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(CASE REPORT)

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23-year-old male patient with localized cutaneous leishmaniasis of the left auricular pavilion: Case report

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Abstract

Leishmaniasis is an infectious disease caused by parasitism of cells of the mononuclear phagocytic system by flagellated protozoa of the genus Leishmania, transmitted to humans by Diptera insects belonging to the genus Phlebotomus in the Old World and Lutzomyia in the New World. Clinically, it presents in humans in three main forms: visceral, cutaneous, and mucocutaneous. These conditions are globally distributed. Old World species are predominantly limited to the skin in the vast majority of cases and remit spontaneously within a few weeks to a few months. In contrast, in the New World, due to multiple Leishmania complexes, there is a higher risk of developing secondary mucosal involvement.

We report the case of a 4-year-old male patient with no significant past medical history, who presented with ulcerative lesions located on the left lateral region of the neck and on the arm of the left upper limb, with characteristics compatible with cutaneous leishmaniasis.

Keywords: Leishmania; Neck; Arm; Ulcer; Pruritus; Cutaneous

1. Introduction

Leishmaniasis is considered by the World Health Organization (WHO) to be an increasing global public health problem, with an annual incidence of 1.5 million cases of cutaneous leishmaniasis. It comprises a group of diseases caused by several protozoan species of the genus Leishmania, which are transmitted to humans by female phlebotomine sandflies (genera Phlebotomus and Lutzomyia).1

The reservoirs of this protozoan are wild and domestic mammals, sometimes asymptomatic and sometimes with evident clinical manifestations, as occurs in humans. The main clinical forms are visceral, mucocutaneous, and cutaneous leishmaniasis.2–3

In localized cutaneous leishmaniasis (LCL), the incubation period ranges from approximately two weeks to six months. Lesions are found mainly on the extremities, followed in frequency by the auricular pavilion, face, and trunk. It is considered that areas exposed to the open air are the most accessible to sandfly bites. The disease begins with an erythematous macule at the site of the bite on the day of inoculation, which lasts up to two days.4

Subsequently, a papule develops that persists for around four days, followed by the formation of a nodule, which is the characteristic primary lesion of the disease. The nodule may last approximately two weeks, increasing in size, and later ulcerates. This ulcer is painless, round, with a clean base and indurated borders. Finally, the lesion tends to resolve with the formation of a scar.5–6

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In diffuse cutaneous leishmaniasis, the clinical picture begins with a macule or papule at the site of the insect bite; the protozoa then spread by contiguity, lymphatic, or hematogenous routes to any part of the body, except the scalp, axillae, palms, and soles. In this form, papules and nodules tend to coalesce, forming plaques of different shapes and sizes with well-defined borders.7

Disseminated cutaneous leishmaniasis is a rare form of cutaneous leishmaniasis. It is defined by the presence of ten or more mixed-type lesions (acneiform, nodular, ulcerated) located on two or more parts of the body.8–9

The diagnosis may be presumptive or definitive. The clinical characteristics of the disease are key to presumptive diagnosis. An ulcerative, painless lesion with a thick granulomatous base, indurated violaceous borders, and a duration of more than four weeks should raise clinical suspicion.10–11

Definitive diagnosis requires demonstration of the parasite, which can be achieved by different methods:

- Demonstration of amastigotes in smear or biopsy: The sample can be obtained by scraping with a scalpel blade or spatula, by aspiration with a hypodermic needle, or using a micropipette.
- In vitro culture: The material is obtained by aspiration or biopsy and should be macerated before inoculation into the culture medium.
- PCR for Leishmania: This is the most sensitive method, although still restricted to specialized laboratories.12

The treatment of cutaneous leishmaniasis is medical, and pentavalent antimonials are considered the drugs of choice for this disease, such as meglumine antimoniate (Glucantime) and sodium stibogluconate (Pentostam). Some of the adverse effects of these drugs are anorexia, nausea, vomiting, malaise, headache, and myalgias. In LCL, local intralesional administration of antimonials is recommended once or twice weekly for one month.13–14

For other forms, parenteral treatment is preferred. In cases of resistance to antimonials, second-line drugs such as amphotericin B and pentamidine may be used. Thermotherapy and local heat have also been employed to treat localized lesions.15

We present a clinical case of localized cutaneous leishmaniasis of the right auricular pavilion (LML) in a 54-year-old patient with multiple underlying comorbidities.

2. Case report

A 54-year-old male patient presented to the nearest health center with a 15-day history of ulcerative, pruritic lesions located on the right auricular pavilion. He reported having sustained an insect bite several days earlier, although he could not recall the name of the insect. At examination, ulcerative lesions with purulent exudate were observed, compatible with suspected leishmaniasis infection. He was admitted to the Infectious Diseases service for further diagnostic work-up and treatment.

The patient was admitted to the Infectious Diseases department and evaluated concomitantly by Dermatology. On physical examination, his vital signs were as follows: heart rate 82 beats per minute, respiratory rate 18 breaths per minute, temperature 37.2 °C, weight 85 kg, height 165 cm, BMI 31.2 kg/m^2 (Class I obesity).

The patient was alert and oriented to person, place, and time, responding appropriately to questioning. The head was normocephalic, with normal hair implantation. Right auricular pavilion: presence of ulcerated, pruritic, crusted lesions. Eyes: isochoric, reactive pupils. Nasal fossae: patent. Mouth: moist oral mucous membranes. Neck: palpable submandibular adenomegaly. Thorax: symmetrical, no scars. Heart: regular rate and rhythm, normal heart sounds (S1–S2). Lungs: preserved vesicular breath sounds, no adventitious sounds. Abdomen: soft, depressible, non-tender to palpation, normal bowel sounds. Extremities: normal muscle tone and strength.

Complementary tests included HIV 1 + 1 serology, which was non-reactive. Parasitological study for leishmaniasis from the ulcerative lesion of the right auricular pavilion was negative for smear and culture, but ELISA and PCR for Leishmania were positive.

Figure 1 Ulcerative lesions, right auricular pavilion.

The patient received treatment with meglumine antimoniate at a dose of 20 mg/kg/day (Glucantime® 1,500 mg/5 mL), administered intramuscularly every 12 hours for 30 days.

Post-treatment evaluation was favorable, with good clinical response and a good prognosis.

3. Discussion

Cutaneous lesions caused by leishmaniasis tend to occur in exposed areas of the skin. The incubation period ranges from days to weeks and even months. The infection begins as a pink papule that enlarges and evolves into a nodule or plaque-like lesion, ultimately leading to a painless ulcer with an indurated border. In the New World, the ulcer may be covered with a thick, white-yellow fibrinous exudate.

Lesions may be multiple and show variable clinical appearances, including sporotrichoid, verrucous, zosteriform, psoriasiform, eczematous, or erysipeloid patterns. In addition, extension of the lesions may be observed along lymphatic drainage pathways; these may or may not ulcerate but can be palpated subcutaneously and proximally along the lymphatic chain from the primary lesion. Regional lymphadenopathy may occur and can be prominent in some cases. Healing usually results in an atrophic, depressed scar, which may become keloid in predisposed patients.

The clinical findings in this case correlate with the typical presentation of cutaneous leishmaniasis. It is important to emphasize that underlying conditions and comorbidities may contribute to delayed medical consultation and diagnosis. In rural areas of our country, Ecuador, many cases of neglect or lack of timely care are observed, and the complications of diseases such as leishmaniasis can become a gateway for other pathologies.

The patient received continuous, strict treatment, which allowed for a good clinical prognosis and favorable evolution.

4. Conclusions

Leishmaniasis is a global public health problem and is particularly relevant in our country, Ecuador, especially in the Amazon region. It is essential to understand the epidemiology of the disease within the country so that it is considered in the differential diagnosis in areas of high incidence. Currently, three main forms of leishmaniasis are recognized, with the cutaneous form being the most frequent and clinically important.

Compliance with ethical standards

Disclosure of conflict of interest

The authors declare that there are no conflicts of interest.

Statement of informed consent

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

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Declaration on the use of images

The authors declare that they requested and obtained informed consent from the patient's legal representatives for the use of the images included in this clinical case report.

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