

# Asymptomatic Intestinal Parasitosis Among Semi-Urban Nigerian Children

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## Abstract

A cross-section of 175 healthy children at the Wesley Guild hospital, Ilesa, Nigeria had microscopic examination of fresh stool samples for intestinal parasites; 58 (33.1%) had various parasites while 4.0% had poly-parasitism. Thus, asymptomatic childhood intestinal parasitosis is common in this community. We advocate routine screening even of healthy children for intestinal parasitosis to minimise morbidities and mortality.

## INTRODUCTION

In the tropics, childhood intestinal parasitosis is common and causes significant morbidity and mortality. <sup>1</sup> The prevalence of intestinal parasitoses have been reported among Nigerian children. <sup>2</sup> However, self-medication, especially with un-prescribed drugs, is now a common public health problem in Nigeria. <sup>3</sup> Therefore, it is essential to evaluate the prevalence of intestinal parasitosis among apparently children in this community.

## METHODOLOGY

A cross-sectional survey of children aged 6 months to 15 years seen consecutively at the Children Out - Patient Clinic of Wesley Guild Hospital, Ilesa, Nigeria, was conducted between June and November, 2003. Only apparently healthy children with normal weights and heights-for-age and venous haematocrits were included. Their age, sex and the socio-economic status <sup>4</sup> were documented. Each subject had light microscopic examination of wet preparations of fresh stools with emphasis on ova and parasites. Data were analysed using the Computer program for epidemiologists (PEPI) Version 3.01. <sup>5</sup> 'p' values < 0.05 were accepted as statistically significant.

## RESULTS

Overall, 3, 246 children were seen at the Clinic but only 175 children [80 males, 95 females] met the study criteria. Parasites were identified in stools of 58 (33.1%) children [19 males, 39 females] with a male: female ratio of 0.49: 1. Thus, significantly many more girls than boys had intestinal parasites ( $z = 2.26$ ,  $p = 0.024$ ). The mean (SD) ages of

children with and without parasitosis were 3.7 (2.3) and 7.3 (2.7) years respectively. This age difference was statistically significant ( $t = 8.71$ ,  $p < 0.001$ ).

Out of the 58 children with intestinal parasitosis, 14 (24.1%) and 44 (75.9%) belonged to the higher (Classes I, II and III) and lower (Classes IV and V) socio-economic classes respectively. Among the 117 children without parasitosis, 35 (29.9%) and 82 (70.1%) also belonged to the higher and lower classes respectively. Statistically, there was no difference in socio-economic status of children with or without intestinal parasites ( $z = 0.62$ ,  $p = 0.534$ ). However, all the 7 (12.1%) children who had multiple intestinal parasites belonged to the lower socio-economic classes.

Among the 175 children, 23 (13.1%), 18 (10.3%), 9 (5.1%), 8 (4.6 %), 6 (3.4%) and 1 (0.6%) had *Ascaris lumbricoides*, *Necator americanus*, *Entamoeba histolytica*, *Strongyloides stercoralis*, *Trichuris trichuria* and *Giardia lamblia* respectively. While 51 (29.1%) children had single parasites, 7 (4.0%) had poly-parasitism; 4 (2.3%) had *A. lumbricoides* and *E. histolytica* while 3 (1.7%) had *A. lumbricoides* and *N. americanus*. No cestodes were found.

## DISCUSSION

Childhood intestinal parasitosis is global though endemic in the tropics and subtropics for reasons attributable mainly to environmental conditions and poor hygiene, <sup>1</sup> causing significant morbidity such as anaemia, diarrhoea and dysentery, malnutrition, mental deficits, poor growth and severe surgical conditions. <sup>6</sup> About a third of the children in this survey had identifiable intestinal parasites though they

were asymptomatic, indicating that this is a common childhood health problem in this community. Two decades ago, remarkably higher prevalence of childhood intestinal parasitosis of 85.1 and 70.8 percent were reported from community-based surveys from Lagos<sub>2</sub> and Ilorin<sub>7</sub> respectively. These are both urban centres in Nigeria. It is possible though unlikely that sanitation in Ilesa, a semi-urban town is much better to justify our lower prevalence. Plausibly, now, people are better aware of parasitic infestation due to the various health education programmes and take pains to control it. It is noteworthy that in this community, parents routinely administer anti-helminthic preparations to their children (personal observations of the authors). This stems from the 'culture' of self-medication and may explain the our lower prevalence. Nonetheless, Ascariasis and Hookworm were the leading infestation in this present study. Even if this increased awareness about the risks and the drive to prevent helminthiasis are admirable, the dangers inherent in self-medication must be highlighted and also the act discouraged. Besides, this did not prevent Protozoa such as Entamoeba and Giardia.

It is unsatisfactory that a third of even the healthy children in this semi-urban community have intestinal parasitic infestations more so as they constitute an immense reservoir. While public education on improved personal and environmental hygiene are cardinal in the control, additionally, routine periodic screening of children and possibly, the caregivers will guarantee early detection, prompt therapy and interruption of transmission of the pathogens. This may help mitigate the impact of childhood

intestinal parasitosis in the community.

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