

DOI: <https://doi.org/10.36489/saudecoletiva.2021v11i68p7441-7450>

Treatment in basic attention of leishmaniasis with intralesional application of glucantime in face region

Tratamiento en la atención básica de leishmaniasis con aplicación intralesional de glucantime en región facial

Tratamento na atenção básica de leishmaniose cutânea com aplicação intralesional de glucantime em região da face

ABSTRACT

American cutaneous leishmaniasis is an endemic infectious disease in the country's public health. The disease is transmitted after the bite of females of the hematophagous mosquito, known as sand fly, and has several clinical manifestations, classified as cutaneous, cutaneous-mucosal and diffuse cutaneous, affecting all genders and age groups. The aim of this article is to report the clinical case of a patient, presenting an ulcerated lesion in the region of the face. The method used was the identification of Leishmania through the polymerase chain reaction associated with clinical response to treatment after intralesional application. As a result, immediate responses were obtained from the lesions that, despite studies showing spontaneous healing after months/years, facial lesions need a more aggressive protocol. It is concluded that the importance of the report is due to the fact that the therapeutic treatment consists of direct application in a location not authorized by the protocol of the Ministry of Health for American tegumentary leishmaniasis.

DESCRIPTORS: Leishmaniasis; Wounds and Injuries; Meglumine Antimoniate.

RESUMEN

La leishmaniasis cutánea americana es una enfermedad infecciosa endémica en la salud pública del país. La enfermedad se transmite tras la picadura de hembras del mosquito hematófago, conocido como flebotomos, y tiene varias manifestaciones clínicas, clasificadas en cutáneas, cutáneo-mucosas y cutáneas difusas, afectando a todos los géneros y grupos de edad. El objetivo de este artículo es reportar el caso clínico de un paciente que presenta una lesión ulcerada en la región de la cara. El método utilizado fue la identificación de Leishmania a través de la reacción en cadena de la polimerasa asociada a la respuesta clínica al tratamiento después de la aplicación intralesional. Como resultado, se obtuvieron respuestas inmediatas de las lesiones que, a pesar de que los estudios muestran una curación espontánea después de meses / años, las lesiones faciales necesitan un protocolo más agresivo. Se concluye que la importancia del informe se debe a que el tratamiento terapéutico consiste en la aplicación directa en un lugar no autorizado por el protocolo del Ministerio de Salud para la leishmaniasis tegumentaria americana.

DESCRIPTORES: Leishmaniasis; Heridas y Traumatismos; Antimoniate de meglumine.

RESUMO

A leishmaniose tegumentar americana é uma doença infecciosa endêmica na saúde pública do país. A doença é transmitida após a picada das fêmeas do mosquito hematófago, conhecido como flebotomíneo e possui diversas manifestações clínicas, classificadas em cutânea, cutaneomucosa e cutânea difusa, acometendo todas os gêneros e faixas etárias. O objetivo desse artigo é relatar o caso clínico de um paciente, apresentando lesão ulcerada em região da face. O método utilizado foi a identificação de Leishmania através da reação em cadeia da polimerase associada a resposta clínica ao tratamento após aplicação intralesional. Como resultado foram obtidas respostas imediatas das lesões que apesar de estudos apresentarem cura espontaneamente após meses/anos, lesões faciais necessitam de um protocolo mais agressivo. Conclui-se que a importância do relato se deve ao fato do tratamento terapêutico consistir a aplicação direta em local não liberado pelo protocolo do Ministério da Saúde de leishmaniose tegumentar americana.

DESCRITORES: Leishmaniose; Ferimentos e Lesões; Antimoniato de Meglumina.

RECEIVED ON: 03/31/2021 APPROVED ON: 06/17/2021

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INTRODUCTION

Leishmaniasis is a chronic infectious-parasitic disease with etiology in parasites of the genus *Leishmania*, classified as a tropical disease, applied in different clinical forms, depending on the species of the protozoan. They present a heteroxenic cycle and parasitize vector insects and vertebrate animals, where in mammals they contract the amastigote form, immobile in a round shape that replicates within the cells of the phagocytic system, spreading through the blood system causing skin eruptions, injuring the epithelial tissue.¹

Leishmaniasis is considered a major public health problem in the world, in continents such as America, Asia, Africa and Europe. Constituting an endemic with a high priority for control, and in Brazil, it plays a relevant role in medical services that are gateways to the public health system.² The World Health Organization (WHO) states that approximately 350 million people are at risk of contracting this infection and that at least 2 million people present new cases every year, when an epidemiological profile of the disease's manifestation around the world is drawn.³

The disease is considered one of the six most significant infectious diseases in the world, ranking second, justified by its high detection coefficient and ability to produce several warning signs and symptoms, especially ulcerous lesions that appear in all parts of the body. In Brazil, the presence of endemics has been verified, with a predominance of rural areas and environments from forests and rivers.³

It comprises a group of infectious diseases that can occur with cutaneous or visceral involvement. American Cutaneous Leishmaniasis (ACL), cutaneous manifestations in the New World, clinically presents lesions with a variety of variables, ranging from the acneiform type to ulcers with or without lymphadenopathy. The typical cutaneous lesion presents only as an ulcer with infiltrated edges in exposed areas of the body, but the clinical manifestation may vary depending on the immunological status of the host, the load of the parasite and the types of *Leishmania* species involved.⁴

The typical ulcer of cutaneous leishmaniasis (CL) can progress to healing over a period of several months to years, if not diagnosed and treated, it can cause deformities and even cause tissue necrosis.⁵ However, some patients have early spontaneous progression of the disease, are diagnosed through laboratory tests and clinical criteria, and even before the start of drug therapy, the lesions may start the process of clinical cure, not requiring treatment.^{6,7}

The aim of this article is to report the clinical case of a patient, presenting an ulcerated lesion in the region of the face, after identifying the disease through the polymerase chain. Clinical treatment consisted of intralesional application of glucantime in lesions typically compatible with an ulcer in the face region.

METHODS

This is a case study, describing the diagnosis and evolution of a patient's disease. Elucidating the mechanisms of the disease and treatments, from clinical and laboratory studies, as it brings great

relevance and scientific contribution, it brings the treatment of a patient diagnosed with Leishmaniasis, a clinical pathology that represents a challenge in the treatment, because it is of ulcers formed in the region of the face, in addition to the severity and deformity inherent to its evolution. The report is made from the first consultation, as the protocol used and monitoring of the healing process. The survey was conducted in 2019 and 2020, lasting 1 year and 5 months.

The method was adopted through bibliographic sources from scientific articles, books and protocols provided by the Ministry of Health (MH), scientific journals such as: *Revista Acta Tropica*, *Journal of the Brazilian Society of Tropical Medicine*, *Journal of Tropical Medicine and Hygiene*, *Revista Saúde Coletiva de Barueri*, among others.

Data collection was performed at the Gentil Carneiro Basic Health Unit, located in the city of Rorainópolis - Roraima, through the patient's medical record, JS S, 34 years old, who authorized the publication of his clinical data as well as photographs for the exclusive use of scientific research by signing the informed consent form (ICF) based on the Brazilian Norms and Guidelines that order research involving human beings, including Resolution No. 466/12 of the National Health Council - CNS (Conselho Nacional de Saúde).

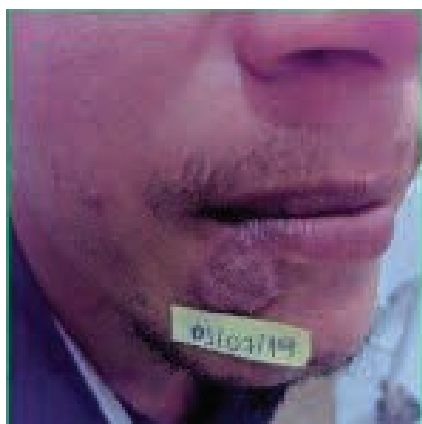
As inclusion criteria, we used confirmation through laboratory examination of cutaneous Leishmaniasis pathology and exposure of facial ulcers. The first outpatient medical consultation took place on June 3rd, 2019, complaining of a wound in the face, perioral region, for 2 months, with the lesion growing over

Figure 01 – Facial lesion starting treatment with the application of the first dose.



Source: Researchers, 2019.

Figure 02 - Facial lesion showing the first signs of evolution during treatment



Source: Researchers, 2019.

Figure 03 – Evolution of the lesion on the face after the second application of intralesional treatment.



Source: Researchers, 2019.

time, with no response to treatment for fungal and bacterial pathology, in the investigation of social history, it was found that he had been in the mining region for 4 months, since then the lesion started small and grew, with suspicion of Leishmaniasis, biopsy was requested through the lesion scaling and research, and the same came positive.

RESULTS

The traditional treatment was presented: glucantime 3 vials intravenously for 20 days, with a total of 60 vials for the entire treatment, however, he mentioned the social difficulty of attending the hospital, due to living in a rural area and not having transport to come to the city and make daily treatment for 20 days. Then the unit's physician suggested intralesional treatment, with infiltration of glucantime in the lesion site, each application would be with an interval of 15 days, and evaluation of the lesion to see if it needed another application, the control would be with photos and physical examination of the patient. Before the first application, tests such as electrocardiogram, liver function, kidney function and hemogram were requested.

No changes were seen in the examination to justify the contraindication to treatment, so the first application was carried out on June 17th, 2019 in the wound of approximately 1,5 cm by 1,8 cm periorally, with a crusty edge appearance, clean bottom, but infiltrative, local asepsis was performed with degerming chlorhexidine, infiltration of local anesthesia-lidocaine, and subsequent infiltration of 2,5 ml glucantime into the lesion, sufficient infiltration was made to leave the swollen aspect, there were no complications with the procedure. In figure 01 we can see the lesion initially.

The second application took place on July 1st, 2019, the patient came reporting that he was doing well, but soon after the first application he reported that he had vision clouding and vertigo that lasted

a few minutes, without other complications. The lesion was smaller, with onset of epithelialization, a sepsis, local anesthesia and subsequent application of 1 ml glucantime were performed until the lesion had an elevated aspect, after about 10 minutes after application, the patient reported vision turbidity and vertigo, with short duration, about 2 minutes the episode, without further complications. In figure 02 we can follow the primary evolution of the patient.

The third and last application was carried out on July 29th, 2019, the patient came reporting that he had been well since the last application, he had no symptoms after being released home

and this return, the lesion was already smaller than the last application, with the almost all epithelialized extension, 1,5 ml of glucantime was made, without interurrences. Figure 03 shows the evolution of the lesion.

The patient was instructed to return to the unit with a frequency of 15 days to monitor the epithelialization of the lesion, after 15 days the patient returned to the basic unit and it was found that the lesion was much smaller and totally epithelialized. At the 6th return, the patient already had no apparent lesion, the patient was followed up for a period of 1 year after applications, where it was found that the lesion did

not recur and had complete healing. In figure 04 we see the lesion completely healed after treatment.

Thus, the total treatment was used about 2 and a half ampoules, a great contrast when analyzing the INTRAVENOUS treatment, less side effects of the same. In figure 05 we see the patient without any trace of the lesion after a period of approximately one and a half year.

DISCUSSION

In Brazil, The traditional treatment for cutaneous leishmaniasis, the drug of first choice for the treatment is N-methyl-glucamine antimoniate (Glucantime) (AM), recommended by the Ministry of Health, at a dose of 10 mg-20 mg Sb5+ / kg/day for twenty consecutive days for Cutaneous Leishmaniasis. There may be responses to the use of this therapy, however relapses are common.⁸ Compared to conventional treatment using about 60 intravenous ampoules, only 2,5 intralesional ampoules were used.

The intralesional method was recently released by the Ministry of Health, in 2017, with some restrictions: single lesion, < 3 cm, not recommended in periarticular regions and head.⁹ Despite being a method already described as effective and beneficial in various parts of the body, there are still no studies describing the effectiveness of intralesional treatment in facial injuries.

It is noteworthy that during treatment, the patient's report about a side effect, vertigo, associated with the drug glucantime, but a mild and short-lasting effect in relation to the side effect of the intravenous, which are more severe and intense, as the drug is old and with a lot of side effects, and when used in large quantities, they have high toxicity, which can bring risks to the patient.¹⁰

Due to the large number of side effects that the drug has, it is recommended that intravenous ampoules be used in a hospital environment. This ends up making its use unfeasible in places with difficult access to health, where health posts are

Figure 04 – Wound healed after treatment over a period of 6 months.



Source: Researchers, 2019.

Figure 05 – Patient without traces of the lesion on the face.



Source: Researchers, 2019.

km away from the patient, where they are precisely the areas of greatest focus of the disease, endemic region, Amazon region, where health is precarious and of difficult access to the population at risk.¹¹

The intralesional method came to revolutionize local health, where health is precarious and difficult to access, as it had its effectiveness proven efficiently and quickly using a smaller amount of the drug, resulting in a TOTAL disappearance of the lesion.^{12,13}

CONCLUSION

The present study brings the perception of the severity of Leishmaniasis, currently categorized in the group of neglected diseases, due to the little investment in this field in question, generating few

studies of efficient drugs with fewer side effects, emphasizing that it is a serious, chronic disease that leads to disability and interferes in the social life of the patient with the pathology, so the importance of an early diagnosis and treatment is emphasized.

Considering that the objective of the research aimed at the treatment of ulcerated lesions in the face region, through identification by the polymerase chain, it is necessary to take the solution to areas of difficult access, where health is precarious, and there are no hospitals, only health units, the intralesional method came to revolutionize the treatment due to the use of fewer ampoules, fewer side effects, in addition to little treatment abandonment and recurrence. Periodic dermatological/otorhinolaryngological

examination of this patient is also recommended to rule out any possibility of recurrence, as well as clear guidance to patients about the signs and symptoms of mucosal lesions.

Thus, it is concluded that the role of the medical conduct in this case was essential, since the treatment had to be changed due to the lack of medication for the traditional treatment, and thus corroborate for the conclusion of diagnosis and treatment planning using the recommendation of the Clinical treatment consisted of intralesional application of glucantime in lesions typically compatible with ulcers in the face region. Taking into account the fundamental importance of the patient's quality of social life, avoiding disfiguring and/or mutilating scarring. ■

REFERENCES

- Gontijo, B et al. American cutaneous leishmaniasis. *Revista da Sociedade Brasileira de Medicina Tropical* 36(1):71-80, jan-fev, 2003.
- Costa, J.M.L. Epidemiology of the Leishmaniasis in Brazil: *Gaz. méd. Bahia* 2005; 75:1(JanJun):3-17. Acesso em 05 de julho de 2017. Disponível em:
- Brasil. Ministério da Saúde. Secretaria de Vigilância em Saúde. Manual de Vigilância da Leishmaniose Tegumentar Americana. Ministério da Saúde, Secretaria de Vigilância em Saúde. – 2. ed. atual. – Brasília: Editora do Ministério da Saúde, 2010. 180 p.: il. – (Série A. Normas e Manuais Técnicos). Acesso em 02 de junho de 2017. Disponível em:
- Lima MVN, Oliveira RZ, Lima AP, et al. Leishmaniose cutânea com desfecho fatal durante o tratamento com antimonial pentavalente. *An Bras Dermatol.* 2007; 82 : 269–271. doi: 10.1590 / S0365-05962007000300010.
- Organização Mundial da Saúde. Relatório Técnico Série 949. Controle da leishmaniose. Genebra, 2010, 186 p.
- Marsden PD, Tada MS, Barreto AC, Cuba CC. Cicatrização espontânea de úlceras cutâneas de *Leishmania braziliensis braziliensis*. *Trans R Soc Trop Med Hyg.* 1984; 78 : 561–562. doi: 10.1016 / 0035-9203 (84) 90087-7.
- Costa JML, Vale KC, França F, et al. Cura espontânea da leishmaniose causada por *Leishmania viannia braziliensis* em lesões cutâneas. *Rev Soc Bras Med Trop.* 1990; 23 : 205–208. doi: 10.1590 / S0037-86821990000400004
- Lopes, Antônio Carlos. Tratado de clínica médica, volume 2 / Antônio Carlos Lopes. 3. ed. Rio de Janeiro: Roca, 2016.
- Brasil. Ministério da Saúde. Secretaria de Vigilância em Saúde. Departamento de Vigilância Epidemiológica. Manual de recomendações para diagnóstico, tratamento e acompanhamento de pacientes com a coinfeção *Leishmania-HIV* / Ministério da Saúde, Secretaria de Vigilância em Saúde, Departamento de Vigilância Epidemiológica – Brasília: Ministério da Saúde, 2011.
- Lucia, RNBP. Distribuição espaço temporal dos casos humanos de leishmaniose tegumentar americana notificados no estado do rio de janeiro de 2001 a 2013 e associação com variáveis clínicas e populacionais. Ministério da Saúde. 2016, Rio de Janeiro.
- Vasconcellos, E.de C., Pimentel M. I., Schubach A. de O., de Oliveira R. de V, Azeredo-Coutinho R. B., Silva F. da C., Salgueiro M. de M., et all. Short Report: Intralesional Meglumine Antimoniate for Treatment of Cutaneous Leishmaniasis Patients with Contraindication to Systemic Therapy from Rio de Janeiro (2000 to 2006). *The American Journal of Tropical Medicine and Hygiene* , 31 de julho de 2012 , 87 (2): 257-260.
- De Oliveira Duque, M. C.; Quintão Silva, J. J.; Soares, P. A. O.; Magalhães, R. S.; Horta, A. P. A.; Paes, L. R. B.; et all. Comparison between systemic and intralesional meglumine antimoniate therapy in a primary health care unit. *ACTA TROPICA* , v. 193, p. 176-182, 2019.
- De Souza Abreu, M., Macedo Torquato de Siqueira, J. M. ., Cleves da Silva Maia, J. ., Barguil Nepomuceno, D. ., Barros Araújo Lopes Luz, E. ., & Ferreira Mendes-Sousa, A. . (2021). Aspectos epidemiológicos e distribuição espacial da leishmaniose visceral em Picos, Piauí, Brasil . *Saúde Coletiva (Barueri)*, 11(65), 5846-5857. <https://doi.org/10.36489/saudecoletiva.2021v11i65p5846-5857>