World Journal of Pharmaceutical and Life Sciences
WJPLS
www.wjpls.org
SJIF Impact Factor: 7.409

CUTANEOUS LEISHMANIASIS IN CHILDREN: A NEW CASE REPORT

N. Seghrouchni*[1], Y. Fahfouhi[1], N. Lamaalmi[2], H. Lachraf[1] and A. Mdaghri Alaoui[1]

[1]Pediatrics Department 2, Children's Hospital, CHU IBN SINA – RABAT.
[2]Department of Pathology, Avicenne Hospital - CHU IBN SINA – RABAT.

***Corresponding Author: N. Seghrouchni**
Pediatrics Department 2, Children's Hospital, CHU IBN SINA - RABAT.

Article Received on 27/06/2025 **Article Revised on 18/07/2025** **Article Accepted on 07/08/2025**

ABSTRACT

Introduction: Cutaneous leishmaniasis (CL) is a parasitic disease caused by flagellated protozoa of the genus *Leishmania*. It is a zoonotic disease transmitted by the bite of female sandflies. In Morocco, CL occurs sporadically or endemically depending on the species and regions. The aim of our study is to highlight the epidemiological, clinical, paraclinical, therapeutic, and evolutionary features of CL in children. **Case Report:** A 2-year-old girl from Kenitra with no relevant medical history and no travel to endemic areas presented with a nodular lesion with a well-defined, rounded shape and irregular surface. No general symptoms were noted, and biological investigations were unremarkable. Antibiotic treatment was ineffective. Parasitological examination of a skin biopsy confirmed the presence of *Leishmania* bodies. The patient was treated with oral clarithromycin, with favorable outcome and complete healing. **Discussion:** Cutaneous leishmaniasis is a major public health concern worldwide. Three main species are implicated: *L. major*, *L. tropica*, and *L. infantum*. Global prevalence of all clinical forms is estimated at 12 million cases. The vector is a blood-feeding female insect that inoculates the parasite into humans. Reservoirs include rodents, dogs, and cats. CL typically presents as painless polymorphic skin lesions, such as ulcerated nodules and plaques, limited to exposed areas and without systemic symptoms. Diagnosis is confirmed through parasitological examination. Treatment includes both local and systemic therapy. **Conclusion:** This case report and literature review emphasize the importance of early diagnosis and appropriate management of CL, along with effective preventive strategies.

I- INTRODUCTION

Cutaneous leishmaniasis (CL), also known as "Oriental sore," is a parasitic disease caused by flagellated protozoa of the genus *Leishmania*, transmitted by female sandflies. In Morocco, CL occurs sporadically or endemically depending on species and geographic areas.

CL is a significant global public health issue. Three species are identified: *L. major*, *L. tropica*, and *L. infantum*.

The aim of this paper is to report specific clinical features of pediatric CL.

II- CASE REPORT

A 2-year-old girl living in Kenitra presented with a nodular lesion on her forearm. The lesion was well-defined, rounded, with an irregular surface, and surrounded by a satellite papule.

It was painless, non-itchy, and without general symptoms.

There were no other skin or mucosal lesions. The rest of the physical exam and blood work (CBC, liver and renal function tests, viral serologies) were normal.

Doppler ultrasound of the limb revealed: phlegmonous infiltration of soft tissues, fistulized to the skin and anterior muscle compartment, with no well-defined collection, along with a slight joint effusion.

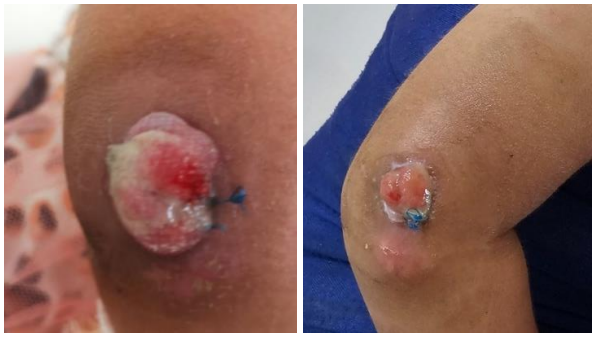
The patient received two courses of antibiotics without improvement. A bacterial culture was negative.

A biopsy of the lesion showed

- Widespread ulceration of the epidermis replaced by granulation tissue with hemorrhagic suffusion; elsewhere, regular hyperplastic epidermis covered by a parakeratotic stratum corneum.
- The dermis contained a dense polymorphic inflammatory infiltrate rich in histiocytes, whose cytoplasm contained round structures corresponding to *Leishmania* bodies (seen on H&E and Giemsa staining).

- Immunohistochemical staining using anti-CD1a antibody showed focal, heterogeneous positivity of *Leishmania* bodies.

Oral clarithromycin (15 mg/kg/day for 10 days per month over three months) was initiated.
No adverse effects were observed on clinical and biological monitoring.
The outcome was favorable, with progressive healing of the lesions.



III- DISCUSSION

1. EPIDEMIOLOGY AND GEOGRAPHIC DISTRIBUTION

Leishmaniasis exists in various foci across the world:

- Cutaneous leishmaniasis: Mediterranean, American, and African foci
- Mucocutaneous leishmaniasis: mainly in South America

It is estimated that 12 million people are infected globally across all forms, with 0.7 to 1.2 million new cases annually, including hundreds of fatal ones.

In Morocco, CL occurs endemo-epidemically, depending on the region and *Leishmania* species:

- *L. tropica*: Azilal to Essaouira and Agadir-Guelmim
- *L. major*: Southern Anti-Atlas and High Atlas
- *L. infantum*: Northern Rif regions like Al-Hoceima, Chefchaouen, and Tetouan

2. VECTOR

The vector is a 1–3 mm sandfly (Phlebotomus), with the blood-feeding female responsible for transmission after acquiring the parasite from a reservoir host.

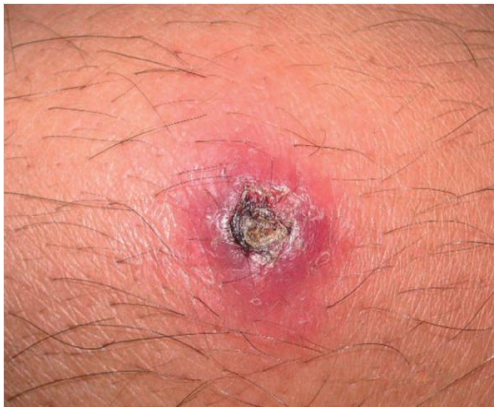
3. RESERVOIRS

Main reservoirs include rodents, dogs, cats, and occasionally humans (accidental host).

4. CLINICAL FEATURES

The disease progresses through three phases: incubation, invasion, and established phase.

- **Incubation** : 2 to several weeks
- **Invasion** : Infiltrated papule with crusts hiding ulceration, usually single and on exposed skin
- **Established phase** : Expanding ulceration reaching 2–8 cm



Typical features: painless, chronic, non-itchy lesions on exposed skin (face, neck, hands, feet) with no systemic symptoms.

Clinical presentation varies with parasite virulence, immune response, genetic susceptibility, and lesion location.

Healing is often spontaneous. For *L. tropica*, healing may take over 12 months, with potential for recurrence or visceral involvement in rare cases.

5. DIAGNOSIS

Diagnosis is suspected with:

- History of residence or travel in endemic area
- Lesions on exposed skin
- Painless, non-pruritic, chronic lesion
- Lack of response to antibiotics
- Absence of systemic symptoms or satellite lymphadenopathy

Confirmation requires parasitological examination (direct microscopy after Giemsa stain, or culture). Samples should be taken from the lesion's inflamed edge via scraping or biopsy.
Serology is not useful diagnostically.

6. TREATMENT

Local Treatments

- Intralesional antimonials: Meglumine antimoniate (Glucantime®), sodium stibogluconate (Pentostam®), 2–10 infiltrations every 2–7 days
- Topical paromomycin cream (effective for *L. major*)
- Other topical treatments: eosin, povidone iodine (Betadine), aureomycin 3%

Systemic Treatments

Used in relapses, lymphatic spread, risk of mucosal involvement, or in immunocompromised patients.

- Oral fluconazole (6 mg/kg/day for 6 weeks) : effective for *L. tropica* and *L. major*
- Azithromycin: effective against *L. major*
- Clarithromycin: 15 mg/kg/day, 10 days/month for 3 months
- Other options : Amphotericin B (0.5–1 mg/kg/day), antimalarials, imidazoles, rifampicin, tetracyclines

7. PREVENTION

Prevention involves

- Animal reservoir control (e.g., vaccination)
- Vector control with repellents, insecticide-treated nets, wearing protective clothing
- Vector elimination by insecticide spraying

BIBLIOGRAPHY

1. Mokni M. Leishmanioses cutanées. Ann Dermatol Venereol, 2019; 146: 232—46.
2. World Health Organization. La leishmaniose dans les pays à forte charge de morbidité : mise à jour épidémiologique à partir des données notifiées en 2014. Wkly Epidemiol Rec., 2016; 22: 285—96.
3. Riyad M, Chiheb S, Soussi-Abdallaoui M. Cutaneous leishmaniasis caused by Leishmania major in Morocco: still a topical question. East Mediterr Health J., 2013; 19: 495—501.
4. Rhajaoui M, Fellah H, Pratlong F, Dedet JP, Lyagoubi M. Leishmaniasis due to Leishmania tropica MON-102 in a new Moroccan focus. Trans R Soc Trop Med Hyg., 2004; 98: 299—301.
5. Alvar J, Vélez ID, Bern C, Herrero M, Desjeux P, Cano J. Leishmaniasis worldwide and global estimates of its incidence. PLoS One., 2012; 7: e35671.
6. Rhajaoui M, Nasereddin A, Fellah H, Azmi K, Amarir F, Al-Jawabreh A, et al. New clinico-epidemiologic profile of cutaneous leishmaniasis, Morocco. Emerg Infect Dis., 2007; 13(9): 1358-1360.
7. Ait Kbaich M, Mhaidi I, Ezzahidi A, Dersi N, El Hamouchi A, Riyad M, et al. New epidemiological pattern of cutaneous leishmaniasis in two pre-Saharan arid provinces, southern Morocco. Acta Trop., 2017; 173: 11-16.
8. Er-Rami M, Benjelloun S, Lahlou H, Khalloufi A, El Kartouti A, Zeroual A, et al. La leishmaniose cutanée à l'hôpital militaire Moulay Ismaıl de Meknès (Maroc) : à propos de 49 cas diagnostiqués entre 2005 et 2011. Pathol Biol (Paris), 2013; 61(2): 49-53.
9. Mokni, M. Leishmanioses cutanées. Annales de Dermatologie et de Vénéréologie, 2019; 146: 232-246.
10. Lutte contre les leishmanioses. Guide des activités. Direction de l'épidémiologie et de lutte contre les maladies. Ministère de la santé, 2010. Maroc.
11. Gitari JW, Nzou SM, Wamunyokoli F, Kinyeru E, Fujii Y, Kaneko S, et al. Leishmaniasis recidivans by Leishmania tropica in Central.
12. Hosseininasab A, Sharifi I, Daei MH, Zarean M, Dadkhah M. Causes of pediatric visceral leishmaniasis in southeastern Iran J Parasitol, 2014; 9: 584—7.
13. Sharifi I, Fekri AR, Aflatoonian MR, Khamesipour A, Mahboudi F, Dowlati Y, et al. Leishmaniasis recidivans among school children in Bam, South-East Iran, 1994—2006. Int J Dermatol, 2010; 49: 557—61.
14. Michelerio A, Barruscotti S, Bossi G, Brazzelli V. Pediatric Old World cutaneous leishmaniasis treated with oral fluconazole: a case series. Pediatr Dermatol, 2018; 35: 384—438.
15. Krolewiecki A, Leon S, Scott P, Abraham D. Activity of azithromycin against Leishmania major in vitro and in vivo. Am J Trop Med Hyg., 2002; 67: 273—7.
16. Inodier P, Zambelli L, Mary C, Faraut F, Garnier JM, Berbis P. Cutaneous leishmaniasis treated with azithromycin in a child Pediatr Infect Dis J., 2008; 27: 80—1.