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Tropical Medicine and Health

Vol. 36 (2008) , No. 3 p.131

Prevalence of *Cryptosporidium*, *Cyclospora cayentanensis* and *Isospora belli* infection among diarrheal patients in South India

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(Accepted June 30, 2008)

Abstract: The emerging protozoan parasites *Cryptosporidium*, *Cyclospora cayentanensis* and *Isospora belli* have altered the etiological spectrum of diarrheal illness. The decline in CD4 cell count in AIDS patients and lack of active immunization exposure to contaminated food and water in young children make them particularly susceptible to protracted and severe diarrhea caused by

Cryptosporidiosis is caused by human as well as several zoonotic species. A study was undertaken to examine the prevalence of *Cryptosporidium cayetanensis* and *I. belli* among these two susceptible populations: immunocompetent individuals with diarrhea and to identify the *Cryptosporidium* prevalent in these populations. A total of 447 children under the age of 10, 200 HIV seropositive adults and 200 HIV seronegative adults with diarrhea were included in the study. Single fecal samples were collected. Wet mount and Neelsen stained smears made from concentrated fecal specimens were examined microscopically for oocysts of *Cryptosporidium*, *Cyclospora cayetanensis*, and *I. belli*. DNA extracted from fecal samples positive for *Cryptosporidium* was analyzed by PCR RFLP for species identification. *Cryptosporidium* was detected in three groups, i.e. children (8.7%), HIV-seropositive adults (6.85%), and HIV-seronegative adults (1%). *Isospora* and *Cyclospora* were detected only among HIV-seropositive persons at a frequency of 16% and 1% respectively. *C. hominis* (7.0%) and *C. parvum* (18.9%) were the only 2 species of *Cryptosporidium* detected.

Key words: [Cryptosporidium](#), [Cyclospora](#), [Isospora](#), [diarrhea](#),

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Kammili Nagamani, Pavuluri Pandu Ranga Rao, Gyaneshwari Matangi Phani Krishna, Anuradha Pattepu Rajalingam and Nirmal Kumar Srinivasan. "Prevalence of *Cryptosporidium*, *Cyclospora cayetanensis* and *Isospora belli* in HIV-seropositive patients in South India". *Tropical Medicine and Health*, Vol. **36**, pp 45-50, 2007.

doi:10.2149/tmh.2007-45

JOI JST.JSTAGE/tmh/2007-45