LOCALIZED LEISHMANIA LYMPHADENITIS

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Introduction

"Localized" leishmania lymphadenitis is a clinico-pathological entity characterized primarily by lymphadenitis in patients who may show cutaneous lesions but who do not have any evidence of visceral leishmaniasis. The condition was reported first in China in a male student who presented with only cervical lymphadenopathy. Lymph node biopsy contained Leishman-Donovan bodies and subsequent inoculation of a hamster produced a generalized leishmaniasis[1].

Localized leishmania lymphadenitis was later reported in two American servicemen in the Mediterranean region[2], four British servicemen in Malta[3], and in two young girls from Shiraz, Iran[4]. More recently, we have reported 19 cases of localized leishmania lymphadenitis in patients from Shiraz who had no evidence of visceral leishmaniasis. In contrast to previous claims, typical cutaneous leishmaniasis (and even a lupoid form) was present in some cases. In others the skin lesions were small, resembling insect bites[5&6]. Outbreaks of localized leishmania lymphadenitis have been reported from some regions of China and from Shiraz in southern Iran[7&8].

Localized leishmania lymphadenitis should not be confused with the lymphadenitis associated with visceral leishmaniasis, which occurs with varying frequency in different geographical regions. For example, lymphadenitis is a common manifestation of visceral leishmaniasis in Venezuela, Sudan and the Mediterranean basin in contrast to other regions such as India, where lymphadenitis is uncommon in Kala Azar and lymph node biopsy is of no value in confirming the diagnosis.

Case Report

In February 1998 a 23-year-old man was referred to the Dermatology Clinics of Razi Hospital complaining of a skin lesion on the face, about one centimeter below the external corner of his left eye. He also had enlarged lymph nodes on the left side of his neck (Fig 1). Direct smears of the skin lesion showed Leishman-Donovan bodies. Sections of a cervical lymph node biopsy showed extensive infiltration by numerous granulomata consisting of histiocytes, epithelioid cells and multinucleated giant cells. Small numbers of Leishman-Donovan bodies were present in the granulomata (Figs 2-4). There was no caseation and no acid-fast bacilli were seen with special staining. These microscopic findings were consistent with leishmania lymphadenitis. A thorough investigation of the patient revealed no clinical or paraclinical evidence of visceral leishmaniasis. Leishmania serology was negative but the leishmanin skin test was positive for L. major antigens.

Laboratory tests, including CBC, ESR, urea, creatinine, bilirubin and liver enzymes, were within normal limits. Immunological evaluation of the patient, which included complement components (C3, C4, CH50), immunoglobulins, T- and B-lymphocytes, was normal. The skin lesion was treated with intra-lesional injections of glucantime and the lymphadenopathy subsided after several weeks.

Discussion

Localized leishmania lymphadenitis is a relatively uncommon manifestation of leishmaniasis. Clinico-pathological

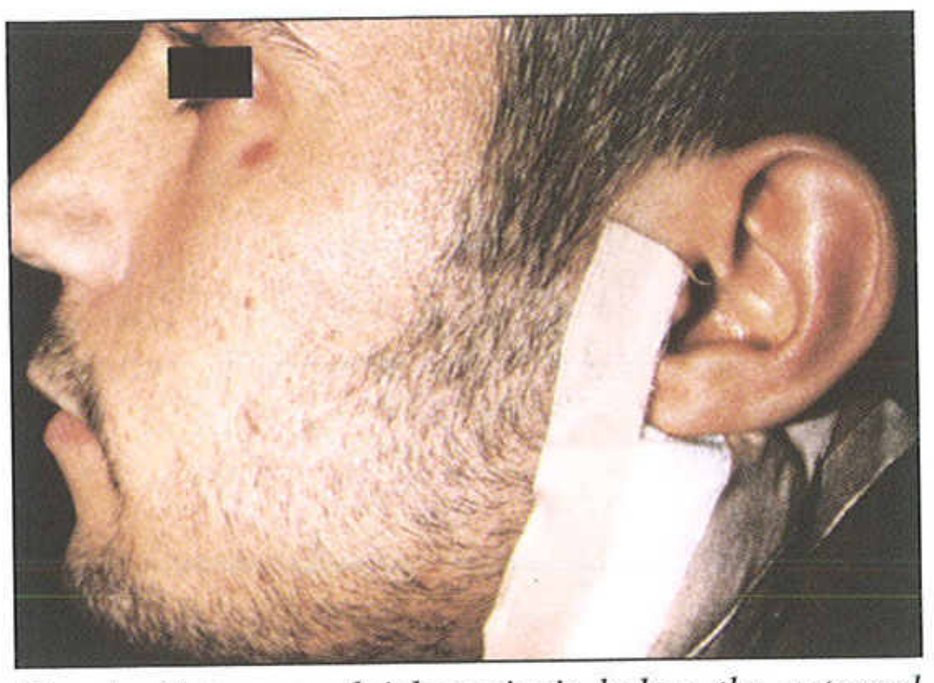

Fig. 1: Cutaneous leishmaniasis below the external corner of the left eye.

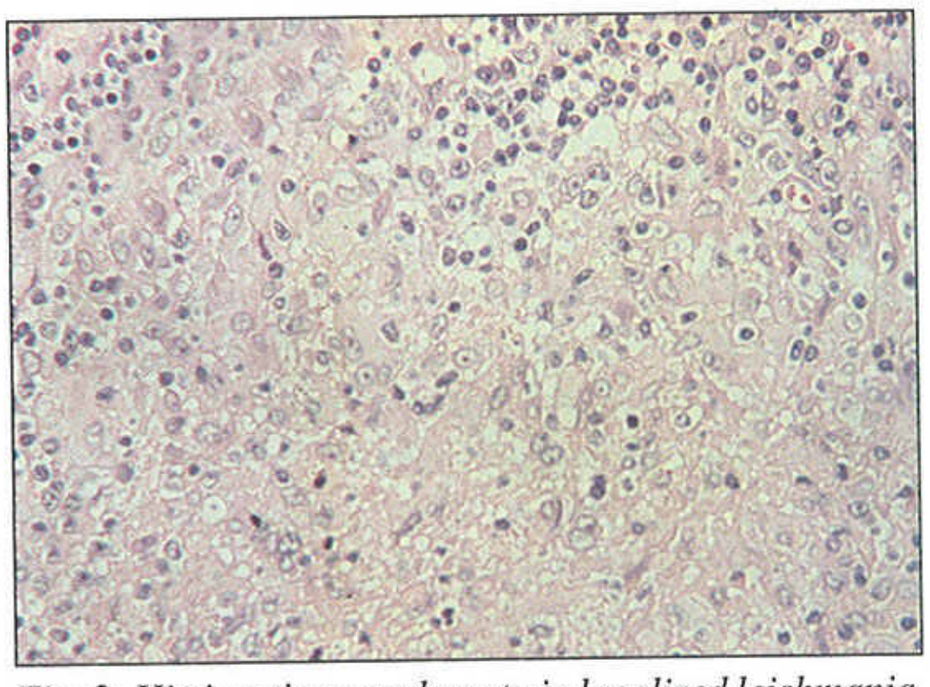

Fig. 2: Histiocytic granulomata in localized leishmania lymphadenitis. H&E.

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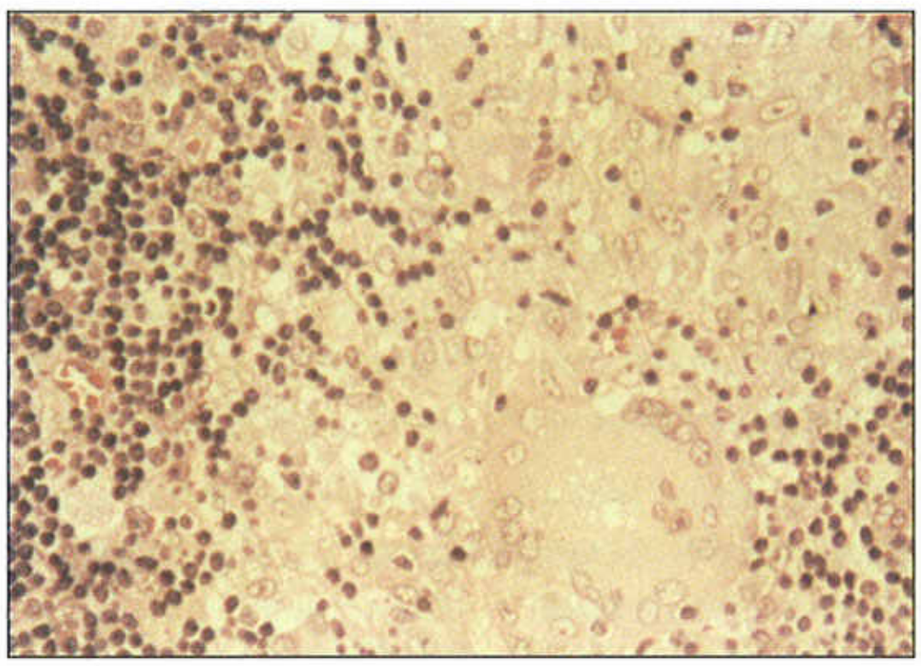

Fig 3: Histiocytic granulomata with multinucleated giant cells in localized leishmania lymphadenitis. H&E.

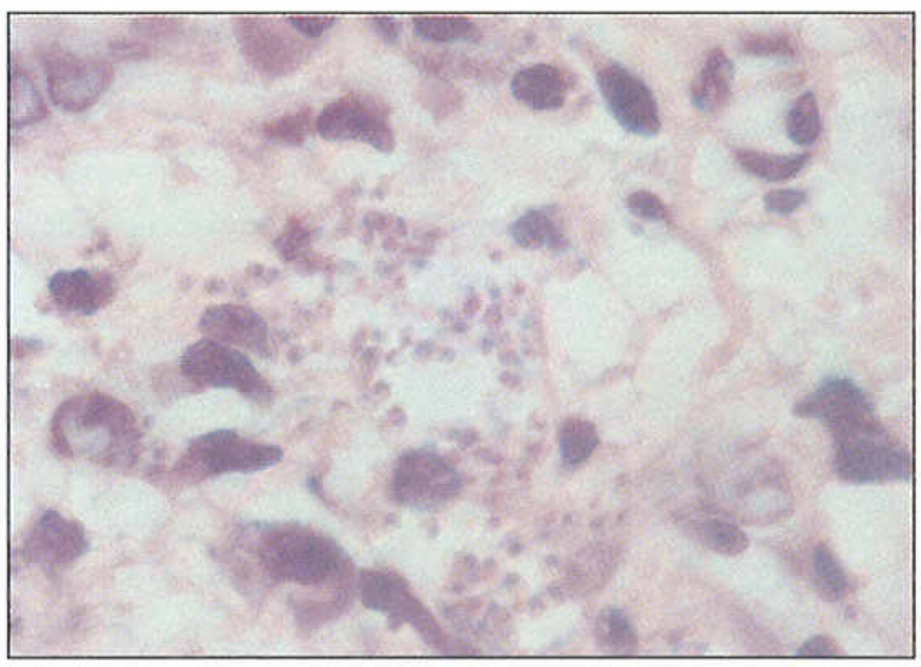

Fig. 4: A group of Leishman-Donovan bodies in localized leishmania lymphadenitis. H&E.

correlation is important for the correct diagnosis and differentiation from other granulomatous lymphadenitides such as toxoplasmosis and tuberculosis. A thorough examination of the patient is necessary. Skin lesions are usually present but they may be small, resembling insect bites, and thus tend to be ignored by the patient and overlooked by the examining physician[5&6]. Histological examination of the lymph node shows granulomatous changes with or without necrosis. Leishman-Donovan bodies are found generally both in the lymph nodes and in the skin lesions, except in lupoid cases where organisms are not present. High serum titers of leishmania antibodies are detectable in the majority of cases[5]. However, patients with lupoid leishmaniasis have serum antibody titers only slightly above those seen in normal controls but they demonstrate a strong delayed hypersensitivity reaction to the leishmanin skin test[5]. Immunohistochemical techniques using polyclonal or monoclonal antibodies are an important diagnostic tool for demonstrating leishmania organisms and/or antigens in biopsies[6]. Some investigators have used animal inoculation or culture in artificial media to confirm the diagnosis. Ardehali et al, using cultures of leishmania and iso-enzyme characterization, showed that localized leishmania lymphadenitis is caused by L. tropica[9]. In other geographical regions, L. major has been shown to cause necrotizing lymphadenitis[10]. Langerhans cells are required for the transport of Leishmania from the infected skin to the draining lymph node and initiation of the specific T cell immune response in the early phase of infection. Epidermal Langerhans cells take up the leishmania organisms in the skin, transport the parasites to the draining lymph nodes to present them to the lymphocytes for initiating the immune response, at the same time causing lymphadenitis[11].

In conclusion, localized leishmania lymphadenitis is a clinical manifestation of leishmaniasis with or without obvious skin lesions. This entity should be included in the differential diagnosis of localized lymphadenopathies, especially where leishmaniasis is endemic.

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