



AN UNCOMMON PRESENTATION OF THE FILARIAL WORM AS A PENILE NODULE- A RARE CASE REPORT

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**ABSTRACT**

Filariasis is a tropical infectious disease and a major global health problem with high incidence in Indian subcontinent. Presenting with lymphatic dysfunction in the form of hydrocele, lymphocele, chyluria and groin lymphadenovarix. We report a rare presentation of filariasis as penile nodule.

**KEYWORDS :**

**INTRODUCTION**

Filariasis is an infectious parasitic disease and is regarded as a major public health problem in the tropical countries of Africa, Southern America, and Asia<sup>1</sup>. In India it is endemic in Orissa, Uttar Pradesh, Bihar, Andhra Pradesh, Tamil Nadu and Gujarat. The nematode *Wuchereria bancrofti* accounts for 90 % of cases worldwide followed by *Brugia malayi* and *Brugia timori*<sup>2</sup>. Infected mosquitoes serve as vectors and humans are the definitive host.

The commonest presentation is lymphatic filariasis which usually involves lower extremities, scrotum, retroperitoneal tissue and axilla causing lymphoedema, elephantiasis, hydrocele, Ram horn penis and rarely in breast. Usually it presents as a generalized lymphoedema of affected parts.

**CASE REPORT**

A 51 year old male, resident of Kanyakumari district, presented with swelling in the penile shaft since 2 weeks, associated with itching. There was no history of fever with chills or trauma. No significant treatment or drug history, no other similar swellings in the body. On examination 2cm x 1.5cm size, non tender, firm, mobile swelling in the penile shaft. There was no inguinal lymphadenopathy, provisionally diagnosis of Fibroma was made and posted for excision biopsy. Post excision the lesion was bisected and found to have live worm (figure: 1 and 2) provisionally diagnosis made as? Cysticercosis and sent for HPE. Oral albendazole and ivermectin, tablets were given. Biopsy report came as filarial worms within the cyst and cyst contains heavy lymphoplasmic cells and eosinophils infiltration. Patient came for first follow up; wound is clean and healthy, no edema noted.



**Fig 1: worm with in cyst**



**Fig 2: live worm**



**Fig 3: biopsy report**

**DISCUSSION**

Filariasis is a parasitic infection caused by a round worm of Filarioideae super family. Humans are definitive hosts in filarial nematodes. The disease manifests as two distinct clinical types- 1) Lymphatic filariasis caused by parasite in lymphatic system and, 2) occult filariasis caused by immune hyper responsiveness of the human host as tropical pulmonary eosinophilia.

The global burden of lymphatic filariasis is not well defined, but it is known to be endemic in over 80 countries, placing 1 billion persons at risk. The World Health Organization (WHO) most recently estimated 120 million people to be currently infected—2% of the world's population. Of these, 44 million have clinical manifestations such as lymphoedema, elephantiasis, hydrocele, lymphangitis, chyluria and renal disease. Lymphatic filariasis is a major health problem in India with most infections caused by *Wuchereria Bancrofti* (90%), *Brugia malai* and *Brugia timori*. Heavily infected areas are Tamil Nadu, Uttar Pradesh, Bihar, Jharkhand, Andhra Pradesh, Orissa, Kerala and Gujarat<sup>3</sup>.

Adult worms usually stay in the lymphatic tissue and release early larval forms in blood stream known as microfilaria into the host bloodstream. Circulating microfilaria are picked up along with a blood meal by the arthropod vector and transmitted to a new host<sup>4</sup>.

Depending on whether microfilaria can be detected in the peripheral blood, patients are described as microfilaraemic or amicrofilareamic. Man is a natural host. All ages are susceptible. In endemic areas, the microfilaria rate is higher in men. *Culex*, *Anopheles* and *Aedes* species of mosquito are vectors for *Wuchereria Bancrofti*. The disease may be asymptomatic or there can be acute episodes of local inflammation involving skin, lymph nodes and lymphatic vessels. Chronic disease in endemic communities can manifest in men in the form of genital damage, especially hydrocele, funiculitis, epididymitis and elephantiasis of the penis and scrotum. In women, the vulva or breast may be involved. An entire arm or leg may be affected in both sexes<sup>4</sup>.

Microfilaria of *W.bancrofti* circulates in the peripheral blood with regular nocturnal periodicity and maximum density had been reported between 10 pm and 2 am<sup>5</sup>. Tests used for diagnosis include demonstration of microfilaria in the peripheral blood or skin and detection of filarial antigens and antibody. For detection of microfilaria, thick and thin blood smears are made and stained with haematoxylin or giemsa stains.

Ultrasound is a valuable tool in the diagnosis of cases of lymphatic filariasis. Amaral et al<sup>7</sup> had first reported the use of ultrasound to visualize adult worms of *Wuchereria Bancrofti* in the scrotal area of infected men. They described a continuous, distinctive and specific pattern of worm movement called the "Filarial dance" sign<sup>6</sup>.

There is continual development of new control strategies and treatment programs for filariasis. Four drugs are now used singly or in various combinations and doses- diethylcarbamazine, (DEC), ivermectin, albendazole, and doxycycline. The DEC recommended dose is 6mg/kg body weight per day in divided doses given orally for 12 days. It may be combined with either Albendazole or Ivermectin (a single dose of 200 to 400 µg/kg) for mass therapy in endemic areas. Vectors can be controlled by anti-larval measures and minor environmental measures.

## CONCLUSION

The uniqueness of this case is its presentation as isolated penile shaft nontender mobile lesion with atypical morphology, without concomitant involvement of scrotum. Though the filarial cyst was completely removed this patient will be followed up periodically.

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