Abstract

Objective Describing the behaviour of dengue and its vector in Câqueza, Colombia (1 746 masl) by serological, entomological and virological monitoring between March and June 2004. Methods Two types of study were carried out. One was a cross-sectional study for serologically monitoring the population and taking entomological indicators; participants were selected from the general population by random conglomerate sampling. The second study consisted of monitoring febrile cases suspected of dengue during a four-week period. Vector behaviour (bite-rate and hours of activity) was also included by using the landing-on-humans technique; a rubbish-collecting day was run during the same period for evaluating this interventions short-term effectiveness. Results Total prevalence of infection by dengue (IgG positive) was 23.3 % in 252 people examined in the surveyed population. Household infestation index was 32.9 %; deposit index was 8.4 %; and Breteau index was 43.9. Following the rubbish-collection day, the infestation index became reduced by 56 % (14.5 % post-intervention), deposit index by 43 % (4.8 % post-intervention) and Breteau index by 59 % (17.9 % post-intervention). Two of the febrile patients (n=83) were IgM positive. Conclusions The study showed that dengue's urban vector can reach dangerous levels of infestation above 1 700 masl; however, a deeper study of its bionomy is needed at these heights above sea-level during different times of the year for improving knowledge regarding climatic and environmental factors affecting their efficiency as vector in these conditions.

Keywords

Aedes aegypti, seroprevalence, sentinel surveillance, entomology, indicators, Colombia