

**FACIAL CUTANEOUS LEISHMANIASIS IN A MOROCCAN ADOLESCENT
DIAGNOSED AFTER TRAVEL TO QATAR: A CASE REPORT****Abderrazzak Atir^{*1}, Ryad El Otmani¹, Malak Daoudi¹, Amina Benouda², Hamid Benziane³**^{*1}Abulcasis International University of Health Sciences, Rabat, Morocco.²Cheikh Zaid International University Hospital, Rabat, Morocco.³Faculty of Medicine and Pharmacy of Rabat, Rabat, Morocco.***Corresponding Author: Abderrazzak Atir**

Abulcasis International University of Health Sciences, Rabat, Morocco.

DOI: <https://doi.org/10.5281/zenodo.23034565>**How to cite this Article:** Abderrazzak Atir^{*1}, Ryad El Otmani¹, Malak Daoudi¹, Amina Benouda², Hamid Benziane³. (2026). Facial Cutaneous Leishmaniasis In A Moroccan Adolescent Diagnosed After Travel To Qatar: A Case Report. World Journal of Pharmaceutical and Medical Research, 12(10), 178–181.

This work is licensed under Creative Commons Attribution 4.0 International license.



Article Received on 26/08/2026

Article Revised on 15/09/2026

Article Published on 01/10/2026

ABSTRACT

Background: Cutaneous leishmaniasis is a vector-borne protozoal infection with a broad clinical spectrum and may resemble bacterial, inflammatory, fungal, or neoplastic skin disease. Travel history can support diagnostic suspicion, but the site of acquisition should not be assigned solely from travel chronology when parasite speciation is unavailable. **Case presentation:** A 14-year-old Moroccan adolescent presented with a persistent facial lesion on the right cheek that had developed after travel to Qatar. The lesion had been present for approximately eight months and had not improved despite self-medication with antibiotics. Examination showed a well-demarcated, indurated, painless nodular plaque approximately 21 mm in diameter, surrounded by a pruritic erythematous halo. Direct microscopy of lesional material stained with May-Grünwald-Giemsa demonstrated intracellular amastigote forms morphologically consistent with *Leishmania* spp. within macrophages, establishing the diagnosis of cutaneous leishmaniasis. The patient received intralesional meglumine antimoniate twice weekly for one month, followed by progressive clinical improvement. **Conclusion:** Cutaneous leishmaniasis should be considered in any chronic non-healing skin lesion, particularly after failure of empirical antibacterial therapy and in the presence of relevant travel or exposure history. Direct microscopy remains a useful first-line parasitological method, while species identification by molecular testing should be pursued when available to strengthen epidemiological interpretation and guide management in selected cases.

KEYWORDS: cutaneous leishmaniasis; facial lesion; adolescent; May-Grünwald-Giemsa; meglumine antimoniate; travel-associated infection; Morocco; Qatar.

1. INTRODUCTION

Leishmaniasis comprises a group of neglected vector-borne diseases caused by protozoa of the genus *Leishmania* and transmitted predominantly through the bite of infected female phlebotomine sand flies.^[1,2] The main clinical syndromes are cutaneous, visceral, and mucosal or mucocutaneous disease, with cutaneous leishmaniasis (CL) representing the most common form.^[1,3]

CL can present as papules, nodules, plaques, or chronic ulcers, typically on exposed skin. Because its morphology is variable, it may be mistaken for bacterial infection, inflammatory dermatoses, deep fungal

infection, atypical mycobacterial disease, or cutaneous neoplasia, which can delay diagnosis.^[4,5]

Diagnosis integrates epidemiological context, clinical assessment, and parasitological confirmation. Direct microscopy of material obtained from the active lesion margin is rapid and inexpensive, whereas polymerase chain reaction (PCR) can increase diagnostic sensitivity and, importantly, provide species-level identification when available.^[5,6]

Morocco is endemic for CL, with established transmission foci and circulation of several *Leishmania* species.^[9] By contrast, recent World Health Organization

(WHO) surveillance data classified Qatar among countries reporting imported CL cases rather than autochthonous CL transmission in 2024.^[7] A retrospective study from Qatar nevertheless documented 68 leishmaniasis cases diagnosed between 2016 and 2022, mainly in a highly mobile population.^[8]

Therefore, travel to Qatar is epidemiologically relevant to the diagnostic history but, in the absence of parasite speciation and a detailed exposure map, does not establish the country of acquisition.

We report a case of facial CL in a Moroccan adolescent diagnosed after travel to Qatar, confirmed by direct microscopy and managed with intralesional meglumine antimoniate.

2. CASE PRESENTATION

2.1. Patient information

A 14-year-old Moroccan adolescent was evaluated for a chronic skin lesion involving the right side of the face. According to the history, the lesion appeared after a presumed insect bite during a stay in Qatar in November 2022 and persisted for approximately eight months before the parasitological diagnosis was established.

There was no reported fever, weight loss, lymphadenopathy, or other systemic symptom. No mucosal involvement was reported.



Figure 1. Clinical appearance of the facial lesion, showing a well-demarcated indurated plaque on the right cheek.

2.2. Clinical findings

Physical examination showed a well-circumscribed, indurated, painless nodular plaque on the right cheek, approximately 21 mm in diameter. The lesion was slightly raised relative to the surrounding skin and was bordered by a pruritic erythematous halo.

Its prolonged course, lack of pain, and failure to improve after empirical antibiotic self-medication argued against an uncomplicated bacterial skin infection and prompted investigation for an alternative cause.

2.3. Clinical timeline.

Time point	Clinical event
November 2022	Reported stay in Qatar.
After a presumed insect bite	Appearance of a facial skin lesion.
Subsequent months	Persistence despite self-medication with antibiotics.
Approximately 8 months later	Consultation for a chronic lesion of the right cheek.
Diagnostic work-up	Sampling of the active inflammatory margin and May-Grünwald-Giemsa staining.
Diagnosis	Intracellular amastigote forms morphologically consistent with <i>Leishmania</i> spp. identified on direct microscopy.
Treatment	Intralesional meglumine antimoniate, two sessions per week for one month.
Outcome	Progressive crust formation, re-epithelialization, and gradual clinical improvement.

3. Diagnostic assessment

A specimen was collected from the active inflammatory margin of the lesion. Direct microscopy after May-Grünwald-Giemsa staining revealed intracellular

amastigote forms within macrophages. Morphologically, the organisms were small ovoid bodies displaying the characteristic nuclear and kinetoplast structures expected for *Leishmania* amastigotes.

The diagnosis of CL was made on the basis of the compatible clinical presentation and direct parasitological confirmation. PCR-based species identification was not performed. Consequently, the

infecting species remains unknown, and the precise geographical site of acquisition cannot be determined from the available data.

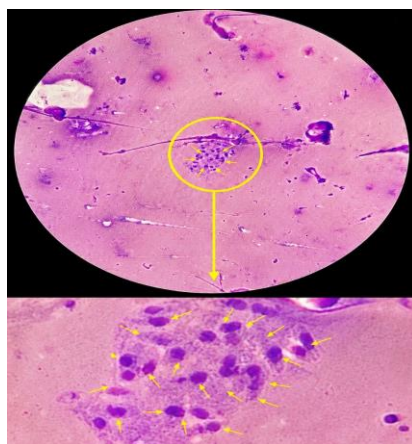


Figure 2: May-Grünwald-Giemsa-stained lesional material showing intracellular amastigote forms morphologically consistent with *Leishmania* spp. within macrophages. The lower panel provides a higher-magnification view of the parasitized cells.

4. Therapeutic intervention

The patient was treated with intralesional meglumine antimoniate. At each treatment session, approximately 2 mL was infiltrated into the lesion using a radial technique, with two sessions performed weekly for one month.

A local approach was selected because the disease was clinically localized and parasitologically confirmed. Intralesional pentavalent antimonials are among the accepted local treatment options for selected uncomplicated Old World CL lesions, although treatment choice should take into account lesion characteristics, parasite species when known, host factors, and the risk of mucosal or disseminated disease.^[5,6]

Progressive improvement was observed during therapy, with crust formation and gradual re-epithelialization.

5. Follow-up and outcomes

Clinical evolution was progressively favorable. Development of a whitish crust was followed by signs of ongoing healing. Given the prolonged interval between lesion onset and diagnosis, complete cosmetic recovery was expected to take longer, and residual scarring remained possible.

Long-term follow-up data and the final cosmetic outcome were not available when the manuscript was prepared.

6. DISCUSSION

CL remains a major global health problem. WHO estimates that approximately 600,000 to 1 million new CL cases occur each year, while only a fraction are formally reported.^[1] The disease is concentrated particularly in the Americas, the Mediterranean basin,

the Middle East, and Central Asia, and diagnostic delay remains common because the lesions are clinically heterogeneous.^[1,2]

In this case, three features were especially informative: persistence for several months, lack of response to empirical antibacterial treatment, and a relevant travel history. A chronic facial lesion in an adolescent should not be repeatedly managed as a routine bacterial infection when the clinical course is atypical or treatment fails.

The epidemiological interpretation requires caution. The patient had travelled to Qatar, where leishmaniasis has been diagnosed in recent years. However, WHO surveillance for 2024 identified imported CL cases in Qatar rather than established autochthonous CL transmission.^[7] The Qatar retrospective series also documents diagnosed disease but does not, by itself, imply local acquisition for each case.^[8]

Without species identification and a detailed account of all potential exposures, the scientifically appropriate formulation is that CL was diagnosed after travel to Qatar, not that infection was definitively acquired there.

The facial location increases the clinical relevance of prompt diagnosis because visible scarring can have lasting cosmetic and psychosocial consequences, particularly in children and adolescents.^[4,6] Early parasitological confirmation can therefore reduce unnecessary antibacterial exposure and facilitate appropriate therapy. Direct microscopy remains valuable because it is rapid, inexpensive, and implementable in many laboratories.

Visualization of intracellular amastigotes with a visible nucleus and kinetoplast in lesional specimens is highly supportive of *Leishmania* infection.^[5] Its limitations are equally important: microscopy does not provide species identification, and sensitivity varies with parasite burden, lesion age, sampling quality, staining quality, and observer experience.

PCR would have strengthened this report by enabling species-level identification and improving the interpretation of probable exposure. This is particularly relevant in travel-associated CL because species differ in geographic distribution, clinical behavior, risk of mucosal involvement, and, in some settings, therapeutic response.^[5,6]

Treatment of localized CL should be individualized according to lesion number, size and anatomical site, host factors, parasite species when known, and the likelihood of mucosal or disseminated disease. For selected uncomplicated Old World CL lesions, local therapies - including intralesional pentavalent antimonials - are recognized options and can limit systemic drug exposure.^[5,6] The favorable clinical trajectory in this patient is consistent with a response to local meglumine antimoniate, although the absence of long-term follow-up prevents a definitive assessment of cure and final scarring.

This case is also relevant in the Moroccan setting, where CL remains endemic and clinicians may encounter both locally acquired disease and cases in internationally mobile patients.^[9] The differential diagnosis of a chronic nodular, crusted, or ulcerated facial lesion includes bacterial ecthyma or furunculosis, atypical mycobacterial infection, deep fungal infection, cutaneous tuberculosis, chromoblastomycosis, syphilitic lesions, inflammatory dermatoses, and cutaneous malignancy, among other conditions.^[10,11] Failure to include CL in the differential diagnosis can delay appropriate investigation and treatment.

7. Strengths and limitations

The principal strength of this report is direct parasitological confirmation using a simple and accessible laboratory method. The main limitations are the absence of molecular species identification, the absence of parasite culture, and the lack of detailed long-term follow-up. These limitations prevent confident attribution of the infection to a specific geographical exposure and restrict assessment of the final cosmetic outcome.

8. CONCLUSION

CL should be considered in any chronic non-healing skin lesion, especially when empirical antibacterial treatment fails and the epidemiological history includes travel or exposure compatible with sand-fly transmission. Direct microscopy can provide rapid diagnostic confirmation, while molecular species identification should be obtained

when feasible to refine epidemiological interpretation and, where relevant, treatment decisions.

For facial lesions, early diagnosis and appropriate management are particularly important because delayed healing may increase the risk of visible scarring and psychosocial impact.

REFERENCES

1. World Health Organization. Leishmaniasis. Fact sheet. Geneva: World Health Organization; 2023. Accessed September 10, 2026.
2. Burza S, Croft SL, Boelaert M. Leishmaniasis. *Lancet*. 2018; 392(10151): 951-970. doi:10.1016/S0140-6736(18)31204-2.
3. Centers for Disease Control and Prevention. Leishmaniasis. CDC Yellow Book 2026: Health Information for International Travel. Updated April 23, 2025. Accessed September 10, 2026.
4. Torres-Guerrero E, Quintanilla-Cedillo MR, Ruiz-Esmenjaud J, Arenas R. Leishmaniasis: a review. *F1000Research*. 2017; 6: 750. doi:10.12688/f1000research.11120.1.
5. Aronson N, Herwaldt BL, Libman M, et al. Diagnosis and treatment of leishmaniasis: clinical practice guidelines by the Infectious Diseases Society of America and the American Society of Tropical Medicine and Hygiene. *Clin Infect Dis*. 2016; 63(12): e202-e264. doi:10.1093/cid/ciw670.
6. de Vries HJC, Schallig HD. Cutaneous leishmaniasis: a 2022 updated narrative review into diagnosis and management developments. *Am J Clin Dermatol*. 2022; 23(6): 823-840. doi:10.1007/s40257-022-00726-8.
7. World Health Organization. Global leishmaniasis surveillance updates 2024: consolidating gains and new initiatives. *Wkly Epidemiol Rec*. 2025; 100(45): 535-552.
8. Abukhattab M, Dagfal J, Adam M, Hashim SA, Mohammed FK, Al-Maslmani M. Epidemiology, clinical characteristics, and treatment outcomes of leishmaniasis in Qatar: a retrospective study. *Qatar Med J*. 2024; 2024(4): 51. doi:10.5339/qmj.2024.51.
9. Rhajaoui M. Human leishmaniasis in Morocco: a nosogeographical diversity. *Pathol Biol (Paris)*. 2011; 59(4): 226-229. doi:10.1016/j.patbio.2009.09.003.
10. Mokni M. Leishmanioses cutanées. *Ann Dermatol Venereol*. 2019; 146(3): 232-246. doi:10.1016/j.annder.2019.02.002.
11. Reithinger R, Dujardin JC, Louzir H, Pirmez C, Alexander B, Brooker S. Cutaneous leishmaniasis. *Lancet Infect Dis*. 2007; 7(9): 581-596. doi:10.1016/S1473-3099(07)70209-8.