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(CASE REPORT)

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PALPEBRAL CUTANEOUS LEISHMANIASIS MIMICKING AN ADNEXAL TUMOR: DERMOSCOPY AT THE HEART OF THE DIAGNOSIS

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ABSTRACT

Background: Cutaneous leishmaniasis (CL) is a common infection in endemic areas and displays a wide clinical polymorphism that can mimic inflammatory, granulomatous, or tumoral lesions, particularly on the face. Eyelid involvement is rare and may be mistaken for a chalazion, an adnexal tumor, or a basal cell carcinoma, which can delay diagnosis.

Case Presentation: We report the case of a 48-year-old man with no relevant medical history who presented with a slowly enlarging nodule of the right lower eyelid that had evolved over two months. Clinical examination revealed a solitary, well-defined, oval, erythematous-pink nodule measuring 1.5 cm, suggestive of a benign adnexal tumor or cutaneous leishmaniasis. Dermoscopy showed a diffuse erythematous background, shiny yellowish "tear-drop" structures, bright white starburst/chrysalis-like areas, and a polymorphous vascular pattern with irregular linear and dotted vessels. These features reoriented the diagnosis toward CL despite a negative smear, and a skin biopsy confirmed the diagnosis by revealing a granulomatous infiltrate containing Leishmania amastigotes.

Conclusion: This case underscores the value of dermoscopy as a rapid, noninvasive tool that can redirect the diagnostic approach in atypical, pseudotumoral eyelid lesions and guide histological confirmation.

Keywords: Cutaneous Leishmaniasis; Dermoscopy; Eyelid; Adnexal Tumor; Yellow Tears; Case report

1 INTRODUCTION

Cutaneous leishmaniasis (CL) is a vector-borne protozoan infection caused by Leishmania species and transmitted through the bite of phlebotomine sandflies. It is endemic across the Mediterranean basin, the Middle East, and parts of Africa, Asia, and Central and South America [1]. CL is characterized by a marked clinical polymorphism: beyond the classic ulcerated nodule, it may present as papular, plaque, verrucous, sporotrichoid, or pseudotumoral lesions, and can therefore simulate a broad range of inflammatory, granulomatous, and neoplastic conditions, especially on the face [1,2].

Eyelid localization is uncommon and accounts for only a small proportion of facial cases. Because of its nonspecific appearance, palpebral CL frequently evokes more common eyelid conditions such as chalazion, benign adnexal tumors, or basal cell carcinoma, which may delay appropriate management [2,3]. Dermoscopy is a noninvasive technique that magnifies subsurface structures and has become a valuable aid in the diagnosis of inflammatory and infectious dermatoses, including CL, for which several suggestive—albeit nonspecific—criteria have been described [4-7]. We report a pseudotumoral palpebral form of CL in which dermoscopy reoriented the diagnosis and prompted histological confirmation.

2 CASE PRESENTATION

A 48-year-old man with no significant past medical history presented with a lesion of the right lower eyelid that had been slowly and progressively enlarging over the preceding two months. He reported no pain, no trauma, and no prior local treatment. He originated from a region where leishmaniasis is endemic.

On clinical examination, there was a solitary, oval, well-circumscribed, erythematous-pink nodule of the right lower eyelid measuring approximately 1.5 cm in its largest diameter. The lesion was firm, non-tender, and non-ulcerated. The remainder of the ophthalmological and general examinations was unremarkable. On clinical grounds, the differential diagnosis included a benign adnexal tumor and cutaneous leishmaniasis (Figure 1).

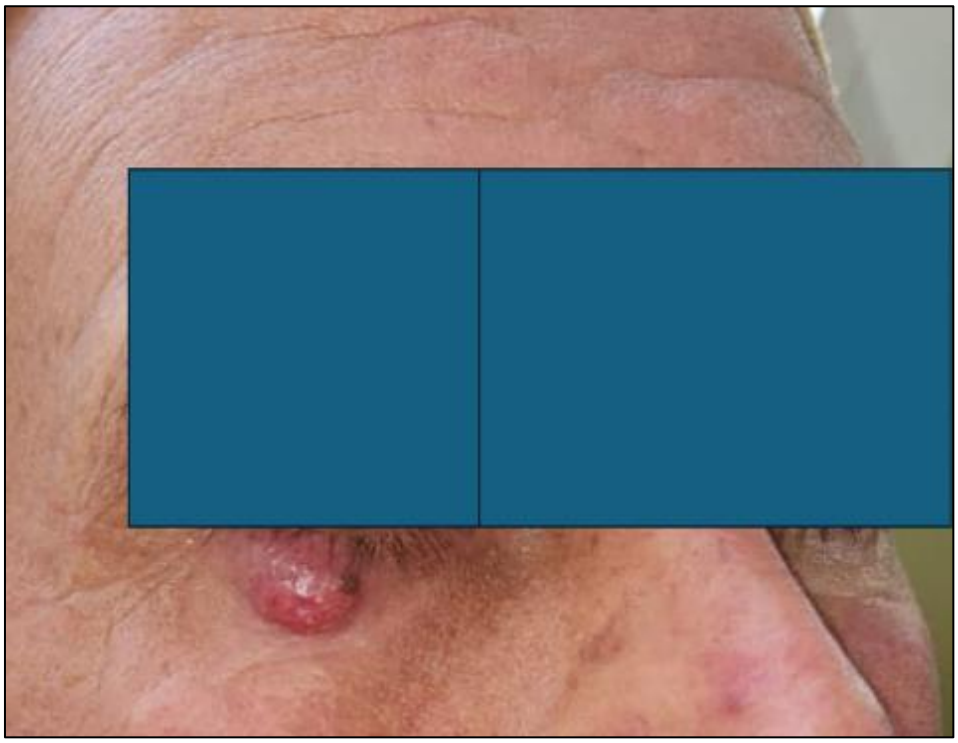

Figure 1: Clinical image showing a solitary erythematous, well-defined nodule of the right lower eyelid.

Dermoscopic examination (Figure 2) revealed a diffuse erythematous background, crowded peripheral follicular openings giving a teardrop-like configuration, bright whitish “chrysalis-like” areas producing a starburst pattern and a polymorphous vascular pattern was observed. These dermoscopic features oriented the diagnosis toward cutaneous leishmaniasis despite a negative slit-skin smear.

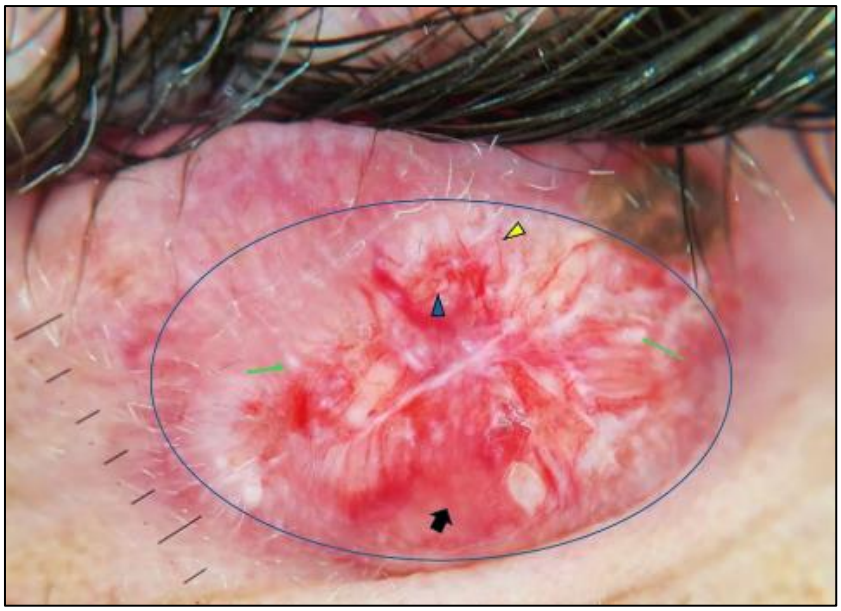

Figure 2: Dermoscopy showing a burst-star (white starburst) appearance (blue circle), an erythematous background (black arrowhead), crowded peripheral follicular openings producing a tear-drop pattern (green arrows), arborizing vessels (blue triangle) and peripheral irregular linear vessels (yellow triangle).

A skin biopsy was performed and confirmed the diagnosis, showing a dermal granulomatous inflammatory infiltrate containing intracytoplasmic Leishmania amastigotes after specific staining (Figure 3,4). The patient is scheduled to begin systemic antimonial therapy, and clinical follow-up will be conducted.

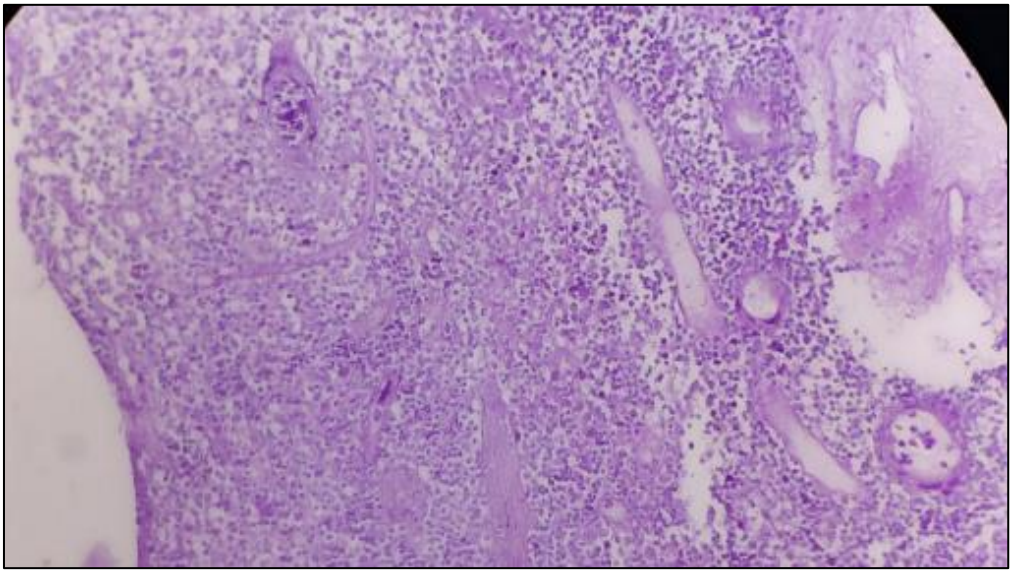

Figure 3: Histological image (H&E, ×100) showing a dense, focally diffuse inflammatory infiltrate of lymphocytes and plasma cells, admixed with histiocytes forming aggregates that harbored minute intracytoplasmic corpuscles

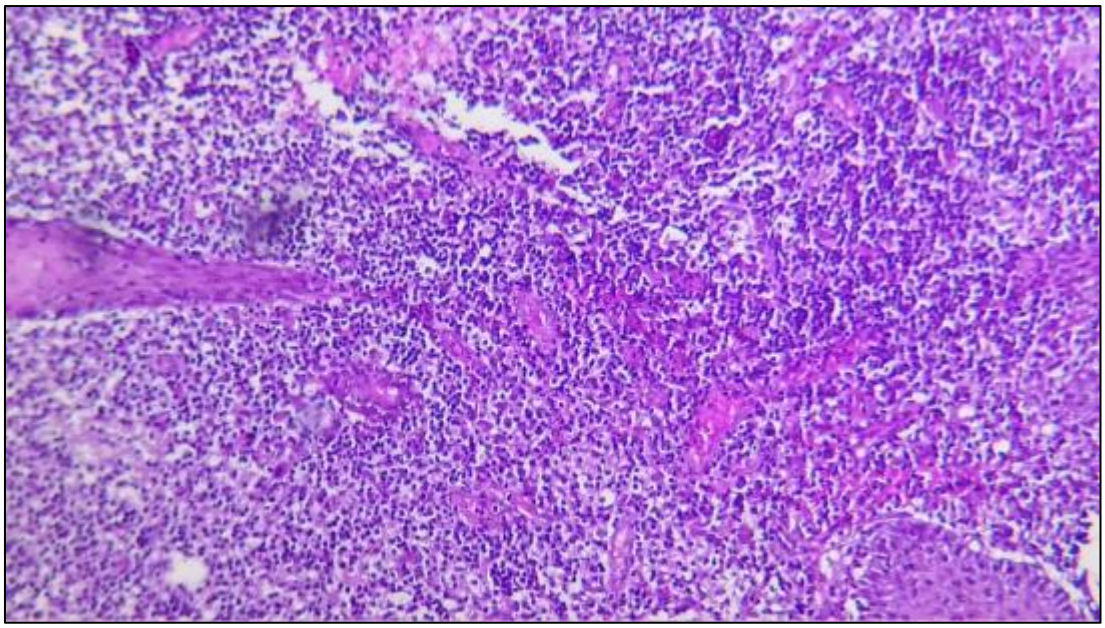

Figure 4: Histological image after specific staining (May-Grünwald Giemsa stain and Periodic Acid Shift ×100) showing tiny, uniform, round intracytoplasmic organism consistent with Leishmania amastigotes

3 DISCUSSION

Cutaneous leishmaniasis is an infection with striking clinical polymorphism that can simulate inflammatory, granulomatous, and tumoral lesions, particularly on the face [1,2]. Palpebral localization is rare and may mimic a chalazion, a benign adnexal tumor, or a basal cell carcinoma; this diagnostic overlap frequently leads to delayed recognition and unnecessary interventions, which explains the interest of an early, noninvasive dermoscopic evaluation [2,3].

Several dermoscopic criteria have been reported in CL. The most frequently described include a diffuse erythematous background, yellowish "tear-drop" structures corresponding to follicular plugs, bright whitish "white starburst"/chrysalis-like areas, hyperkeratosis, and central erosion or ulceration [4-7]. A polymorphous vascular pattern is characteristic, combining irregular linear, dotted, comma-shaped, hairpin, glomerular, and arborizing vessels [4-7]. In a large dermoscopic series, generalized erythema was present in virtually all lesions, while yellow tears and the white starburst sign were observed in approximately one third of cases, and irregular linear vessels were the predominant vascular structure [7]. Facial lesions, as in our patient, tend to display linear irregular vessels more frequently than lesions at other sites [7]. Although none of these features is pathognomonic, their combination is highly suggestive of CL and can meaningfully reorient the diagnostic approach in a pseudotumoral presentation.

Dermoscopy does not replace parasitological or histological confirmation, which remains mandatory. The slit-skin smear is rapid and inexpensive but has limited and variable sensitivity, so a negative smear—as observed in our patient—does not exclude the diagnosis [1]. In such cases, histopathology typically shows a granulomatous dermal infiltrate with amastigotes, and ancillary noninvasive imaging such as reflectance confocal microscopy may help to visualize amastigotes in vivo and support the diagnosis [8]. In our observation, dermoscopy provided early diagnostic orientation that guided the decision to proceed to biopsy despite the negative smear, avoiding a delay that could have resulted from managing the lesion as a benign adnexal tumor.

4 CONCLUSION

Dermoscopy is a valuable, noninvasive tool in the evaluation of atypical, pseudotumoral forms of palpebral cutaneous leishmaniasis. The combination of yellow "tear-drop" structures, white starburst/chrysalis-like areas, a diffuse erythematous background, and a polymorphous vascular pattern can reorient the diagnosis toward CL and guide histological confirmation, even when the initial smear is negative. Clinicians practicing in or receiving patients from endemic areas should consider CL in the differential diagnosis of any atypical eyelid nodule and use dermoscopy as a first-line aid to avoid diagnostic delay.

STATEMENTS ON COMPLIANCE WITH ETHICAL STANDARDS

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Disclosure of conflict of interest

The authors declare that there is no conflict of interest regarding the publication of this article.

Statement of informed consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. Institutional ethical approval was not required for a single case report according to local regulations.

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