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Biting on human body parts of Simulium vectors and its implication for the manifestation of Onchocerca nodules along Osun River, southwestern Nigeria.

Adeleke MA, Sam-Wobo SO, Akinwale OP, Olatunde GO, Mafiana CF.

Public Health Entomology and Parasitology Unit, Department of Biological Sciences, Osun State University, Osogbo;

Abstract

Background: The biting preference of Simulium vectors has been known to influence the distribution of Onchocerca nodules and microfilariae in human body. There is, however, variation in biting pattern of Simulium flies in different geographical locations. This study investigates the biting pattern on human parts by Simulium vectors along Osun river system where Simulium soubrense Beffa form has been implicated as the dominant vector and its possible implication on the distribution of Onchocerca nodules on human body along the river. **Methods:** Flies were collected by consented fly capturers on exposed human parts namely head/neck region, arms, upper limb and lower limb in Osun Eleja and Osun Budepo along Osun river in the wet season (August- September) and the dry season (November-December) in 2008. The residents of the communities were also screened for palpable Onchocerca nodules. **Results:** The results showed that number of flies collected below the ankle region was significantly higher than the number collected on other exposed parts ($p < 0.05$) while the least was collected on head/neck region in both seasons. The lower trunk was the most common site (60%) for nodule location at Osun Eleja followed by upper trunk (40%). Nodules were not found in the head and limb regions. At Osun Budepo, the upper trunk was the most common site of the nodule location (53.8%) followed by the lower trunk (38.5%) and head region (7.7%). **Conclusion:** Though, most of the flies were caught at the ankle region, the biting of other parts coupled with the presence of nodules at the head and upper trunk regions showed that Simulium vectors could obtain microfilariae from any part of the body, thus increasing the risk of onchocerciasis transmission.

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