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Short communication

Oral filariasis—A case report

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Abstract

Filarial worms are nematodes that dwell in the subcutaneous tissues and lymphatics of human hosts. In India, filariasis is predominantly caused by a species of nematode called *Wuchereria bancrofti*. The disease is transmitted through the bite of blood sucking mosquitoes. The salient clinical feature of the disease is lymphangitis leading to elephantiasis of the legs, arms, scrotum and breast. Oral or perioral involvement is very rare. We report a case of filariasis which was diagnosed after biopsy of an innocuous cheek nodule.

Keywords: Nematode infestation; Oral filariasis; Cheek nodule

Introduction

Filarial worms are nematodes that dwell in the subcutaneous tissues and lymphatics of human hosts. *Wuchereria bancrofti* and *Brugia malayi* (that cause filariasis), *Onchocerca volvulus* (that causes onchocerciasis), and *Loa loa* (that causes loiasis) are different species of filarial nematodes. Filariasis is a major public health problem in India, and *W. bancrofti* is the predominant infection, which causes 99% of the problems in the country.[1] Filarial nematodes produce larval worms, the microfilariae of which, when detected in the peripheral blood, can be used to differentiate among species. Over 48 species of mosquitoes are natural vectors of filariasis, the salient clinical features of which are lymphangitis followed by elephantiasis of the legs, arms, scrotum, and breasts. Oral or perioral involvement is rare.[2]

We report a case of filariasis that was diagnosed after biopsy of an innocuous-looking nodule on the cheek.

Case report

A 50-year-old woman was referred with a submucosal nodule in her left cheek of 2 weeks' duration. She had no pain but the nodule itched. There were no overt signs of disease among her family.

On examination there was a solitary, mobile, firm nodule 1 cm in diameter, 2 cm lateral and superior to the angle of the mouth. A general physical examination showed no relevant findings. Ultrasonographically the lesion was hypoechoic and rounded. Her haemoglobin concentration was 126 g/L, erythrocyte sedimentation rate 10 mm in the first hour, and total white cell count 6.35×10^9/L. Differential count showed eosinophilia (neutrophils 53%, lymphocytes 35%, eosinophils 11%, monocytes 1%, and no basophils).

Excisional biopsy was done through an intraoral approach (Fig. 1), histological examination of which showed a well-circumscribed area of granulation tissue with sheets of inflammatory cells (eosinophils, lymphocytes, giant cells, and mast cells). Portions of worms with capsular structures and alimentary canal were also visible, together with areas of necrosis and numerous proliferating blood vessels. Cross-sections of muscles, nerves, and normal mucous salivary acini

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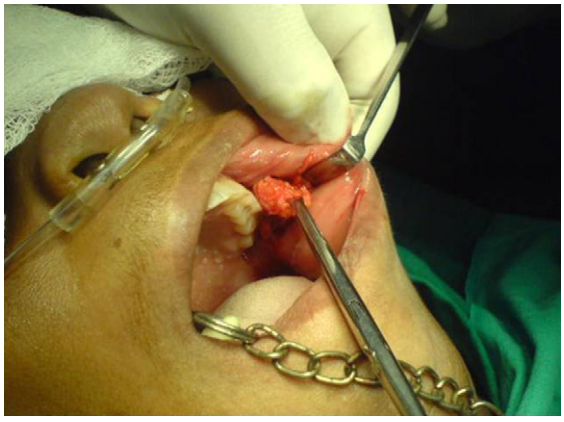

Fig. 1. Excisional biopsy of the nodule on the cheek.

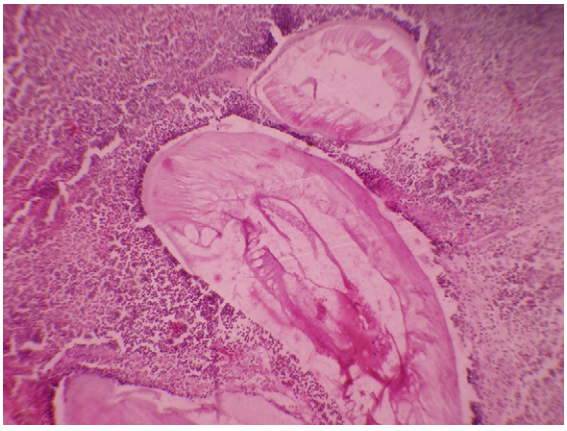

Fig. 2. Histological section showing the nematode (haematoxylin and eosin, original magnification ×10).

were present outside the area of circumscription (Fig. 2). The definitive diagnosis was nematode infestation.

As the nematode that is prevalent in this region (the port of Mangalore, Karnataka, India) is the filarial nematode *W. bancrofti* we assumed that this nematode was the one concerned. We did not do a Giemsa-stained nocturnal peripheral blood smear examination to confirm microfilaraemia, and further tests such as assays for circulating antigens or DNA of *W. bancrofti* were not available.

The patient was treated with diethylcarbamazine three times daily for 3 weeks and albendazole twice daily for 3 days. The site of the biopsy healed uneventfully.

Discussion

Filariasis is prevalent in tropical and subtropical areas of Africa, the Pacific, and the Americas, and is endemic in many parts of India. In 2001 it was estimated that about 473 million people were exposed to the risk of bancroftian infection in India.[1]

Perioral manifestations of lymphatic filariasis are rare, but oedematous swellings of the lips and interdental papillae have been reported in a young patient with microfilaraemia.[2]

The clinical signs of lymphatic filariasis can vary from one endemic area to another, and infected subjects have few overt clinical signs despite large numbers of circulating microfilariae in their peripheral blood and the disease being asymptomatic. A definitive diagnosis can be made only by detection of parasites and so can be difficult, as adult worms located in lymphatic vessels or nodes are largely inaccessible. Microfilariae can be found in blood, which can be examined microscopically. Many infected people have no microfilaraemia, however, which makes the definitive diagnosis even more difficult.[3] Our patient had no systemic signs apart from eosinophilia, so we did not suspect a parasitic infestation. As far as we know this is probably the first report of a case of primary oral manifestation in filariasis.

Acknowledgements

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