




# Auricular leishmaniasis in a child successfully treated with intralesional amphotericin B

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## Abstract

Cutaneous leishmaniasis (CL) is the most frequent form of leishmaniasis. The auricle is an extremely rare site for CL in the Old World. Auricular CL may be mistaken for other entities, such as relapsing polychondritis (RP). Here we report a pediatric case of Old World auricular CL mimicking RP in a child successfully treated with intralesional liposomal amphotericin B.

## KEYWORDS

auricular leishmaniasis, child, cutaneous leishmaniasis, intralesional amphotericin B, Old World leishmaniasis

## 1 | INTRODUCTION

Leishmaniasis is a zoonotic disease transmitted by sandflies.<sup>1</sup> Geographical distribution differentiates the two categories of disease: New World leishmaniasis and Old World leishmaniasis. Cutaneous leishmaniasis (CL) is the most common type and frequently manifests as a small self-limited papule that heals spontaneously.

The auricle is an extremely rare site for CL in Old World leishmaniasis.<sup>2</sup> Differential diagnosis of auricular CL includes bacterial, fungal,

and mycobacterial infections, relapsing polychondritis (RP), sarcoidosis, leprosy, syphilis, and malignant lesions.<sup>3</sup>

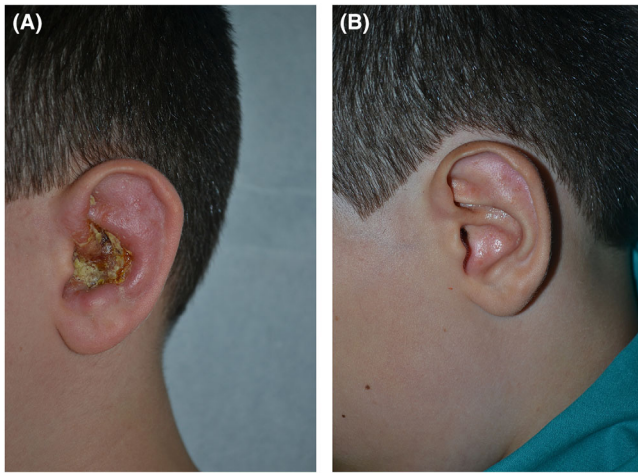
We report a pediatric case of auricular CL in the Old World successfully treated with intralesional liposomal amphotericin B (L-AMB).

## 2 | CASE REPORT

A 9-year-old male presented to our clinic for a left ear lesion that appeared as a papule, which progressively enlarged and ulcerated

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**FIGURE 1** (A) Erythematous, edematous, ulcerated lesion covered by a thick crust on left auricle. (B) The auricular lesion rapidly healed 1 month after the first treatment with intralesional L-AmB multiple injections. L-AmB, liposomal amphotericin B.

over 4 months. The child came from Calabria, an Italian region where *Leishmania infantum* is endemic. He underwent previous unsuccessful courses of systemic antibiotics and systemic corticosteroids with partial edema reduction. On examination, the patient had a 4-cm erythematous, edematous, and painful ulcer covered by a thick crust on his left auricle involving the distal outer ear canal and sparing the lobe (Figure 1A). The patient underwent laboratory tests, computed tomography of neck and facial bone, hearing test, eye examination, and urinalysis, which were normal. The unilateral involvement of the ear and the absence of inflammation in other cartilaginous structures led us to exclude RP/auricular chondritis. Clinical suspicion of CL led to skin biopsy. Giemsa staining revealed *Leishmania* spp. amastigotes on light microscopy and real-time PCR consistently tested positive. Serology was positive for total antibodies against *Leishmania* spp. confirming the diagnosis of auricular CL.

Treatment was initiated with intravenous liposomal amphotericin B (L-AmB) 3 mg/kg/day for 7 days, plus an infusion on the 14th day and 21st day, combined with 15% paromomycin ointment twice daily. No drug toxicity occurred but despite initial improvement, he had evidence of persistent infection after 3 months of therapy. Therefore, we treated with intralesional L-AmB (2 mg/ml), injecting 0.4 ml/cm<sup>2</sup> into the lesion. The auricular lesion rapidly healed 1 month after the first treatment session (Figure 1B) and no relapse has occurred after 1 year of follow-up. No other intralesional L-AmB sessions were required.

### 3 | DISCUSSION

CL should be suspected in any patient with chronic auricular skin lesions and a history of exposure in an endemic area.<sup>3</sup> Although CL is

endemic in southern Italy, clinical presentation involving the ear is an unusual presentation in the Old World. There are no specific guidelines for the treatment of pediatric patients with CL.<sup>4</sup> Treatment should be individually tailored, carefully considering the adverse effects, efficacy, cost, and cosmesis.<sup>5</sup>

In our case, intralesional L-AmB therapy was safe and effective, suggesting that this may be a valid option in selected cases of resistant CL.

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#### CONFLICT OF INTEREST

All the authors declare no conflict of interest.

#### DATA AVAILABILITY STATEMENT

Research data are not shared.

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