

Correspondence

Presentation of leishmaniasis (*Leishmania infantum*) in the skin of a patient with severe atopic dermatitis

DOI: 10.1111/j.1365-2133.2009.09201.x

SIR, A 66-year-old woman was attending for a course of whole-body ultraviolet (UV) A1 (340–400 nm) phototherapy for severe atopic dermatitis. Over the years she had required very potent topical steroids most days and was on long-term systemic prednisolone, mainly for her asthma rather than her atopic eczema. She also had a background of type 2 diabetes mellitus, thought to be secondary to her corticosteroid therapy, and osteoporosis. When she started UVA1 she had, as well as typical features of widespread eczema, nodules on her right cheek below the lower eyelid (Fig. 1a), and on the right side of her neck. Histopathology of a fragment of one of these skin lesions showed features that were reported as suggestive of rosacea.

Following her biopsy, she was commenced on oral doxycycline 200 mg daily, on the assumption that this was a clinically unusual pattern of granulomatous rosacea. Prior to commencing the doxycycline, she had reached a dose of 7.3 J cm^{-2} per UVA1 treatment, but, due to the known phototoxic potential of doxycycline, after it was commenced a small test area on the skin of one arm only was treated with a low dose of UVA1. This did not lead to an erythematous response

and therefore UVA1 was restarted to the whole body at 0.73 J cm^{-2} per treatment, with 10% increments thereafter. Initially there was some improvement in the cheek lesions but then, despite continuing the doxycycline (at a lower dose of 100 mg daily due to nausea) and the UVA1 therapy, these became more prominent. Histopathology of a repeat fragment of a skin lesion was again reported as consistent with granulomatous rosacea (Fig. 2a). However, when the fragment of

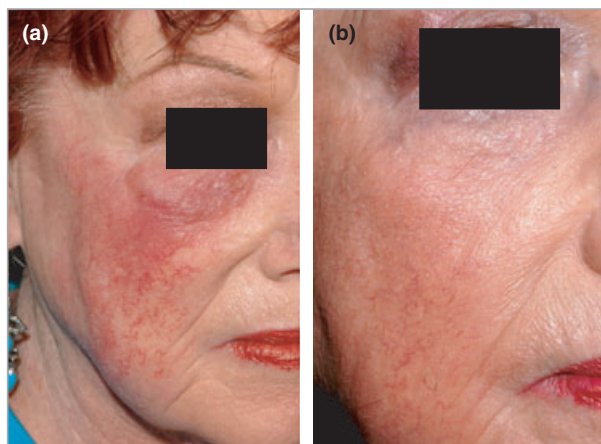


Fig 1. An area of tumid, infiltrated erythema on the right cheek, 2 weeks prior to commencement of ultraviolet A1 phototherapy (a) and 1 month after completion of treatment with sodium stibogluconate, showing resolution of cutaneous leishmaniasis (b).

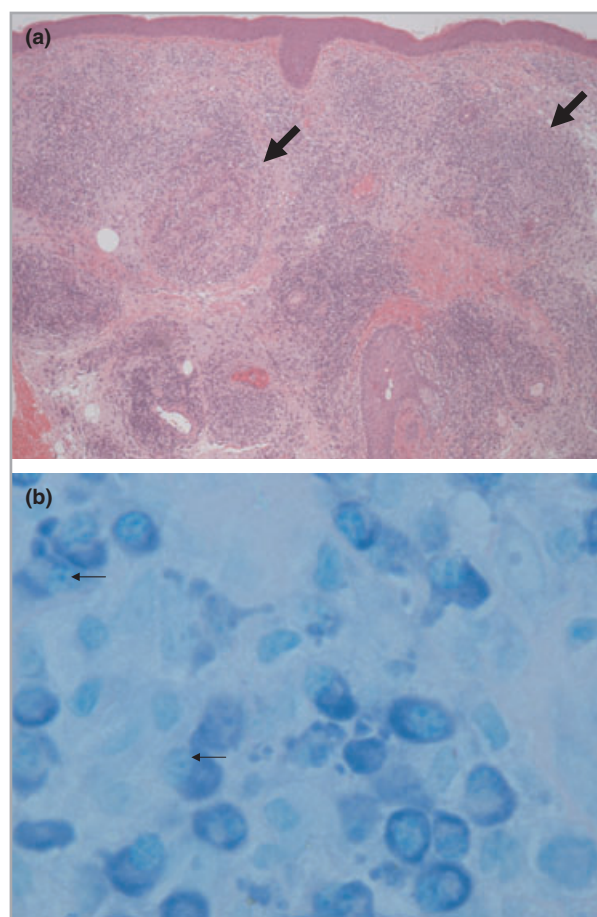


Fig 2. (a) Histopathology of the second fragment of a tumid skin lesion on the right cheek, demonstrating a dense dermal infiltrate of lymphocytes and plasma cells with loose granulomata (arrowed), initially reported (on the basis of these features and the clinical history given) as consistent with granulomatous rosacea (haematoxylin and eosin). (b) High-power view of a histopathological slide (Giemsa stain) of a fragment of a tumid skin lesion, showing amastigotes (arrowed).

the skin lesion was being taken by skin biopsy, she mentioned that she had lived in Spain (moving back to Scotland 15 years previously) and that while there she had been investigated (including bone marrow biopsy) for leishmaniasis followed by a course of intramuscular antimonial injections daily over 4 weeks. This history of previous probable visceral leishmaniasis led us to consider whether these lesions could in fact represent cutaneous recurrence of a previous visceral strain. On review of her histopathology, a few amastigotes could be seen on haematoxylin and eosin and Giemsa stains (Fig. 2b) and samples sent to the laboratory of the Hospital for Tropical Diseases, London confirmed the presence of *Leishmania* DNA of the *donovani/infantum* complex.

At that stage, as well as these nodules on the right neck and right cheek, she had similar lesions on her forearms which we had initially interpreted as nodular prurigo, but which we decided might also be leishmaniasis. She did not have splenomegaly, abnormalities on blood film or other features to suggest active visceral leishmaniasis.

After discussing the options she was treated with a 6-week course of intravenous sodium stibogluconate, for which she attended the hospital daily. This method of treating leishmaniasis has previously been reported as clinically effective, with the added benefit of reducing the financial costs of inpatient care required.¹ During this treatment, there was initial derangement of liver function and a rise in amylase, both of which improved as the therapy continued.

By the end of the course of stibogluconate the skin on her face was almost entirely clear (Fig. 1b) and, after a period of 2 weeks after starting the stibogluconate when her eczema became much worse, her eczema also greatly improved. Her UVA1 phototherapy was discontinued 1 month after her course of stibogluconate had finished and while under review 8 months subsequently, there was no evidence of systemic illness.

We believe that this case is interesting for several reasons. Firstly, it is a reminder of the importance of obtaining a complete previous medical history and travel history in diagnosing certain diseases, such as leishmaniasis, that can show late recurrence. Secondly, the diagnosis was made more difficult by her concomitantly having severe atopic dermatitis. Leishmaniasis proving difficult to diagnose in the presence of atopic dermatitis has been reported before in a case series from Saudi Arabia.² We suspect that the systemic and topical corticosteroids that she required for her atopic eczema played a part in cutaneous recurrence of her leishmaniasis. The problem was present before she even started UVA1 phototherapy and so we are unsure as to whether or not this played any part in its pattern of presentation. It is of interest that her eczema flared towards the end of her course of antileishmanial systemic therapy, but then very markedly improved, raising the possibility of an immune response to release of antigen from killed *Leishmania* organisms.

Departments of Dermatology,
*Infectious Diseases and †Pathology,
Ninewells Hospital and Medical School,
Dundee, U.K.
E-mail: a.kerr@dundee.ac.uk

A. KERR
R.S. DAWE
D. NATHWANI*
A.T. EVANS†
J. FERGUSON

References

- 1 Seaton RA, Morrison J, Man I et al. Out-patient parenteral antimicrobial therapy – a viable option for the management of cutaneous leishmaniasis. *QJM* 1999; **92**:659–67.
- 2 Kubeyinje EP, Belagavi CS. Cutaneous leishmaniasis occurring with atopic eczema: report of three cases. *East Afr Med J* 2000; **77**:572–3.

Key words: atopic dermatitis, leishmaniasis, ultraviolet A1 phototherapy

Conflicts of interest: none declared.