Abstract

Introduction. Recent studies have suggested an association between the soil-transmitted helminth infections and malaria incidence. However, published evidence is still insufficient and diverging. Since 1977, new ecologic studies have not been carried out to explore this association. Ecologic studies could explore this correlation on a population level, assessing its potential importance on public health. bjectives. The aim of this evaluation is to explore the association between soil-transmitted helminths prevalence and malaria incidence, at an ecologic level in Colombia. Materials and methods. Using data from the National Health Survey, which was carried out in 1980 in Colombia, we calculated Spearman correlation coefficients between the prevalence of: Ascaris lumbricoides, Trichuris trichiura and hookworm, with the 1980 malaria incidence data of the same year provided from the Colombian Malaria National Eradication Service. A robust regression analysis with least trimmed squares was performed. Results. Falciparum malaria incidence and Ascaris lumbricoides prevalence had a low correlation (R² = 0.086) but this correlation was stronger into the clusters of towns with prevalence of Ascaris lumbricoides infection above 30% were only included (R² = 0.916). Conclusion. This work showed an ecologic correlation in Colombia between malaria incidence and soil-transmitted helminths prevalence. This could suggest that either there is an association between these two groups of parasites, or could be explained by the presence of common structural determinants for both diseases.

Keywords

Malaria, epidemiology, helminthes, epidemiologic factors, ecological studies, Colombia.