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Prevalence of Chagas disease in patients requiring a cardiac electronic device implantation in Natal-RN, Brazil

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Introduction: Chagas disease is a condition present in several regions of Brazil and is one of the causes of injury to the cardiac conduction system — an etiology referenced by Consolim-Colombo, Kerr, Saraiva, Izar, and others in *Tratado de Cardiologia Socesp*, 4th edition, 2019 — leading to the need for implantation of a permanent pacemaker. As this procedure becomes more widely performed and remains highly relevant for the treatment of these injuries, exploring its associated clinical correlations is crucial. **Objective:** To assess the prevalence of Chagas disease in patients requiring a cardiac implantable electronic device in a tertiary care center. **Method:** Serological samples from patients who underwent permanent artificial cardiac pacemaker implantation at the Hospital do Coração in Natal (RN, Brazil) were analyzed between June 1st and June 25th, 2025. Two distinct IgG-based serological assays were performed (Hemagglutination, ELISA, or IFI). An analysis was also performed to determine which complementary diagnostic test confirmed conduction system injury and the associated conditions. Data were collected using a specific standardized form previously approved by the Ethics Committee, with informed consent obtained from all participants. **Results:** Among the analyzed patients, 45% were male. Systemic arterial hypertension was present in 81% of patients, diabetes mellitus in 27%, and smoking in 36%. Electrocardiogram established the diagnosis in 72% of cases, and Holter monitoring in 27%. Complete atrioventricular block was the most frequent conduction abnormality (91%), while sinus bradycardia was recorded in 1 case (9%). All IgG serological tests were negative for *Trypanosoma cruzi*. **Conclusion:** The results were negative for IgG serology for Chagas disease in the studied sample. However, Brazil remains a country with multiple endemic areas for this condition. It is essential that health services continue to engage in the screening process and prophylactic interventions, in order to prevent infection and the potential need for tertiary care due to disease-related complications.

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