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(CASE REPORT)

Re-emergence of Chagas Disease: A Case of Acute Parasitemia in Colombia

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Abstract

Introduction: Acute Chagas disease due to Trypanosoma cruzi is uncommon in Colombia and is difficult to suspect outside endemic areas. Timely diagnosis is crucial to prevent chronic cardiac and digestive complications. **Case presentation:** A 60-year-old male with no relevant medical history presented with a 38-day history of nocturnal fever, chills, and progressive cervical and inguinal lymphadenopathy. He had recently traveled to Venezuela and worked on a farm in the Atlántico Department of Colombia. Physical examination revealed palpable lymph nodes without other abnormalities. Laboratory tests including liver function, renal function, and chest radiography were normal; blood and urine cultures were negative. A thick blood smear demonstrated Trypanosoma cruzi trypomastigotes, confirming acute infection with positive IgM serology. Cardiac evaluation was normal. Benznidazole 100 mg orally every 8 hours for 60 days was initiated, with a transient inflammatory reaction during the first week and favorable evolution without complications.
Conclusion: This case highlights the importance of considering acute Chagas disease in patients with prolonged fever and lymphadenopathy following exposure in rural or endemic areas, even in nontraditional regions of the country.

Keywords: Trypanosoma cruzi; Chagas disease; acute infection; benznidazole; parasitic diseases; Colombia

1. Introduction

Chagas disease is a zoonosis caused by the protozoan Trypanosoma cruzi, transmitted mainly by hematophagous triatomine insects of the Reduviidae family. It is recognized as one of the parasitic diseases with the greatest impact in Latin America, where it is estimated that between 6 and 8 million people are infected and about 75 million remain at risk of acquiring the infection. Although historically endemic to the Latin American region, over recent decades, migration, congenital transmission, and the circulation of triatomines in temperate climates have led to case reports in North America, Europe, and Asia, turning this infection into a global public health problem [1].

In Colombia, Chagas disease remains an important epidemiological challenge. According to data from the Instituto Nacional de Salud (INS), during 2023–2024 more than 150 new cases were reported, about 40% of which corresponded to acute infection confirmed by laboratory testing, with active foci of transmission in departments such as Santander, Boyacá, Casanare, Meta, Arauca, and Norte de Santander. The estimated prevalence in the general population ranges between 0.5% and 1%, although in rural endemic communities it may exceed 5%, particularly in areas with proven presence of Rhodnius prolixus, Triatoma dimidiata, and Panstrongylus geniculatus, the main domestic vectors in the country [2].

At a national level, the Ministry of Health and Social Protection has implemented strategies for integrated surveillance, serological screening in blood banks, and domiciliary vector control, in addition to guidelines for the prevention of

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congenital transmission. Nonetheless, gaps persist in timely diagnosis in rural areas with difficult access, where direct parasitology continues to be the main confirmatory tool. Additionally, an increase in outbreaks of oral transmission associated with the consumption of contaminated foods, such as artisanal guava or açaí juices, has emerged as a significant route of infection in the last decade [3].

The acute phase of infection is often subclinical or oligosymptomatic, contributing to underdiagnosis. When clinically apparent, it may present as a prolonged febrile illness accompanied by asthenia, myalgias, lymphadenopathy, or hepatosplenomegaly, findings that are easily confused with other infectious causes. Diagnostic confirmation may be obtained by direct visualization of trypomastigotes in peripheral blood, an accessible tool in resource-limited settings, or by IgM and IgG serology. Treatment in the acute phase with benznidazole has an efficacy greater than 80–90%, reduces parasitemia, and decreases the likelihood of progression to the chronic phase [4].

The subsequent clinical course may be silent for years; without treatment, up to 30% of patients will develop chronic Chagas cardiomyopathy, the main cause of morbidity and mortality associated with the infection. In this context, early identification of acute cases is essential to establish timely treatment and avoid irreversible sequelae [5].

This article presents a case of acute-phase Chagas disease diagnosed by direct parasitology in a patient with prolonged fever and an epidemiological history of rural exposure in an endemic area of Colombia, underscoring the relevance of clinical suspicion and timely access to diagnosis.

2. Case Report

We present the case of a 60-year-old male patient with no relevant pathological history, who reported travel to Venezuela two months before symptom onset and subsequent work on a farm in the Atlántico Department of Colombia.

He presented with a 38-day clinical course characterized by non-quantified nocturnal fever associated with chills and progressive cervical and inguinal lymphadenopathy. He had no respiratory, neurological, gastrointestinal, or urinary symptoms. On physical examination, palpable lymph nodes were found in bilateral cervical and inguinal regions, with no additional findings.

Initial laboratory studies showed a normal complete blood count, and normal liver and renal function; chest radiography was unremarkable. Blood and urine cultures were negative.

However, a thick blood smear for hemoparasites demonstrated the presence of Trypanosoma cruzi in the trypomastigote form. Serum antibodies were requested, later reporting positive IgM for T. cruzi, confirming acute infection. Risk stratification studies, including cardiac evaluation, with echocardiogram and electrocardiogram, were within normal parameters.

Benznidazole 100 mg orally every 8 hours for 60 days was initiated. He presented a transient inflammatory response during the first week, characterized by persistence of fever and general malaise, attributable to parasitic lysis. He evolved favorably and completed the therapeutic regimen without any complications.

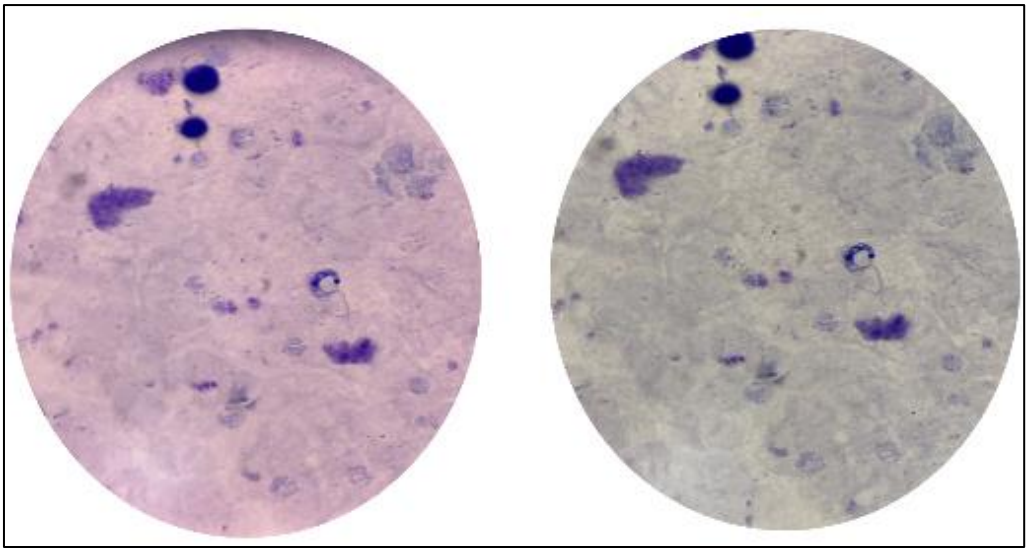

Figure 1 Peripheral blood smear stained with Giemsa, observed under oil-immersion. The image shows a Trypanosoma cruzi trypomastigote with fusiform morphology, posterior kinetoplast, and undulating membrane, a finding compatible with acute infection

3. Discussion

Chagas disease, caused by Trypanosoma cruzi, represents a complex zoonosis with well-differentiated clinical phases and a multifactorial pathophysiology that combines direct tissue damage, immune dysfunction, and chronic inflammatory processes. Infection begins when metacyclic trypomastigotes present in the feces of the triatomine vector enter the host through mucous membranes or skin lesions. Once inside the host, the parasite invades reticuloendothelial cells, myocytes, and enteric neurons, transforming into intracellular amastigotes that multiply actively before releasing new trypomastigotes into the bloodstream [6].

During the acute phase, lasting 4 to 8 weeks, there is typically high parasitemia and a mixed humoral and cellular immune response, with the release of pro-inflammatory cytokines (IL-6, TNF-α, IFN-γ) that contribute both to infection control and tissue damage. In most cases, the acute phase is asymptomatic or oligosymptomatic, but it may manifest with prolonged fever, asthenia, hepatomegaly, lymphadenopathy, facial edema, or Romaña's sign (unilateral palpebral edema). Severe cases may present with myocarditis or meningoencephalitis, especially in children or immunocompromised patients [7].

The indeterminate chronic phase is characterized by low or undetectable parasitemia and persistence of a subclinical immune response. In this stage, the parasite may remain latent for decades. Approximately 20–30% of infected individuals will progress to the symptomatic chronic phase, with cardiac or digestive involvement. Chagas cardiomyopathy is the most frequent and severe manifestation, resulting from persistent myocardial inflammation, interstitial fibrosis, and conduction system abnormalities that lead to arrhythmias, heart failure, or sudden death [8]. In contrast, the digestive form—more common in the Southern Cone—is associated with destruction of the myenteric plexus, leading to megaesophagus or megacolon [9].

The etiological treatment of choice remains benznidazole (5–7 mg/kg/day for 60 days), a trypanocidal drug that achieves cure rates of 80–90% in the acute phase and reduces progression to chronic disease when initiated early. Nifurtimox is an effective alternative, although with a higher adverse effect profile [10]. In recent years, combined schemes and reduced doses have been evaluated with promising results to improve tolerance and adherence. Additionally, in 2025 Colombia became the first country in Latin America to adopt rapid tests as an official tool for early diagnosis, strengthening timely access to treatment.

Comprehensive management includes, in addition to antiparasitic therapy, periodic cardiologic follow-up with ECG and echocardiography for early detection of cardiomyopathy. In patients with chronic forms, the approach focuses on the control of heart failure and arrhythmias and the prevention of thromboembolic events, as well as the management of digestive or neurological complications when present [11].

Despite advances, Chagas disease remains a neglected public health problem. It is estimated that more than 6 million people are infected in Latin America and about 1.1 million live with chronic cardiac sequelae. Early identification strengthened screening in pregnant women, and surveillance of oral transmission emerge as priority strategies to reduce the disease burden in the region [12].

4. Conclusion

Chagas disease should be considered in the differential diagnosis of prolonged fever in patients exposed to endemic areas, even in the absence of specific symptoms. Direct parasitological confirmation and IgM serology enabled timely diagnosis and immediate treatment. Benznidazole showed an adequate therapeutic response, with an expected inflammatory reaction during the first week. This case underscores the importance of epidemiological surveillance, early diagnostic confirmation, and management guided by national guidelines to prevent progression to chronic forms.

Compliance with ethical standards

Disclosure of conflict of interest

The authors declare that they have no conflict of interest.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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