Locally acquired visceral leishmaniasis in Sri Lanka

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(Index words: Liver and bone marrow biopsy, clinical features, LD bodies)

Introduction

Cutaneous leishmaniasis is an established disease in Sri Lanka. The first locally acquired case was detected in 1992 [1]. This was followed a few years later by a number of cases from different parts of the island. The first report of mucosal tissue localisation was in 2005 [2]. Although Sri Lanka has been identified as the country where disease has been acquired in two cases of travel related visceral leishmaniasis in foreigners [3], to date autochthonous visceral leishmaniasis has not been documented in the country. Here we report the first locally acquired case in a resident from the North Central Province of the island.

Case report

A 36-year old woman from the North Central Province presented with a history of abdominal distension for 3 months. There was no history of fever or overseas travel. The patient was pale, and had mild bilateral axillary lymphadenopathy. Massive hepatosplenomegaly was present. There were no skin lesions or pigmentation. The ESR was 160 mm/h. The haemoglobin was 7.9 g/dl, the white cell count 3.6 × 10\(^9\)/l, and the platelet count 186 × 10\(^9\)/l. The liver enzymes and serum bilirubin were within the normal range. The serum proteins were elevated with reversal of albumin: globulin ratio (total proteins 90g/l, albumin 32 g/l, globulins 58g/l). Based on these findings a clinical diagnosis of lymphoma was made. A bone marrow and a trephine biopsy were done, followed by a liver biopsy.

The liver biopsy showed preservation of normal architecture with a prominent perportal inflammatory infiltrate comprising lymphocytes and plasma cells. There was Kupffer cell hyperplasia with numerous amastigotes within them giving the typical dot or dash appearance of Leishman-Donovan (LD) bodies (Figure 1a). The bone marrow showed reactive proliferation of all cell lines and the histiocytes contained numerous amastigotes (Figure 1b). The trephine biopsy also revealed amastigotes within marrow histiocytes (Figure 1c). Giemsa stain performed on the trephine biopsy showed the LD bodies (Figure 1d). Based on the clinical history, histopathological and haematological findings it was concluded that she had visceral leishmaniasis.

Discussion

The parasite Leishmania is exclusively transmitted by the bite of a female sandfly of the genus Phlebotomus or Lutzemia. Depending on the species of parasite and immune response of the host, the disease ranges from self-healing cutaneous lesions to a fatal systemic disease. Visceral leishmaniasis, a deadly disease, is particularly prevalent in India, Bangladesh, Brazil, north eastern Africa and in European countries bordering the Mediterranean. Visceral leishmaniasis is a current global health concern due to its co-existence with HIV infection [4].

Leishmania donovani, the parasite species commonly causing visceralising disease, has been identified as the causative organism for cutaneous leishmaniasis in Sri Lanka [5]. A few studies indicate that the common sandfly Phlebotomus argentipes is widely distributed in the island [6].

It is possible that this is the first identification of a prevalent disease [7]. Further testing must be done to specifically identify the parasite by isoenzyme and DNA

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analysis, and epidemiological studies are necessary. Unfortunately, the patient is not willing to undertake any further medical treatment or testing.

References

External ophthalmomyiasis caused by sheep botfly (*Oestrus ovis*) larvae

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(Index words: Conjunctivitis, first instar larvae)

**Introduction**

We here report the first identified Sri Lankan case of ophthalmomyiasis. Myiasis is the infestation of tissues and organs of animals or man by fly larvae. Myiasis itself is an uncommon condition in Sri Lanka. The present case is an ophthalmomyiasis caused by *Oestrus ovis*, the sheep botfly. These are large, dark grey flies with dark spots on the dorsum of the thorax and abdomen, covered with moderate amounts of large brown hairs. Gravid females dart onto the conjunctiva (usually the inner canthus) the outer nares, the lips or into the buccal cavity, and deposit their first stage larvae. By means of large claw-like oral hooks and spines the larvae rapidly bore into the mucous membranes. Near the eye the larvae may burrow into the eyelid, conjunctival sac or lacrimal duct (external ophthalmomyiasis), but rarely into the eyeball (internal ophthalmomyiasis). The former causes much irritation; the latter may lead to optic atrophy and may require enucleation [1].

**Case report**

In September 2004 a 20-year old farmer was admitted to the Puttalam Hospital in the night with a red eye. He stated that when he was working in the field that morning, he noticed something stuck on his right eye. Assuming that it was a piece of paddy leaf he had ignored it. But the irritation had continued and the eye had become red and itchy causing a severe pain in the night. He had neither pets nor domestic animals in his house though there were cattle and goats in the surroundings.

On examination the vision of the right eye was 6/18 and the left eye 6/6. There was no evidence of corneal or intra-ocular involvement, but moderate injection of right conjunctiva was visible. Six motile larvae were seen attached to the right inferior and bulbal conjunctiva. Under topical anaesthesia, the larvae were removed with fine forceps after irrigation of the eye with physiological saline. The specimens were sent to the Medical Research Institute for identification. After removal of larvae and administration of topical antibiotics, symptoms and clinical signs resolved and the patient regained the visual acuity of 6/6 in the right eye.

**Description of the larvae**

The removed larvae were translucent, white and measured about 1.1 mm in length and 0.3 mm in width.