

Skin pseudolymphoma caused by cutaneous leishmaniasis

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ABSTRACT

تعد اللشمانيا الجلدية مرض شائع في المملكة العربية السعودية وليس من الصعب تشخيصها في أغلب الأحيان بواسطة الفحص المجهرى. هناك حالات شاذة لهذا المرض يكون فيها التشخيص صعبا للطبيب المعالج ولطبيب علم الأمراض في المختبر. في هذه المقالة قمنا بوصف لحالة نادرة كانت اللشمانيا تشبه الورم اللمفاوي الجلدي سريريا وتحت المجهر.

Cutaneous leishmaniasis is a common disease in the Kingdom of Saudi Arabia. A patient with a usual presentation is easy to diagnose by histological examination. However, atypical cases may serve as a problem for both the clinician and the pathologist on the diagnostic level. Here we present a case, in which the clinical presentation and microscopic features mimic cutaneous B-cell lymphoma and pseudolymphoma.

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Leishmaniasis is a protozoal disease capable of causing a spectrum of clinical syndromes ranging from cutaneous ulcerations to systemic infections. These protozoa are transmitted to mammals via the bite

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of the female sandfly. Cutaneous leishmaniasis (CL) displays considerable variation in its histopathological and clinical presentation. Definitive diagnosis of leishmaniasis requires demonstration of the parasite (Leishman-Donovan [LD] bodies). In some cases, florid lymphoid hyperplasia is seen with only few LD bodies, and this may hamper histological diagnosis.^{1,2} This case is presented to add a new aspect to the etiology and pathogenesis of pseudolymphoma, and to avoid misinterpretation of cutaneous leishmaniasis as cutaneous lymphoma.

Case Report. A 55-year-old woman presented with 2 nodules on her face of 6-months duration. Physical examination revealed 2 erythematous nodules on the right side of her forehead measuring 1x2 cm, and another on her left cheek measuring 0.8x1.3 cm. Medical and family history was unremarkable. The clinical impression was cutaneous lymphoma, pseudolymphoma, or lupus erythematosus. A punch biopsy from the forehead lesion was carried out. The microscopic examination of the specimen revealed prominent lymphoid infiltration in the dermis with a focal lymphoid follicle and a germinal center (Figure 1). Plasma cells and few histiocytes were found at the periphery. The pathologist's first presumptive differential diagnosis was cutaneous lymphoid hyperplasia and marginal zone B-cell lymphoma. Immunohistochemical stains were performed. A mixture of B and T lymphocytes was demonstrated by stains for CD20 and CD3 (Figures 2a and 2b). The Bcl-6 immunostaining showed the focus of the germinal center (Figure 2c). A few CD30-positive cells were also shown (Figure 2d). Kappa and lambda immunohistochemistry stained the plasma cells in a polyclonal pattern (Figure 2e and 2f). These immunohistochemical stains confirmed the diagnosis of cutaneous lymphoid hyperplasia. Further levels of Hematoxylin and Eosin stain slides were carried out that showed few LD bodies after an extensive search (Figure 3). The histopathologic diagnosis was reported as Leishmania cutis associated B-cell cutaneous lymphoid hyperplasia.

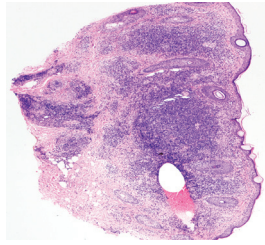


Figure 1 - Low power magnification shows a dense diffuse inflammatory infiltrate with a central lymphoid follicle (original magnification x40, Hematoxylin and eosin stain).

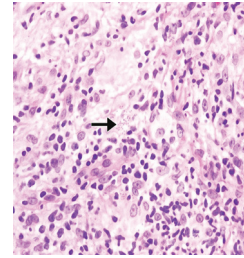


Figure 3 - High power magnification reveals Leishman-Donovan bodies (arrow, original magnification x400, Hematoxylin and eosin stain).

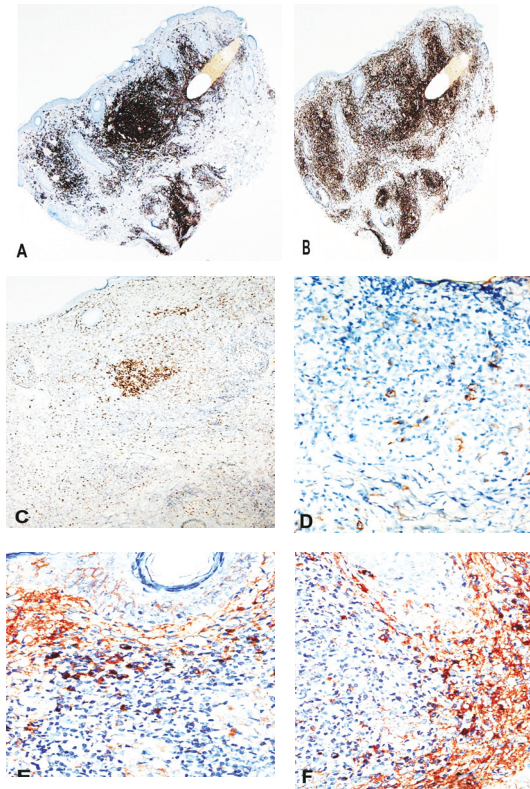


Figure 2 - Immunohistochemistry showing: A) CD20 stain with many B lymphocytes (original magnification x40); B) CD3 with many T lymphocytes (original magnification x40); C) B-cell lymphoma-6 stain showing a germinal center (original magnification x100); D) few CD30 positive cells are present (original magnification x200); and E & F) polyclonal plasma cells as shown by mixture of Kappa and Lambda immunohistochemistry (original magnification x200).

Discussion. Cutaneous leishmaniasis is the most common form of leishmaniasis. It is a skin infection caused by a unicellular parasite that is transmitted by sandfly bites. Clinically, CL usually presents as an erythematous papule, which can evolve into a plaque, nodule, or ulcer. Sometimes, there are multiple erythematous nodules mimicking cutaneous lymphoma or pseudolymphoma. The typical microscopic findings are mixed inflammatory infiltrate with many histiocytes and granuloma formation containing LD bodies.^{1,2} Cutaneous pseudolymphoma has often been described in association with a variety of cutaneous infections such as Lyme disease. Only 3 cases of cutaneous lymphoid hyperplasia associated with leishmaniasis infection have been reported in the literature.³⁻⁵

In conclusion, leishmaniasis is a common disease in Saudi Arabia. Diagnosis of leishmaniasis can be made easily by histological identification of amastigotes inside macrophages. However, sometimes the diagnosis can be very difficult.

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