human ehrlichiosis believed to be caused by *Ehrlichia canis* (Maeda *et al.*, 1987).

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