

Clinical and Epidemiological Profile of Patients With Chagas Disease With Digestive and Cardiodigestive Involvement

Perfil Clínico e Epidemiológico de Pacientes Com Doença de Chagas Com Acometimento Digestivo e Cardiodigestivo

Perfil Clínico y Epidemiológico de los Pacientes con Enfermedad de Chagas con Compromiso Digestivo y Cardiodigestivo

RESUMO

Objetivo: Conhecer o perfil clínico e epidemiológico de pacientes com acometimento digestivo e cardiodigestivo atendidos no Ambulatório de Doença de Chagas (ADOC) da Universidade do Estado do Rio Grande do Norte (UERN). **Método:** Trata-se de um estudo transversal retrospectivo, por meio da análise de prontuários arquivados no ADOC no período de 2011 a 2023, vinculado à UERN. Os atendimentos foram realizados por alunos do curso de medicina, sob a supervisão de um professor-médico. **Resultados:** Foram identificados 65 pacientes com a forma digestiva ou cardiodigestiva da doença de chagas, representando 12,3% dos prontuários. Desses, 52,3% tinham a forma digestiva e 47,7%, a cardiodigestiva. A maioria é da mesorregião do alto oeste potiguar, com destaque para Caraúbas (38,4%), Mossoró (26,2%) e Apodi (9,2%). **Conclusão:** O estudo revela a importância do diagnóstico precoce e acompanhamento contínuo dos pacientes com doença de chagas, a fim de melhorar o manejo clínico e prevenir complicações graves.

DESCRIPTORES: Doença de Chagas; Promoção da Saúde; Epidemiologia Clínica.

ABSTRACT

Objective: to understand the clinical and epidemiological profile of patients with digestive and cardiodigestive involvement treated at the Chagas Disease Outpatient Clinic (CDOC) of the university of the State of Rio Grande do Norte (SRGN). **Method:** this is a retrospective cross-sectional study based on the analysis of medical records archived at CDOC from 2011 to 2023, linked to UERN. The consultations were conducted by medical students under the supervision of a physician-professor. **Results:** Sixty-five patients with either digestive or cardiodigestive forms of chagas disease were identified, representing 12.3% of the medical records. Of these, 52.3% had the digestive form and 47.7% had the cardiodigestive form. Most patients are from the alto oeste potiguar mesoregion, particularly from Caraúbas (38.4%), Mossoró (26.2%), and Apodi (9.2%). **Conclusion:** the study highlights the importance of early diagnosis and continuous monitoring of chagas disease patients to improve clinical management and prevent severe complications.

DESCRIPTORS: Chagas Disease; Health Promotion; Clinical Epidemiology.

RESUMEN

Objetivo: Conocer el perfil clínico y epidemiológico de pacientes con afectación digestiva y cardiodigestiva atendidos en el Consultorio de Enfermedad de Chagas (ADOC) de la Universidad del Estado de Río Grande do Norte (UERN). **Método:** Se trata de un estudio transversal retrospectivo, basado en el análisis de historias clínicas archivadas en ADOC desde 2011 hasta 2023, vinculado a UERN. Las consultas fueron realizadas por estudiantes de medicina bajo la supervisión de un profesor-médico. **Resultados:** Se identificaron 65 pacientes con la forma digestiva o cardiodigestiva de la enfermedad de Chagas, lo que representa el 12,3% de los expedientes. De estos, el 52,3% presentaban la forma digestiva y el 47,7%, la forma cardiodigestiva. La mayoría proviene de la mesorregión del Alto Oeste Potiguar, destacándose Caraúbas (38,4%), Mossoró (26,2%) y Apodi (9,2%). **Conclusión:** El estudio resalta la importancia del diagnóstico temprano y el seguimiento continuo de los pacientes con enfermedad de Chagas, con el fin de mejorar el manejo clínico y prevenir complicaciones graves.

DESCRIPTORES: Enfermedad de Chagas; Promoción de la Salud; Epidemiología Clínica.

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INTRODUÇÃO

Chagas disease (CD) was discovered by Brazilian physician Carlos Chagas in 1909, during an expedition to the municipality of Lassance (MG) to study malaria. There, Chagas identified the protozoan *Trypanosoma cruzi*, which causes the disease, present in *Leontopithecus rosalia* (golden lion tamarin). The protozoan was also found in the digestive tract of *Triatoma infestans*, the "kissing bug", the vector responsible for transmitting the disease. In recognition of his discovery, the disease was named in his honor by Oswaldo Cruz^(1,2).

CD can be transmitted in several ways: vector-borne, through the feces or urine of the vector during the bite; transfusion, with reduced risk due to serological control; by transplant, especially in immunosuppressed patients; by congenital transmission, when *T. cruzi* crosses the placenta; and by oral transmission, often through food contaminated with feces or urine of infected triatomines. Over the past 15 years, oral transmission has been more common in cases of acute CD in Brazil. In addition, there are reports of

transmission through breastfeeding, with the protozoan found in breast milk during the acute phase of infection⁽³⁾.

Chagas disease has two phases: acute and chronic. In the acute phase, there are a large number of parasites in the blood, which may be asymptomatic or cause fever, asthenia, myalgia, hepatomegaly and splenomegaly, the Romanã sign and, in severe cases, myocarditis, pericarditis and meningoencephalitis. Approximately 95% of acute cases regress spontaneously, while 30-40% evolve to the chronic phase, usually decades after the initial infection⁽⁴⁾.

The chronic phase of Chagas disease begins 2 to 4 months after the acute infection and is characterized by a low concentration of parasites in the blood. Patients may evolve to different forms: Indeterminate Form (IF), with positive tests but no symptoms or changes; Digestive Form (DF), with symptoms such as dysphagia and constipation, or tests indicating megasophagus or megacolon; Cardiac Form (CF), with electrocardiographic changes and, in some cases, cardiomegaly; and Mixed Form, which com-

bines FC and FD⁽⁵⁾.

Cardiomyopathy in Chagas disease results from degeneration, myocarditis and fibrosis of the myofibrils, leading to dilation of the heart chambers, arrhythmias, increased risk of cardioembolic events and, later, heart failure. In the digestive system, the parasite affects smooth muscle and nerve cells, causing inflammation, cell destruction and fibrosis, which results in slowing of esophageal and intestinal transit, muscle hypertrophy and dilation of organs, generating symptoms such as dysphagia and constipation^(6,7).

In Brazil, Chagas disease is a disease of compulsory notification, especially acute cases, according to ordinance no. 05 of 2006. It continues to be a public health problem, mainly in rural areas, where there is a higher prevalence of people living in mud houses and, therefore, the vector finds habitat. Although it is more common in rural areas, the disease is also visible in urban areas due to the expansion of cities and other forms of transmission⁽⁸⁾.

Chagas disease is the fourth leading cause of death among infectious and parasitic diseases in Brazil, with the highest mortality rate in the 50 to

64 age group. The World Health Organization (WHO) estimates that between 6 and 7 million people have the disease worldwide, with the majority in Latin America, with approximately 1.3 to 3.2 million cases in Brazil in 2020. The North region has the highest proportion of new cases^(9,10).

Economic, environmental (such as climate change and environmental degradation), political and social factors (poor housing conditions, migration, income and sanitation) influence the transmission of Chagas disease, increasing its prevalence. The economic impact is significant due to the lack of productivity generated by the morbidity and mortality of sequelae, such as cardiomyopathy and gastropathy⁽¹¹⁾.

This study is justified by the need to understand the profiles and reality of patients with Chagas disease, especially in the digestive form, which has a lower incidence and lethality compared to the cardiac form. The lack of understanding of the epidemiological situation highlights the importance of academic research that describes and categorizes cases, contributing to improvements in public health, the quality of medical care, and the understanding of the disease in the outpatient setting.

Therefore, this study aims to: understand the clinical and epidemiological profile of patients with digestive and cardiodigestive involvement treated at the Chagas Disease Outpatient Clinic (ADOC - Ambulatório de Doença de Chagas) of the University of the State of Rio Grande do Norte (UERN).

METHOD

This is a retrospective cross-sectional study, through the analysis of medical records filed at the Chagas Disease Outpatient Clinic (ADOC) from 2011 to 2023, linked to the State University of Rio Grande do Norte (UERN).

The aim of cross-sectional research is to analyze data over a specific period, where exposure to the factor occurs in the same period analyzed. It describes the most prevalent variables in a population, analyzing epidemiological factors in relation to the population and/or a specific period. A retrospective study uses records from the past, with follow-up up to a specific time frame⁽¹²⁾.

The ADOC is located at the School of Health Sciences (FACS – UERN) in Mossoró - RN. Care began in 2011. The outpatient clinic is already a reference center for monitoring people with Chagas Disease, not only in RN, but also in several states in the northeast region, such as Ceará, Paraíba, among others.

Patients are referred from other services when there is clinical and epidemiological suspicion of the disease or from blood banks that test positive for CD. Upon arrival at the clinic, the patient undergoes new serological tests, such as indirect immunofluorescence and/or indirect hemagglutination. If positive, the patient continues to receive care.

The care is standardized and performed by undergraduate medical students, under the supervision of a professor-physician. This involves an anamnesis (identification, clinical picture, complaints, history, lifestyle habits, notes on tests, etc.) and a physical examination. All of this data collected is recorded in the patient's medical record at each new appointment. After this, the cases and procedures are discussed between the students and the professor-physician in charge.

In the study, all medical records of patients treated at ADOC between 2011 (the year in which outpatient services began) and 2023 (the year in which this research was conducted) were analyzed, a historical series of 12 years. Thus, the total population was 528 patients, and those with digestive or cardiodigestive involvement

were classified and selected. Thus, the result was 65 patients, which was the sample used in the data collection in this study.

The inclusion criteria were the presence of the following exams: esophagogram, barium enema, echocardiogram and electrocardiogram, in addition to digestive symptoms (chronic dysphagia and/or constipation) and cardiac symptoms (palpitations, dyspnea). The exclusion criteria considered the absence of these exams or data in the medical records that would allow classification regarding digestive and cardiac involvement.

Data collection was carried out using an electronic form on Google Forms, covering sociodemographic information (sex, age, race, profession, education, origin, rural area, residence in a mud house), data on Chagas Disease (symptoms, contact with the barber, blood donation or transfusion, presence of a warehouse or chicken coop, continuous use of medications), examination findings (electrocardiogram, echocardiogram, esophagogram, barium enema), associated comorbidities (hypertension, diabetes, dyslipidemia, heart disease and stroke) and lifestyle habits (smoking, alcoholism, physical activity).

Before being included in the outpatient care program, all patients read or listened to the reading and signed the Free and Informed Consent Form (FICF), approved by the Ethics and Research Committee of the State University of Rio Grande do Norte (CEP UERN), under number 1,160,553. CAAE: 43783915.3.00005294 of July 21st, 2015.

RESULTS

The sociodemographic data of the study population (65 subjects) are described in Table 1. In this sense, 60% (39) of the patients were female and 40% (26) were male. Age ranged from 37 to 90 years, with an average of 61.6

Original Article

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years. Regarding occupation, 15.4% (10) reported being retired and among those who perform some work activity (55), the professions of farmer (a stood out, with 40% (26) and “house-

wife” with 26.2% (17).

Regarding the level of education, the majority of patients had incomplete elementary education, with 58.5% (38), followed by 16.9% (11)

who had completed high school and only 1.5% (1) had completed higher education. Furthermore, the majority (56.9% - 37) identified with brown skin color.

Table 1 - Sociodemographic data of patients with digestive and cardiodigestive involvement treated at ADOC (n = 65), in Mossoró-RN.

| Variables | Category | N° | % |
|--------------------|------------------------------|----|-------|
| Sex | Male | 26 | 40 |
| | Female | 39 | 60 |
| | Total | 65 | 100,0 |
| Age | 37-52 | 15 | 23,0 |
| | 53-68 | 32 | 49,2 |
| | 69-84 | 17 | 26,2 |
| | > 84 | 1 | 1,54 |
| | Total | 65 | 100,0 |
| Occupation | Retired | 10 | 15,4 |
| | Farmer | 24 | 36,9 |
| | Housewife | 17 | 26,2 |
| | Health agent | 3 | 4,6 |
| | Others* | 11 | 16,9 |
| | Total | 65 | 100,0 |
| Level of Education | Illiterate | 5 | 7,7 |
| | Incomplete Elementary school | 38 | 58,5 |
| | Complete Elementary school | 6 | 9,2 |
| | Complete High School | 11 | 16,9 |
| | Complete High School | 4 | 6,2 |
| | Complete Higher Education | 1 | 1,5 |
| | Total | 65 | 100,0 |
| Color of skin | Brown | 37 | 56,9 |
| | White | 23 | 35,4 |
| | Black | 5 | 7,7 |
| | Total | 65 | 100,0 |

*Others: Trader, electrician, teacher, fisherman, salt worker, sales promoter and construction machine operator.

Source: ADOC (2023).

After selection, 65 medical records of patients with the digestive or mixed (cardiodigestive) form of CD were identified, out of a total of 528 medical records, which represents a prevalence

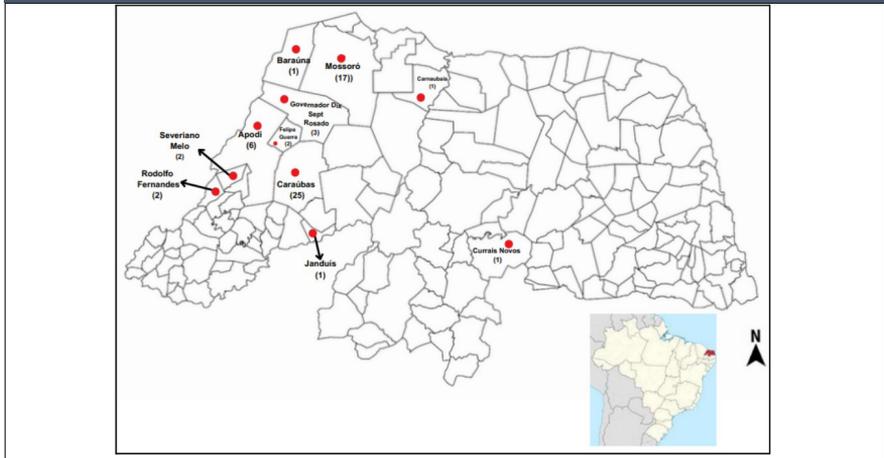
of approximately 12.3%. Furthermore, of these 65 patients, 52.3% (34) had the digestive form, and 47.7% (31) had the cardiodigestive form.

Regarding origin, most patients reside in cities in the interior of the Alto Oeste Potiguar mesoregion, with emphasis on Caraúbas, with 24 (38.4%), Mossoró, which is the headquarters city of ADOC, with 17 (26.2%), and

Apodi, with 6 (9.2%).

These cities are part of the Alto Oeste Potiguar mesoregion. Furthermore, 3.2% (2) of the patients came from the city of São José do Brejo do Cruz, in the state of Paraíba and 1.5% (1) from the city of São José do Rio Preto, in the state of São Paulo. The other cities mentioned can be seen in figure 1.

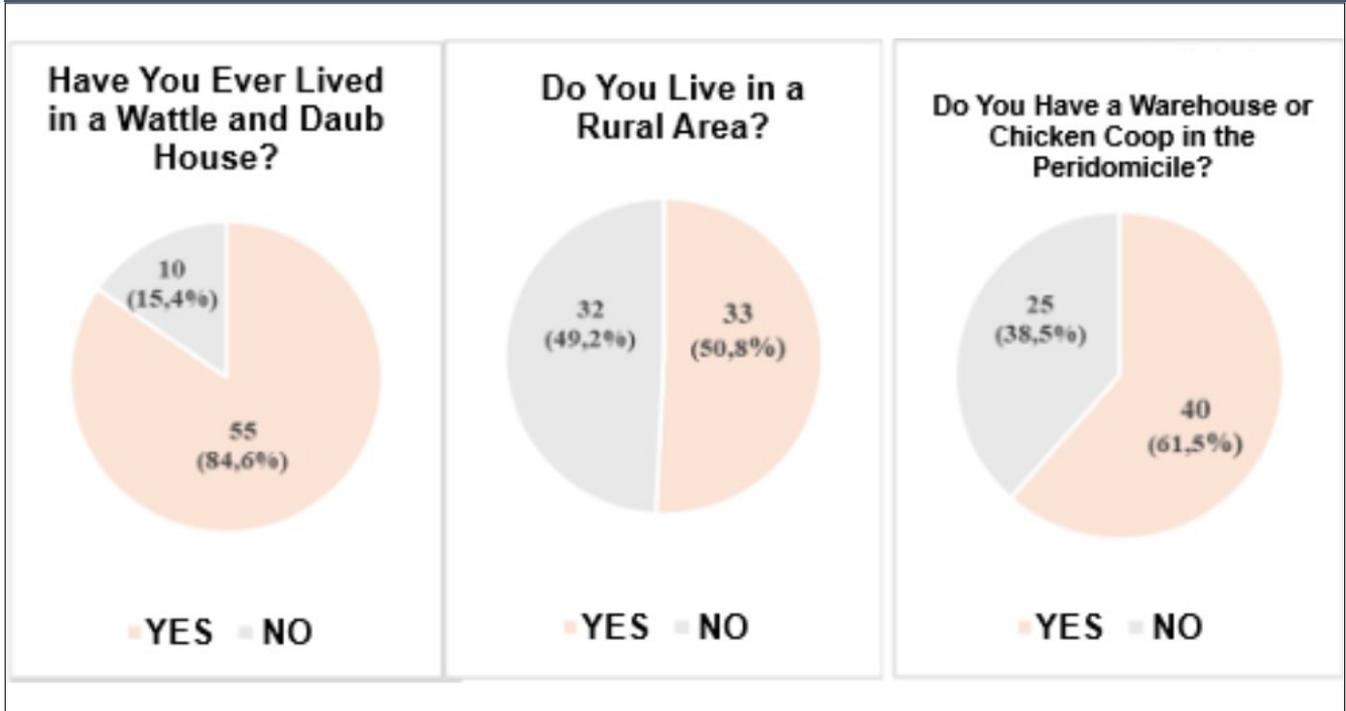
Figure 1 - Cities of origin of patients with digestive and cardiodigestive involvement followed at ADOC in the state of RN (n=65).



Source: Own authorship based on data from ADOC (2023).

When asked if they had ever lived in a wattle and daub house, i.e., a “rammed earth house”, 84.6% (55) of the patients stated that they had lived in this type of residence. Also, approximately 3.1% (2) stated that they still lived in this type of home. Furthermore, 50.8% (33) lived in rural areas and 61.5% (40) had a warehouse or chicken coop in the area surrounding their homes.

Graph 1 – Epidemiological data regarding the type of housing in the past, the presence of vector proliferation sites and the current area of residence of the patients selected for the study (n = 65), in Mossoró-RN.



Source: ADOC (2023).

Patients were asked whether they had ever had direct contact with *Triatoma infestans*, popularly known as “barber bug,” and 84.4% (54) said they had. Regarding etiological treat-

ment, approximately 53.8% (35) of patients had not undergone treatment before being monitored at the ADOC. Therefore, these patients underwent treatment at the usual dose at the outpatient clinic.

Regarding blood donation and

transfusion, 7.7% (5) had already donated blood, while 13.8% (9) had already received transfusions. Table 2 shows the variables presented in more detail.

Table 2 - Aspects related to CD regarding etiological treatment, contact with the vector, blood donation and transfusion to patients with digestive and cardiodigestive involvement monitored at the ADOC (n = 65), in Mossoró-RN.

| Variáveis | Category | N° | % |
|----------------------------|---------------------|----|------|
| Etiological treatment | Outside ADOC | 30 | 46,2 |
| | Inside ADOC | 35 | 53,8 |
| | Total | 65 | 100 |
| Contact the Barber beetle | Yes | 54 | 83 |
| | No | 11 | 17 |
| | Total | 65 | 100 |
| Blood donation | No | 60 | 92,3 |
| | Yes, once | 3 | 4,6 |
| | Yes, more than once | 2 | 3,1 |
| | Total | 65 | 100 |
| Received blood transfusion | No | 56 | 86,2 |
| | Yes, once | 6 | 9,2 |
| | Yes, more than once | 3 | 4,6 |
| | Total | 65 | 100 |

Source: ADOC (2023).

Regarding the symptoms attributed to the pathology, in the first consultation and in subsequent appointments, the patient was asked about the characteristic complaints of CD. In this sense, 8 patients (12.3%) were asymp-

tomatic, while 57 (87.7%) presented some digestive or digestive and cardiac symptoms simultaneously. Among the main digestive symptoms, dysphagia stands out, with 43.1% (28), constipation with 46.2% (30) and heartburn with 15.4% (10). Among the cardi-

ac symptoms, palpitation stands out, with 52.3% (34), dyspnea with 44.6% (29) and fatigue with 40% (26). The average number of symptoms was 3.4. The other symptoms reported by patients can be seen in Table 3.

Tabela 3 – Sintomas mais prevalentes mencionados pelos pacientes com acometimento digestivo e cardiodigestivo acompanhados no ADOC (n = 65), em Mossoró-RN.

| SYMPTOMS | N° | % |
|-------------------|----|------|
| Asymptomatic | 8 | 12,3 |
| Digestive | | |
| Constipation | 30 | 46,2 |
| Dysphagia | 28 | 43,1 |
| Heartburn | 10 | 15,4 |
| Epigastralgia | 1 | 1,5 |
| Globus pharyngeus | 4 | 6,2 |
| Obstipation | 2 | 3,1 |
| Regurgitation | 2 | 3,1 |
| Reflux | 2 | 3,1 |
| Cardiac | | |
| Palpitation | 34 | 52,3 |
| Dyspnea | 29 | 44,6 |
| Fatigue | 26 | 40 |
| Lipothymia | 25 | 38,5 |
| Precordial pain | 5 | 7,6 |
| Lower limb edema | 13 | 20 |
| Syncope | 11 | 16,9 |

Source: ADOC (2023).

DISCUSSION

This study focused on the compilation of the clinical and epidemiological profile of patients with Chagas disease treated at the ADOC of FACS/UERN. In this sense, it is, a priori, pertinent to understand the relevance of this service for the population of Rio Grande do Norte and other states that would not have free specialized care for the monitoring and treatment of the disease, since according to ⁽¹³⁾, this disease, even though endemic, is expensive for the public sector and unprofitable for the private sector, as it has a low socioeconomic profile.

In the period analyzed in this investigation, from 2011 to 2023, 14 cities were covered in the monitoring of CD in its digestive and cardiodigestive forms. It is noteworthy, however, that the ADOC has a greater scope than these 14 cities, since the forms researched in this work (digestive and mixed) correspond to only about 12.5% of the total population covered by the service.

In view of this, it was possible to establish the sociodemographic profile of the population studied, which is predominantly female, elderly, from rural areas, with work activity in the field, self-declared as brown, with low level of education, with precarious housing at some point in their lives, such as a mud and wattle house, and who have already had contact with the vector, in addition to a sedentary lifestyle, presenting multiple comorbidities such as hypertension and late complications of the disease, such as megaesophagus, megacolon and cardiomyopathy. In this context, a similar profile was identified in Minas Gerais, where an elderly population was evidenced, with a predominance of females, from rural areas and with low educational level, varying in self-declared race, with the majority in this region self-declared as white ⁽¹⁴⁾. This demonstrates a similar relationship of profiles in different regions where the disease is considered endemic.

The number of patients with low levels of education in this study was noteworthy, as it was shown that 43 (66.2%) patients were illiterate or had not completed elementary school. It can be seen that this is a predominant factor in other studies, which attribute low levels of education to the socioeconomic reality of this population, in which the low purchasing power and poor educational infrastructure of rural areas stand out, which conditions precarious access to a quality education system ⁽¹⁵⁾.

With regard to sex and age, there was a predominance of women, with 60% (39) of the sample, and of elderly people, whose average age was 61.6 years. These findings may be related to the predominance of women in the Brazilian population, since, according to the last demographic census, conducted by the Brazilian Institute of Geography and Statistics (IBGE), 51% of the Brazilian population is composed of women. It is worth emphasizing that, from the age of 30 onwards, the proportion of women becomes even greater in all regions, that is, the elderly population is also mostly made up of women, due to their greater life expectancy compared to men ⁽¹⁶⁾.

Furthermore, studies ⁽¹⁷⁾ show that men seek health services less frequently than women, and therefore have a later diagnosis of their diseases. Finally, these factors are associated with the chronicity of CD, in which the symptoms of chronic presentation can appear decades after infection, causing individuals to seek care when they already have complications from the disease, such as megaesophagus, megacolon or cardiomyopathy ⁽¹⁸⁾.

As for origin, there was a slight predominance of rural areas in relation to urban areas, in which the former represents 50.8% (33) of the sample and the latter 49.2% (32). The cities that are part of the Alto Oeste Potiguar mesoregion stood out. In this sense, this region represents an endemic area for CD, as evidenced by a study ⁽¹⁹⁾ in which a survey was carried out with 423 individuals in

the municipality of Felipe Guerra and neighboring cities, reaching the result that 6.6% (27) of this sample was infected by *Trypanosoma cruzi*.

In addition to this, outbreaks of CD in the region confirmed 18 cases of CD in 4 cities in the region after ingestion of sugarcane juice, coming from the same source ⁽²⁰⁾. In this sense, the rural area of the mesoregion of Alto Oeste Potiguar becomes an endemic area, both due to its natural aspects of vegetation and climate, as well as uncontrolled human occupations.

Furthermore, it was identified that the high prevalence of CD in this region is related to the association between the housing area, work activity and housing conditions. In this study, it was seen that 43% (28) performed activities in the field, such as agriculture and fishing. In addition, 84.6% (55) of this population lived at some point in their lives in a mud and mud house, with 3.1% (2) still living in these conditions and 62.5% (40) having a warehouse or chicken coop in the peridomicile.

These data, as considered ⁽²¹⁾, contribute to identifying the possible forms of transmission of the disease, since the precariousness of housing and the presence of natural reservoirs such as warehouses or chicken coops, as well as work activity in the field are major conditions for the vectorial transmission of the disease, since they are common factors among those infected by *Trypanosoma cruzi* in this research.

This hypothesis is further reinforced by the fact that 84.6% (55) of patients had already had contact with *Triatoma infestans*, as well as 86.2% (56) had never received a blood transfusion and 92.3% (60) had never donated, which demonstrates a low probability of transmission of the disease through transfusion. Thus, it is understood that the main form of transmission present in the study population is vectorial.

Regarding the prevalence of CD in the digestive and cardiodigestive forms in the ADOC, of a total of 528 pa-

tients analyzed, 65 patients had at least the digestive form of the disease, which represents a prevalence of approximately 12.3% (65) of all patients in the outpatient clinic. Furthermore, of these 65 patients, 52.3% (34) had the digestive form and 47.7% (31) the cardiodigestive form.

In the Brazilian context, the prevalence of the digestive form of CD has been estimated through the diagnosis of esophagopathy and colonopathy, conducted in radiological studies carried out in Chagasic populations living in endemic areas. Thus, in seven studies, which included 2,073 cases, the prevalence varied between 7.1% and 18.8%, with an average of 8.8%⁽²²⁾. Thus, it is understood that the prevalence in ADOC, of 12.3%, is within the national average.

In the present study, 87.7% (57) of the patients presented some symptomatology related to Chagas disease, related to complications resulting from the actions of the protozoa over the years, while 12.3% (8) did not present typical symptoms of CD. These patients without symptoms were classified as having the digestive form based on the results of tests such as barium enema and esophagogram.

Therefore, the symptoms, especially in the elderly population, can be variable, since they can present with milder symptoms, such as heartburn, or even more serious complications such as megaesophagus, megacolon or cardiomyopathy. Associated with this, the existence of other comorbidities, such as metabolic and cardiovascular diseases, may occur, making diagnosis and treatment more difficult. Therefore, epidemiological studies are of great importance in identifying the population most susceptible to these conditions. Thus, these aspects associated with knowledge about the complications and clinical aspects of the symptoms of this population allow for appropriate therapeutic management⁽²³⁾.

The most prevalent gastrointestinal symptoms were constipation with 49.3%

(32), dysphagia with 43.1% (28), heartburn with 18.5% (12) and enlargement with 6.2% (4). In this perspective, these symptoms are due to motility disorders of both the esophagus and the colon. Similar results were found in Teresina, in the state of Piauí, when analyzing cases of CD in a tertiary hospital in the city. Thus, 76 patients were evaluated and dysphagia was the main symptom, with 69.6%, followed by constipation with 39.1% of cases, finally weight loss with 39.1%⁽²⁴⁾.

Cardiac symptoms are causes of fibrosing cardiomyopathy, which can generate four main syndromes, including: heart failure, arrhythmias, anginal manifestations, and thromboembolic events. Among the most common symptoms in the population participating in this study, palpitation stands out, with 52.3% (34), dyspnea with 44.6% (29), fatigue with 40% (26), fainting with 38.5% (25), edema of the lower limbs with 20% (13), and chest pain with 9.2% (6).

These symptoms are typical of heart failure, with dyspnea on mild exertion and the presence of edema of the lower limbs being warning signs and signs of HF severity⁽²⁵⁾. A similar study shows synergistic results, of which 50% of the sample had dyspnea, 47.6% had palpitations, and 40.5% had a history of fainting/syncope⁽²⁶⁾.

Therefore, the findings described in the study corroborate the existing literature on the typical signs and symptoms of heart failure, reinforcing the importance of early identification and appropriate management of the condition to avoid serious complications, such as recurrent hospitalizations and premature death. Appropriate management of symptoms, together with pharmacological and non-pharmacological interventions, can significantly improve the prognosis of patients with heart failure.

CONCLUSION

This study allowed us to understand

the clinical and epidemiological profile of patients with digestive and cardiodigestive disorders treated at the Chagas Disease Outpatient Clinic at UERN. It was found that this profile is characterized by the majority of women, of advanced age, with low levels of education, living in rural areas and with a history of living in precarious conditions, such as mud houses. Most of these individuals have severe forms of the disease, such as megaesophagus, megacolon and cardiomyopathy, associated with prevalent comorbidities, such as arterial hypertension and cardiac disorders.

These results highlight the importance of specialized monitoring offered by ADOC, which serves a vulnerable population, whose clinical and sociodemographic characteristics require a comprehensive approach. The social and economic conditions of this population are directly linked to the findings, reflecting inequalities that hinder access to health care and favor the persistence of risk factors for the transmission of Chagas Disease, such as contact with the vector and precarious housing conditions. These aspects reinforce the need for an integrated approach that considers not only the clinical aspects of the disease, but also the social determinants of health.

Understanding the profile of this population from a Public Health perspective is essential to developing effective strategies and measures, especially in endemic areas. In this context, it is essential to formulate public policies, planning, evaluation and management to combat Chagas disease, especially in endemic regions such as Alto Oeste Potiguar, with the aim of improving living conditions, strengthening prevention and ensuring access to treatment. The specialized care provided by the UERN ADOC is a crucial tool in controlling the disease and promoting health, highlighting the importance of accessible health services that are appropriate to the needs of populations in situations of social vulnerability.

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