XVIII International Congress for Tropical Medicine and Malaria

and

XLVIII Congress of the Brazilian Society of Tropical Medicine

XXVIII Brazilian Annual Meeting of Applied Research on Chagas Disease, XVI Brazilian Annual Meeting of Applied Research on Leishmaniasis and III Latin American Congress on Travel Medicine

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Certificate

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This is to certify that

has attended the **XVIII International Congress for Tropical Medicine and Malaria** and **XLVIII Congress of the Brazilian Society of Tropical Medicine**, held in Rio de Janeiro from September 23 to 27, 2012, as **Poster Presentation:** Clinical decisions when disagreements between PCR and serology among patients in diagnostic investigation for chronic Chagas disease occur.

Rio de Janeiro, September 27, 2012.

Professor Pierre Ambroise-Thomas
President of the IFTM

Professor José Rodrigues Coura
President of the XVIII ICTMM

Professor Cláudio Tadeu Daniel-Ribeiro
President of the Scientific Committee of the XVIII ICTMM

Professor Carlos Henrique Nery Costa
President of the SBMT

Introduction: Chagas disease (CHD) is caused by the protozoan *Trypanosoma cruzi* and transmitted by hematophagous *Triatoma* insects, affecting approximately 12 million people in Latin America. Various autoimmune diseases (AID) including multiple sclerosis and diabetes mellitus have been associated with persistent infections, suggesting that chronic infections are related to autoimmune processes. The contribution of autoantibodies to the pathogenesis of CHD is not fully understood, but different studies have suggested the importance of autoantibodies in chagasic cardiomyopathy. **Material and Methods:** To investigate the presence at following autoantibodies in sera from chronic chagasic patients: smooth anti-muscle (SMA), anti-gastric parietal cells (APAC) and anti-endomysial (IgA-EmA) using indirect immunofluorescence assay, in serum samples from 50 patients previously diagnosed with Chagas disease in the Chagasic Patient Ambulatory Care Unit of the Hospital de Clínicas da Universidade Federal do Paraná (HC/UFPR) and in the sera of 100 ethnically healthy voluntaries. **Results:** There was a trend for higher SMA and APAC frequencies in chagasic patients. When compared to controls (3/50, 6% vs 1/100, 1% for SMA, OR=6.3, 95%CI=0.6-62.4); While 4% at the patients were positive for APAC (2/50) and none for the controls. All individuals were negative for IgA-EmA. **Conclusions:** These preliminaries results suggest that chronic Chagas disease may be associated with the development of autoimmunity. Neverthless in order to confirm this hypothesis a larger number of patients will be further investigated. **Financial support**: CAPES. **E-mail:** matiascosta.angel@gmail.com

Chagas056- **Clinical decisions when disagreements between PCR and serology among patients in diagnostic investigation for chronic Chagas disease occur.**

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Introduction: Since 2008, Ipec – Fiocruz is conducting a project to develop and turn available a PCR test to be used in clinical practice, mainly for the diagnosis of chronic Chagas disease. The main motivation was to have an alternative to serology when this is persistently inconclusive, following Brazilian guidelines. This work aims to briefly discuss clinical course of action when serology are negative and PCR is positive for chronic Chagas disease. **Methods:** This was a case series, from a sequential selection of patients suspected of chronic Chagas disease. From March 2008 to March 2012 patients looking for Chagas disease diagnosis at Ipec were screened to be a volunteer to a project aiming to validate a PCR test for Chagas disease. All volunteer with PCR for Chagas disease available up to January 2012 were included. Two commercial serological tests, one EIE and one IIF, were conducted. The protocol was to collect three blood samples for each patient to conduct PCR test. *PCR was conducted in each sample with primers designed to two target regions: nuclear satellite and kinotoplast.* **Results**: 151 patients had data available for both PCR and serological tests. These patients did seek chronic Chagas disease diagnosis due to a variety of reasons, including: blood bank positive screening (20.63%); referred from other health units due to heart disease (30.95%); referred from other health units due to digestive disease (13.49%); due to Chagas disease among relatives (25.40%). The proportion of males was 42.28%, the mean age was 47.53, 73.60% reported ever lived at rural areas and 65.87% reported ever lived in mud houses and 13.49% ever received blood transfusion. Ninety three had initial diagnosis as without Chagas disease and 10 had inconclusive diagnosis. From these 93, 48 (53.30%) had at least one positive PCR. From the 10 patients initially with inconclusive diagnosis, 6 had positive PCR. Three patients had 2 (2.64%) consecutive samples with inconclusive serology results. Patients were called back and 5 of them were further tested so far. All of these 5 remained with at least one positive PCR, one did seroconvert from negative to positive and one had two inconclusive Serologies. **Conclusions**: Similar results were observed before; however the appropriate medical course of action is seldom discussed. Three main points come from this results: as currently stated in Brazilian guideline, PCR will probably add very little information on decision making; although further confirmation is required it seems that PCR is able to identify a considerable proportions of patients with Chagas disease that serology cannot; as PCR becomes technically less laboriously and expensive, it will be relevant to discuss its roll as first line test. Patients' follow-up and investigations about clinical characteristics contributions to decision making are required to better understand this phenomena. **E-mail:** pedro.brasil@ipec.fiocruz.br