BRIEF COMMUNICATION

INFECTION BY Cryptosporidium SP. IN IMMUNOCOMPROMISED HAEMATOLOGICAL PATIENTS

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SUMMARY

The frequency of intestinal infection by Cryptosporidium sp. was determined in 60 patients, attended at the Haematological and Haemotherapeutical Service of “Santa Casa de Misericórdia” of São Paulo, suffering lymphoproliferative diseases (Group 1). As control group (Group 2) 59 persons without haematological diseases, but with the same life time and living at the same place of that of haematological patients, had been examined. The stool parasitological tests performed disclosed Cryptosporidium sp. oocysts in six (10%) individuals belonging to Group 1, whereas, in Group 2, nobody showed infection by this coccidian. Among the patients infected by Cryptosporidium sp. only one showed diarrhoeal faeces.

KEYWORDS: Cryptosporidium sp.; Cryptosporidiosis; Lymphoproliferative disease; Immunocompromised patient.

Infection by protozoan of the genus Cryptosporidium have been recognized as a frequent cause of enteric disease and, sometimes, other alterations in immunocompromised patients. This infection has also been observed in non-immunosuppressed individuals, without the same severity, showing a self-limited clinical course. Giardia lamblia, Entamoeba histolytica, Cryptosporidium parvum and Blastocystis hominis were found to be to the most commonly associated parasites in hundred immunocompromised children in Egypt; Cryptosporidium was, in this study, confined to immunocompromised groups with T-cell abnormalities.

Human cryptosporidiosis usually is caused either by Cryptosporidium parvum, a species with zoonotic behaviour, or C. hominis, which only infects humans; the morphological discrimination of both species is, however, quite impossible. Other species morphologically distinguishable seldom may infect human beings.

In Brazil cryptosporidiosis has been found in aids patients and even in other kind of immunosuppressed patients. It has also been diagnosed in non-immunosuppressed people, with or without diarrhoeal faeces.

In the present study the occurrence, from January 2000 to December 2002, of Cryptosporidium sp. infection in 60 haematological patients, with variable degrees of immunosuppression, attended at the Haematological and Haemotherapeutical Service of “Santa Casa de Misericórdia” of São Paulo was investigated. The research protocol was evaluated and approved by the Ethical Research Committee of the Tropical Medicine Institute of São Paulo.

Sixty patients with either lymphoproliferative diseases showing variable levels of immunosuppression had been examined for the presence of Cryptosporidium sp. oocysts in the stool, by staining with carbolfuchsin, after concentration by the formol-ether technique. A control group, consisted of 59 persons with the same life time and living at the same place but not showing haematological diseases, was also examined. So, for each patient, except in one case, a control individual, usually a member of the patient family, was obtained and submitted to the same parasitological technique.

The results, showed in the table I, indicate a significative difference between the frequency of Cryptosporidium sp. infection in both examined groups.

<table>
<thead>
<tr>
<th>Patients Examined</th>
<th>Cryptosporidium sp.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>Haematological</td>
<td>60</td>
</tr>
<tr>
<td>Control</td>
<td>59</td>
</tr>
</tbody>
</table>

p < 0.05

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Frequently cryptosporidiosis had been found to impair the clinical outlook of patients with either immunosuppressive diseases, as aids and neoplasms, or patients submitted to immunosuppressive situations as bone-marrow and solid organ transplantations. However, in some occasions, Cryptosporidium oocysts had been diagnosed in faeces of asymptomatic and oligosymptomatic patients. It is noteworthy that among the patients shedding Cryptosporidium sp. oocysts in the present study only one was suffering from diarrhea, suggesting lack of intestinal alterations due to Cryptosporidium infection in almost all those patients. GENTILE et al., studying patients with haematologic malignancies in Italy, found a different situation: only five were asymptomatic among 20 patients with intestinal cryptosporidiosis.

The group of haematological patients showed a significative higher frequency of infection by Cryptosporidium sp. when compared to the control group. It should be stressed that both groups had been submitted to the same environmental conditions and had comparatively the same control group. It should be stressed that both groups had been submitted to the same environmental conditions and had comparatively the same age suggesting a higher tendency of infection by Cryptosporidium sp. among the haematological patients.

RESUMO

Infecção por Cryptosporidium sp. em pacientes hematológicos submetidos a situações de imunodeficiência

Determinou-se a frequência de infecção intestinal por Cryptosporidium sp. em 60 pacientes atendidos no Serviço de Hematologia e Hemoterapia da Santa Casa de Misericórdia de São Paulo que apresentavam processos linfoproliferativos (Grupo 1). Como grupo controle (Grupo 2) examinaram-se 59 indivíduos sadios, que habitavam as mesmas localidades e pertenciam a faixa etária semelhante a dos pacientes do Grupo 1. Os exames parasitológicos de fezes revelaram frequência de infecção por Cryptosporidium sp. de 10% no Grupo 1, enquanto nos controles (Grupo 2) não se evidenciou nenhum caso de infecção por esse coccídeo. Entre os pacientes que eliminavam oocistos de Cryptosporidium sp. apenas um apresentava fezes diarréicas.

REFERENCES


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