

# Cryptosporidiosis occurrence in HIV+ patients attended in a hospital, Brazil

## Ocorrência de Cryptosporidiose em pacientes HIV+ atendidos em um hospital, Brasil

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### Keywords

Cryptosporidiosis, epidemiology.  
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### Descritores

Criptosporidiose, epidemiologia.  
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### Abstract

Cryptosporidiosis occurrence was determined in HIV+ patient assisted in the Clinic of Infect-parasitic Diseases in a hospital of Nova Iguaçu, Rio de Janeiro, Brazil, in the period from July/1998 to March/1999. In order to research, seventy-five patient, carriers of diarrhea or not, were appraised. The samples of feces were collected and placed in saline solution with formaldehyde (5%). The Modified Ritchie technique was used for the oocysts research, and the smears were stained with Safranin O methylene blue. The results verified 9.33% of positive samples, with higher frequency of cases in patients of the masculine sex from 20 to 50 years old, however without significant difference.

### Resumo

A ocorrência de criptosporidiose foi determinada em pacientes HIV+ atendidos na clínica de doenças infecto-parasitárias em hospital de Nova Iguaçu, Rio de Janeiro, Brasil, no período de julho de 1998 a março de 1999. Para a pesquisa, 75 pacientes, portadores ou não de diarreia, foram avaliados. As amostras de fezes foram coletadas e colocadas em solução salina com formaldeído (5%). A técnica de Ritchie modificada foi usada para a pesquisa de oocistos, e os esfregaços foram corados com safranina azul de metileno. Os resultados verificaram 9,33% de amostras positivas, com maior frequência de casos em pacientes do sexo masculino de 20 a 50 anos, contudo, sem diferença significativa.

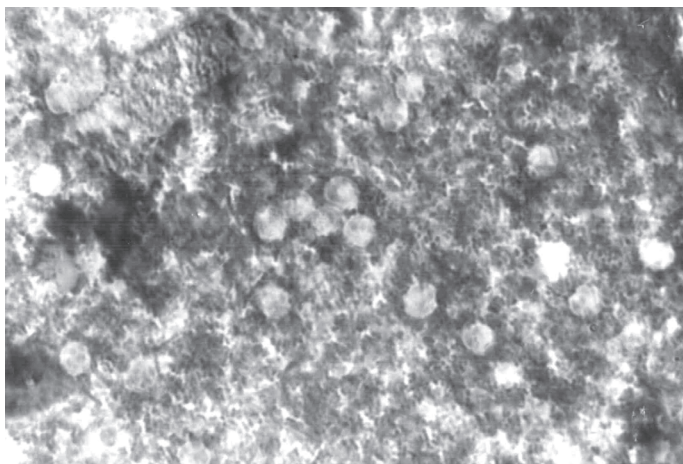
Cryptosporidiosis is an opportunist infection caused by protozoa of the *Cryptosporidium* genus, which can be associated or to contribute for human infection. This infection can occur in immunocompetent people, particularly those that work with cattle, causing an auto-limited diarrheic syndrome, as well as in immunocompromised patient (especially children and patient with AIDS),<sup>1</sup> causing most serious problems, being clinically manifested as a prolonged diarrhea, weight loss, fever and abdominal pain, with occasional spreading to the trachea and

bronchial tree. Fayer & Ungar,<sup>1</sup> making a bibliographical revision of papers accomplished in pre-determined populations, demonstrated the wide geographical distribution of the parasite and its association with diarrhea in human beings, mainly in development countries. In Europe and North America, the prevalence is lower than those reports in places as Asia, Australia, Africa, and Central and South America; being that in South America, Brazil attains prevalence up to 70%.<sup>5</sup> The largest importance of the occurrence is emphasized by the high frequency

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**Figure** - Presence of *Cryptosporidium* sp oocysts in feces smears stained with Safranin O methylene blue (100X).

in HIV+ patient and undernourishment children. Being frequently observed reports as of Luna who reported the occurrence of the microorganism in 17% of the collected samples of HIV+ patient with diarrhea,<sup>2</sup> in the Rio de Janeiro Municipal Hospital; and Moitinho et al reporting a prevalence of 6.6% among children of one year to two years old,<sup>3</sup> in the Maringá University Hospital. Using this information as a basis and regarding the lack of reports in hospitals of the Baixada Fluminense area, we decide for doing this report. The research took place from July/1998 to March/1999 in the Clinic of Infect-parasitic Diseases of the Nova Iguaçu Hospital, Nova Iguaçu, Rio de Janeiro, Brazil; and it was carried out in seventy-five HIV+ patients with diarrhea or not. The feces samples were placed in saline solution added of 5% of formaldehyde and like this sent

for the laboratory, where they were centrifuged for separation of the sediment, which was processed through the Modified Ritchie technique. Soon after, of each sample two smears were prepared and stained with Safranin O methylene blue. The results demonstrated 9.33% of positive samples among the analyzed cases. The samples were considered positive when observed (with objective of immersion and after the stained for the Safranin O methylene blue technique) a brilliant rose-orange structure, with dark corpuscles or granulations in its interior and presence of external double layer, represented the oocysts (Figure).

The statistical results didn't demonstrate differences, corroborating the results of Luna<sup>2</sup> and Soave et al,<sup>4</sup> however it was verified that a higher number of cases was patent among individuals of the masculine sex, with ages of 20 and 50 years, and with diarrhea symptoms. This result like others here mentioned, it highlights the occurrence of considerable infection rate, fact that suggests the presence of the problem of difficult control, and that consequently indicate the need of establishing measures to avoid its dispersion. With basis in its incubation period and in the infection possibilities that are inherent to the genus, we have a discreet idea of the possibilities of transmission of this microorganism and consequently of its dispersion for the external environment, starting from the hospital, reason that forces us to highlight the attention for its presence.

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