

PREVALENCE AND RISK FACTORS OF *ENTEROBIUS VERICULARIS* INFECTION AMONG CHILDREN IN A POOR URBAN COMMUNITY IN SRI LANKA

S.A.O. Suraweera, G.L.S. Galgamuwa, W.M.D.R. Iddawela and S. Wickramasinghe*

Department of Parasitology, Faculty of Medicine, University of Peradeniya, Sri Lanka
**susijjp@yahoo.co.jp*

Enterobiasis is one of the commonest intestinal parasitic infections, which is caused by *Enterobius vermicularis*. Over a billion people are infected worldwide according to the World Health Organization (WHO). Children are more commonly affected than adults. Diagnosis of enterobiasis is by the microscopic detection of eggs from perianal skin sampling using transparent adhesive tape (scotch tape). The aims of the present study were to determine the prevalence and identify risk factors associated with *E. vermicularis* infection among children aged 1-12 years in a poor urban community in Sri Lanka.

A cross-sectional study was carried out from September to November 2013 in a poor urban community living in the Hantana Tea Estate, Kandy. Children aged 1-12 years were invited to enroll in the study after parental consent. Samples from 204 children were obtained using the scotch tape method after demonstration on a mannequin. Information regarding risk factors such as hand washing, sucking fingers, eating unwashed fruits, toilet facilities, socioeconomic status, overcrowding, de-worming history and parents' knowledge regarding the infection were ascertained from the parents or guardian. The data was coded and analyzed using SPSS version 17.0 and MS Excel.

The overall positivity for *E. vermicularis* eggs was 32% (65/204). Boys had slightly higher prevalence (33%) of infection than girls (31%). Children aged 1-3 years showed the highest prevalence (38%). The risk factors significantly associated with *E. vermicularis* infection were lack of parental knowledge about pinworm infection ($p < 0.001$), hand washing only with water before a meal ($p < 0.001$) and after defaecation ($p = 0.029$) and de-worming period exceeding three months ($p < 0.001$). Age, sex, family clusters, sucking fingers, eating unclean fruits, toilet facilities and socioeconomic status were not found to be significant risk factors for this infection.

In conclusion, this study showed a high prevalence of enterobiasis among children, indicating a high level of transmission among this group. Lack of parental education regarding infection and poor personal hygiene have a significant association with its prevalence, emphasizing the importance of health education and awareness programmes among the study population. Mass medication of residents with enterobiasis and their contacts to reduce transmission of this infection could be suggested.

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