ABSTRACT

EPIDEMIOLOGY OF TOXOCARIASIS IN A JAMAICAN COMMUNITY

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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.