PREVALENCE OF IgG AND IgM ANTI-TOXOPLASMA ANTIBODIES IN PATIENTS WITH HIV AND ACQUIRED IMMUNODEFICIENCY SYNDROME (AIDS)

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With the emergence of the human immunodeficiency virus (HIV), in patients with acquired immunodeficiency syndrome (AIDS), Toxoplasma gondii has arisen as an important opportunistic pathogenic agent, especially in the central nervous system, being the most common cause of intracerebral lesions. The incidence of Toxoplasma gondii in HIV-infected patients depends principally on the existence of latent Toxoplasma parasitosis in the population affected. Through the enzyme-linked immunosorbent assay (ELISA), IgG and IgM anti-Toxoplasma antibodies were found in 92 patients of which 46 (50.0%) were IgG seropositive, and only one case (1.0%) had IgM antibodies. Of the 92 patients, 53 were HIV seropositives and 39 had AIDS. The detection and monitoring of anti-Toxoplasma antibodies in HIV patients is essential, since in this group there is a high percentage risk of developing cerebral toxoplasmosis, which is the second cause of death in this type of patients.

Key-words: Anti-Toxoplasma antibodies. AIDS. HIV. Toxoplasmosis.


toxoplasmosis has risen considerably, causing abscesses and encephalitic toxoplasmosis, resulting from the progressive deterioration caused by a previous latent infection in the brain 4 8 9 , although the clinical manifestations are observed in proportion to the diminished number of T lymphocytes 10 11 . Another pathology caused by Toxoplasma gondii in this type of patient is ocular toxoplasmosis that occurs in 82% of the cases 3 5 . In HIV patients without previous exposure to Toxoplasma gondii the prevalence of anti-Toxoplasma antibodies is 15%, and 50% of these can develop encephalitis caused by toxoplasmosis and 25% to 50%, in Europe and Africa 6 7 10 11 12 13 . In Brazil in the patients who die from acquired immunodeficiency syndrome (AIDS), the principal pathogen that damage the CNS is Toxoplasma gondii.

In Mexico and in our community the prevalence of anti-Toxoplasma antibodies in patients with HIV positive and AIDS unknown. Because of the risk of damage to the CNS and the high morbidity of this type of patients, we believe it is of utmost importance to find out the prevalence of anti-Toxoplasma antibodies in AIDS patients.

MATERIAL AND METHODS

In a period of six months 92 sera were included in this study of which 53 corresponded to HIV-positive patients (HIV), 39 had acquired immunodeficiency syndrome (AIDS). Through the immunoenzyme assay (ELISA), of Platex Menarini diagnostics Company TXG029 and TGM030, IgG and IgM anti-Toxoplasma antibodies were detected.

Questionnaire. The following variables were taken into account: sex, age, and clinical diagnosis.

RESULTS

The age range was from 17 to 69 years old, with an average of 34 years and standard deviation of 10.34. The seropositivity distribution according to the age groups is shown in Table 1. In terms of sex, out of 92 patients, 84 (91.3%) were male and 8 (8.7%) female.

For IgM antibodies we only found one case (1.0%) with an infection that possibly was recently acquired, a result similar to that in other population groups (0.75) 6.

The greatest number of seropositive cases was found in the 20 to 39 age group, since the vast majority of AIDS and HIV infected fall into this age range.

In the results obtained, the seroprevalence of anti-Toxoplasma antibodies was greater in AIDS patients, and 50% of these can develop cerebral toxoplasmosis, as other researchers have pointed out 7 15 16 . Therefore, the diagnosis of toxoplasmosis and immediate treatment in these patients is essential.

RESUMO

Com a aparição do vírus de imunodeficiência humana (VIH), a prevalência de toxoplasmosis tem aumentado demais. Em dos pacientes com o...


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(91.3%) were male and 8 (8.7%) were female.

The seropositivity of IgG anti-Toxoplasma antibodies was 46/92 (50%) and there was only one case (1.0%) with IgM antibodies. In the sera of AIDS-diagnosed patients we found 27/39 (69.2%) with IgG and no case of IgM anti-Toxoplasma antibodies, and in the HIV+ patients anti-Toxoplasma IgG antibodies were found in 19/53 (35.8%) with a case of IgM.

<table>
<thead>
<tr>
<th>Age</th>
<th>IgG positive</th>
<th>IgM positive</th>
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<tbody>
<tr>
<td></td>
<td>n° %</td>
<td>n° %</td>
</tr>
<tr>
<td>&lt; 20</td>
<td>1 1.1</td>
<td>0 0.0</td>
</tr>
<tr>
<td>20-29</td>
<td>17 18.6</td>
<td>0 0.0</td>
</tr>
<tr>
<td>30-39</td>
<td>20 21.9</td>
<td>0 0.0</td>
</tr>
<tr>
<td>40-49</td>
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<td>50-59</td>
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<td>0 0.0</td>
</tr>
<tr>
<td>&gt; 60</td>
<td>3 3.3</td>
<td>0 0.0</td>
</tr>
<tr>
<td>Total</td>
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<td>1</td>
</tr>
</tbody>
</table>

### DISCUSSION

The results obtained show that AIDS patients have a greater percentage of anti-Toxoplasma gondii IgG antibodies, possibly because their immuno deficiency is very advanced and because of diminished CD4+ as other researchers have described  9 10 11 . The presence of IgG antibodies in HIV+ and AIDS patients can be due to reactivations of Toxoplasma gondii of a

síndrome de inmunodeficiência, a toxoplasmosis é a principal causa de morte. A incidência, de anticorpos nesse tipo de pacientes depende da prevalência da população onde se apresenta a doença. O método de Enzima Inmuno Ensaio absorvente (ELISA) foi aplicado a 92 pacientes para determinar si eram positivos a anticorpos anti-Toxoplasma IgG e IgM. O resultado foi: 46 (50.5%) foram seropositivos e um caso apresentou anticorpos IgM. D estes 92 pacientes, 53 apresentavam o virus de inmunodeficiência humana (HIV) y 39 tinham SIDA. A determinação e o "monitorio" de anticorpos anti-Toxoplasma em pacientes com HIV+ indispensible, pois uma taxa elevada destos pacientes pode desenvolver a toxoplasmosis cerebral, a causa principal de morte nesses pacientes.

Palavras-claves: Anticorpos anti-Toxoplasma. SIDA. HIV. Toxoplasmosis.

### REFERENCES


