

# CICLO CARLOS CHAGAS

DE PALESTRAS

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Apoio



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## Patologia / Patogenia

### Evolution of anti-*Trypanosoma cruzi* antibodies production in patients with Chronic Chagas Disease: correlation between antibodies titles and development of cardiac disease severity

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Chagas disease is one of most important endemic infections in Latin America affecting over 7 million people. About 30-50% of patients develop the cardiac form of the disease, which can lead severe cardiac dysfunction and death. In this scenario, the identification of immunological markers of disease progression would be an important tool for early treatment and deaths rates decrease. In this study, it was evaluated the production of anti-*Trypanosoma cruzi* antibodies through 2-8 years in patients with chronic Chagas disease, correlating this production with disease progression and heart commitment. A strong inverse correlation ( $r=-0.6298$ ,  $p=0.0006$ ) between anti-*T. cruzi* IgG<sub>1</sub> titles and ventricular ejection fraction (VEF) in the chronic Chagas cardiomyopathy (CCC) patients were observed after disease progression. In contrast, CCC patients presented less positivity for anti-*T. cruzi* IgE when compared to patients with the indeterminate form of the disease (IND) ( $p=0.0091$ ). High levels of anti-*T. cruzi* IgG<sub>3</sub> titles were detected in all *T. cruzi*-infected patients, indicating lack of correlation of this IgG isotype with disease progression. In addition, low levels of anti-*T. cruzi* IgG<sub>2</sub>, IgG<sub>4</sub> and IgA were detected in all patients through the follow-up. As this study was conducted in patients with many years of chronic disease, no anti-*T. cruzi* IgM was detected. Taken together, these results indicate that the levels of anti-*T. cruzi* IgG<sub>1</sub> and IgE could be considered promising biomarkers to prewise the development and severity of chronic Chagas disease cardiomyopathy.

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