v. 3, n. 28, 2023

International Journal of Health Science

CASE REPORT OF AMERICAN TEGUMENTARY LEISHMANIASIS OCCURRED IN THE MUNICIPALITY OF ITAPERUNA, RIO DE JANEIRO, WITH LITERATURE REVIEW

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Abstract: Justification: The work is justified by the emergence of cases of American Cutaneous Leishmaniasis (ATL) in the city of Itaperuna/RJ. According to SINAN - RJ, between 2010 and 2020, the municipality recorded 19 cases of ACL. **Objective:** The aim of this study was to report the case of a citizen of Itaperuna, RJ, diagnosed with American Tegumentary Leishmaniasis (ATL) at the dermatology outpatient clinic of Clínica Escola do Centro Universitário Redentor/Afya, Itaperuna, in addition to reviewing the literature. **Methodology:** the methods used were information from the medical records obtained at the Clínica Escola do Centro Universitário Redentor/Afya, Itaperuna - RJ. In addition to searches on the PubMed platform and the VHL platform of the Ministry of Health, in which the descriptors "*Cutaneous Leishmaniasis*" AND "Rio de Janeiro", "American Tegumentary Leishmaniasis". Additionally, epidemiological data from SINAN NET of the Ministry of Health were used. **Results:** patient, male, 77 years old, referring "injury in the left lower limb that does not heal", 5 months ago. Clinical manifestation: single ulcerated lesion on the left lower limb. The diagnostic hypothesis is ATL, indicating histopathological examination. The histopathological laboratory diagnosis with the presence of gigantocyte cells, confirming the diagnostic hypothesis. Patient referred to the reference center of the municipality. **Conclusion:** ATL is a neglected tropical disease that compromises the individual and social capacities of the individual, being a public health problem. Thus, it is necessary for the population to have knowledge about American Tegumentary Leishmaniasis, to assist in vector control and early diagnosis so that treatment is effective.

Keywords: Diagnosis; Cutaneous leishmaniasis; LTA

INTRODUCTION

American tegumentary leishmaniasis (ATL) is a public health problem that has historically been neglected, affecting mainly marginalized population groups, further compromising their productive capacity and social interaction, as it is a stigmatizing condition. ATL is a parasitic disease of the skin and mucous membranes, caused by protozoa of the genus Leishmania. In Brazil the main species found are: *Leishmania (Viannia) braziliensis*, *Leishmania (Viannia) guyanensis* e a *Leishmania (Leishmania) amazonensis* (1). In relation to the State of Rio de Janeiro, *Leishmania* (V.) *braziliense* is mostly responsible for ACL cases. Transmission depends on the adaptation of the vector to the domestic and peridomestic environment (2).

In Brazil, an average of 21,000 cases of ACL are registered annually, which makes the country endemic. In the state of Rio de Janeiro, between 2018 and 2019, 94 cases (1) were reported, and in the municipality of Itaperuna - RJ, 4 cases were registered. In 2020, 3 new cases were recorded, with the highest number of confirmed cases in the region. According to epidemiological data from the Disease Information and Notification System of the state of Rio de Janeiro, in the period from 2010 to 2020, the municipality of Itaperuna accounted for 19 cases of ACL (4).

The aim of this study was to report the case of a citizen of Itaperuna, RJ, diagnosed with American Tegumentary Leishmaniasis (ATL) at the dermatology outpatient clinic of Clínica Escola do Centro Universitário Redentor/ Afya, Itaperuna, in addition to reviewing the literature on the epidemiology of disease in the city and its clinical presentations.

METHODOLOGY

The methods used to prepare this expanded summary were information from the medical records obtained at the Clínica Escola

do Centro Universitário Redentor/Afya, Itaperuna - RJ. In addition to searches on the PubMed platform and the VHL platform of the Ministry of Health, in which the descriptors "*Cutaneous Leishmaniasis*" AND "Rio de Janeiro", "American Tegumentary Leishmaniasis", including articles that addressed these themes. Additionally, epidemiological data from SINAN NET of the Ministry of Health were used.

For the diagnosis, the "ANATOMOPATHOLOGICAL" examination was carried out on March 3, 2022. Material: skin lesion of the left lower limb. Macroscopy: irregular skin fragment, brownish and elastic, measuring 0.6 x 0.4 x 0.3 cm. In the cuts, the aspect is repeated. Conclusion: skin biopsy showing dense acute and chronic inflammatory infiltrate, with the presence of numerous gigantocyte cells. Microscopic findings, together with clinical findings, favor the diagnosis of Leishmaniasis.

RESULTS AND DISCUSSIONS

Patient B.F.G., 77 years old, resident of Niterói - Itaperuna - RJ, presented a single ulcerated skin lesion, with a hyperemic and granulomatous background, with regular, raised edges, with a framed pattern of progressive and painless evolution in the proximal region of the left lower limb. He reports starting 5 months ago and with the concurrence of an animal from his street with lesions similar to his. According to the clinical analysis of the lesion and the patient's social history, an intralesional biopsy was requested to confirm the diagnostic hypothesis of American tegumentary leishmaniasis and to continue the clinical case.

American tegumentary leishmaniasis (ATL) is caused by intracellular protozoa of the genus Leishmania, and the main species endemic to the state of Rio de Janeiro is *Leishmania* (V.) *braziliensis* (6). Vectorial transmission is characterized by the bite of a female sand fly, of the genus Lutzomyia, known as the straw mosquito. Since the hosts and possible natural reservoirs of Leishmania are rodents, marsupials and canids (6). The municipality of Itaperuna, as well as other municipalities in the northwest region of the state of Rio de Janeiro, are remnant areas of the Atlantic Forest, in which a progressive process of human occupation has been taking place, associated with the deforestation of these wild areas, causing changes in the epidemiological profile of leishmaniasis, leaving it being only wild and starting to occur in peridomestic and domestic environments, thanks to the adaptation of the sandfly vector (5).

The clinical forms of American tegumentary leishmaniasis can be: cutaneous (LC) and mucosal leishmaniasis (LM). Cutaneous leishmaniasis presents as papules, which evolve into ulcers with a granular base and infiltrated borders in a frame, and may have only one or multiple lesions, which can be: localized - single or multiple ulcerous lesions (up to twenty lesions); disseminated - various papular and acne-like lesions that affect different body parts; in a diffuse form - rarer clinical form with the formation of plaques and several non-ulcerated nodules covering large skin surfaces. Mucosal leishmaniasis may occur as a result of CL or not, and is characterized by infiltration, ulceration and, mainly, tissue damage to the nasal cavity, pharynx or larynx (7).

The diagnosis of ACL encompasses epidemiological, clinical and laboratory aspects (parasitological research, immunological and molecular diagnosis). Frequently, the association of some of these elements is necessary to arrive at the final diagnosis (3). That said, even after clinical identification, the ideal is that diagnostic confirmation is accompanied by laboratory tests, with the aim of obtaining better results and consequently

excluding differential diagnoses. Laboratory diagnosis is based on three major groups of tests, namely: parasitological, immunological and molecular. It is known that when the parasite is present, ATL is confirmed, which can be done through different parasitological techniques of direct or indirect investigation. In view of this, the patient returned to the outpatient clinic with histopathological results showing acute and chronic infiltrate, with the presence of numerous gigantocyte cells, which, associated with the patient's clinical data, propitiates the diagnosis of American tegumentary leishmaniasis.

The first choice of treatment for ATL, caused by *Leishmania braziliensis*, is with IV or IM meglumine antimoniate, for patients from all Brazilian regions, except those with renal, hepatic or cardiac comorbidity, pregnant women and aged 50 years or older ; or Liposomal Amphotericin B, for patients aged 50 years and over; with kidney, heart or liver failure of any age; kidney, heart or liver transplants; pregnant women of any age. For ulcers up to 3 cm in diameter, intralesional meglumine antimoniate medication can be used. The second is with amphotericin B deoxycholate, or pentamidine isethionate, except in pregnant and lactating women (3). The patient will receive treatment at the reference service in the region that is expected to start treatment on April 18, 2022.

FINAL CONSIDERATIONS

ATL is a dermatological disease characterized by the presence of ulcers with high edges and a granular and painless bottom, requiring diagnosis and specialized treatment. Thus, it is necessary that the population has knowledge about American Tegumentary Leishmaniasis, to assist in vector control and early diagnosis so that treatment is more effective. In addition, health professionals must pay attention to the cases, in order to carry out the mandatory notification of cases, to obtain more concrete epidemiological data and targeted health actions.

REFERENCES

1. Cenário Epidemiológico: Leishmanioses em Humanos no Estado do RJ / Epidemiological Scenario: Leishmaniasis in Humans in the State of RJ. Rio de Janeiro; SES/RJ; 13/08/2019. 9 p.

2. Guia de orientação. Vigilância de leishmaniose tegumentar Americana (LTA). 2016, Santa Catarina, 5. ed, pag. 1-45.

3. Manual de Vigilância da Leishmaniose Tegumentar. 1. ed. Brasília, DF : Ministério da Saúde, 2017. pag. 71-79.

4. Ministério da Saúde/SVS - Sistema de Informação de Agravos de Notificação - Sinan Net.

5. Oliveira, Alair & Paula, Paula. (2011). Perfil Epidemiológico dos Casos de Leishmaniose no Município de Itaperuna - RJ: de Janeiro de 2006 a Outubro de 2009. Acta Biomédica Brasiliensia. 2. 30. 10.18571/acbm.006.

6. Senna TCR; Pimentel MIF; Oliveira LFA; Lyra MR; Saheki MN; Salgueiro MM; Valete-Rosalino CM; Martins ACC; Schubach AO; Bedoya-Pacheco SJ. *Clinical features and therapeutic response in adult and pediatric patients with American tegumentary leishmaniasis in Rio de Janeiro.* Trans R Soc Trop Med Hyg. 2020 Jan 6;114(1):1-6. doi: 10.1093/trstmh/trz095. PMID: 31703122.

7. Vasconcelos, J. M; Gomes, C. G; Sousa, A; Teixeira, A. B; & Lima, J. M. (2018). Leishmaniose tegumentar americana: perfil epidemiológico, diagnóstico e tratamento. *RBAC*, *50*(3), 221-7.