

Contents lists available at [ScienceDirect](http://www.sciencedirect.com)

Asian Pacific Journal of Tropical Medicine

journal homepage: www.elsevier.com/locate/apjtm

Document heading doi:

Filariasis presenting as a scrotal nodule in a 2 year old child: A case report

Kiran Yagain*, Mary Mathew

Department of Pathology, Kasturba Medical College, Manipal

ARTICLE INFO

Article history:

Received 17 November 2010

Received in revised form 27 November 2010

Accepted 15 December 2010

Available online 20 February 2011

Keywords:

Filariasis

Scrotum

India

ABSTRACT

A two year old boy from southwestern village of India presented with a 2 cm × 1 cm size swelling in scrotum for 8 months. It was excised surgically and the histopathological examination revealed a gravid filarial worm. The occurrence of adult filarial worm in 2 year old boy signifies the endemicity and high larval load of insect vectors in western coast of south India.

1. Introduction

Bancroftian filariasis is caused by the parasite *Wuchereria bancrofti*[1]. This thread like nematode is transmitted to humans by obligatory blood feeding mosquitoes[1]. The disease mainly involves the lymphatic system, skin, and external genitalia[1].

2. Case report

A 2 year old boy with no premorbid illness, hailing from southwestern village of India came to our hospital with swelling in scrotum for 8 months. The boy did not have any episodes of fever or symptoms suggestive of lymphangitis. The swelling was noticed insidiously and had gradually increased in size. On local examination, the swelling was 2 cm × 1 cm in size, firm, nontender and nonfluctuant with overlying normal scrotal skin. Both testes were felt separately and no inguinal lymphnode was palpated.

Clinically, it was diagnosed as dermoid cyst and was excised surgically. Preoperative ultrasound examination was not done.

Gross examination of excised specimen revealed a single

nodule of greywhite tissue measuring 1 cm × 1 cm × 0.5 cm. Cut section of the nodule showed greywhite mucoid areas.

Microscopic examination showed a fibrocollagenous and fibromuscular cyst wall enclosing a cross section of gravid filarial worm with foreign body granulomatous response(Figure 1).



Figure 1. Fibrocollagenous scrotal cyst enclosing a gravid filarial worm. H&E stain, 40×.

*Corresponding author: Dr. Kiran Yagain, Assistant Professor, Department of Pathology, Kasturba Medical College, Manipal 576104, Karnataka State, India.
Tel: +91 0820 29 22492
Fax: 91 820 2571927
E-mail: kiranyagain@rediffmail.com

3. Discussion

Wuchereria bancrofti, *Brugia malayi*, and *Brugia timori* are the causative agents of bancroftian and brugian (sometimes referred to as Malayan) filariasis. Filariae are transmitted by several genera of mosquitoes like *Anopheles*, *Culex*, and *Aedes* species^[2,3].

Clinical features include acute transient episodes of fever accompanied by painful inflammation of the lymphatics of the extremities and male genitalia. Chronic lymphatic dysfunction leads to gross disfigurement of the male genitalia and progressive lymphedema and swelling of the legs or arms^[1].

Wuchereria bancrofti is widely distributed in tropics and subtropics, *Brugia malayi* is restricted to South and Southeast Asia, *Brugiya timori* is restricted to the eastern Indonesian archipelago^[1]. It is estimated that 120 million people are infected with these parasites^[1].

Literature review reveals that less than 1% of competent mosquito vectors contain infective larvae, intense exposure to mosquitoes is necessary to develop patent infection^[1]. Repeated and long-duration exposure to insect vectors harboring infective larvae is generally necessary for humans to acquire these infections, although travelers to endemic areas occasionally become infected^[4,5-9].

Live motile worms exhibiting the “filarial dance” sign and nearby dilated lymphatic vessels can be detected by ultrasonography in the scrotum, inguinal lymph node, and breast^[10,11].

In the present case, the boy hailed from southwestern part of India which is an endemic area for filariasis. Since pathological changes of filarial disease in external genitalia occurs commonly after adolescence, the scrotal nodule of this 2-year old boy was not thought to be due to filariasis. A preoperative ultrasound examination would have saved the boy from unwanted surgical trauma^[10,11]. Diethylcarbamazine is the frequently used drug for filariasis^[1].

Also occurrence of adult filarial worm in a 2-year old boy signifies the endemicity and high larval load of insect vectors in western coast of south India.

Surgical excision of scrotal nodules should be considered only after ruling out filarial etiology, especially in people hailing from endemic areas. Such nodules should always be subjected for ultrasound examination for the “filarial dance”

sign.

Conflict of interest statement

We declare that we have no conflict of interest.

References

- [1] Grove DI. Tissue nematodes including trichinosis, dracunculiasis, and the filariasis. In: Mandell GL, Bennett JE, Dolin R, editors. *Mandell, Douglas, and Bennett's principles and practice of infectious diseases*. 6th ed. Philadelphia: Elsevier, Churchill Livingstone; 2005: 3267–76.
- [2] Gambhir M, Michael E. Complex ecological dynamics and eradicability of the vector borne macroparasitic disease, lymphatic filariasis. *PLoS ONE* 2008; **3**: e2874.
- [3] Snow LC, Bockarie MJ, Michael E. Transmission dynamics of lymphatic filariasis: vector-specific density dependence in the development of *Wuchereria bancrofti* infective larvae in mosquitoes. *Med Vet Entomol* 2006; **20**: 261–72.
- [4] Klion AD. Filarial infections in travelers and immigrants. *Curr Infect Dis Rep* 2008; **10**: 50–7.
- [5] Lipner E, Law MA, Barnett E, Keystone JS, von Sonnenburg F, Loutan L, et al. Filariasis in travelers presenting to the Geo Sentinel Surveillance Network. *PLoS NTD* 2008; **1**: e88.
- [6] Avier B, Lucia GG, Celeste MS, Gisela PL, Alcides T. A case report of cutaneous larva migrans in Argentina. *Asia Pac J Trop Biomed* 2011; **1**(1): 81–2.
- [7] Sameer S, Wagh DD, Shivali K, Yeshwant L. A case of acute epididymo-orchitis due to *Pseudomonas aeruginosa* presenting as ARDS in an immunocompetent host. *Asia Pac J Trop Biomed* 2011; **1**(1): 83–4.
- [8] Azira NMS, Zeehaida M. A case report of ocular toxocariasis. *Asia Pac J Trop Biomed* 2011; **1**(2): 164–5.
- [9] Khan MAA, Mohammed F, Zain AS, Syed NA, Huzaifa M, Maryam B, et al. A case of cellulitis of the hands caused by a predatory bird attack. *Asia Pac J Trop Biomed* 2011; **1**(2): 166–8.
- [10] Mand S, Debrah A, Batsa L, Adjei O, Hoerauf A. Reliable and frequent detection of adult *Wuchereria bancrofti* in Ghanaian women by ultrasonography. *Trop Med Int Health* 2004; **9**: 1111–4.
- [11] Mand S, Marfo-Debrekyei Y, Dittrich M, Fischer K, Adjei O, Hoerauf A. Animated documentation of the filaria dance sign (FDS) in bancroftian filariasis. *Filaria J* 2003; **2**: 3.