

ABSTRACT

EPIDEMIOLOGY OF TOXOCARIASIS IN A JAMAICAN COMMUNITY

Hugh Earle Lounges

A cross-sectional study was done in the urban, low-income community of Cedar Valley, Kingston, Jamaica to ascertain the level of exposure to *Toxocara* sp., and determine the major risk factors for this zoonotic infection. The survey saw a compliance rate of 60 %. Of the 360 persons contacted, 215 gave a blood sample and satisfactorily responded to the questionnaires. Of the compliant individuals, 51 % were seropositive for IgG to *T.canis* E/S antigen. Stool samples were collected from survey participants for the detection of other geohelminths; 191 of the 215 persons who donated blood samples also donated stool samples. The prevalence of each geohelminth was: *Trichuris* 25%, *Ascaris* 5% and hookworm 1%.

Multivariate approach: using a multiple regression model with standardized optical densities from ELISA results as the dependent variable the following risk factor was indicated: age [younger persons were more at risk for infection] ($p < 0.05$). Risk factors were also investigated by examining the features of households in the sample from the community: of the 31 households with compliant members ≥ 3 , discriminant analysis

showed that two levels of infection could be distinguished from each other using a discriminant function which included: high percentage of females in the household, poor hand-washing habits, poor quality toilet facilities, consumption of locally grown chickens [chickens grown in the community], presence of cats around the household, low mean age and visceral (abdominal) and/or limb pain. This study suggests that the prevalence of toxocariasis, coupled with its wide and non-specific symptomatology, warrants its consideration in the differential diagnosis of eye disease, unexplained abdominal and/or limb pains and unexplained eosinophilia in Jamaica.

Keywords: Hugh Earle Lounges; *Toxocara*; zoonotic; epidemiology; Jamaica; geohelminth; risk factors.