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Epididymal Filariasis – A Case Report and Review of Literature

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ABSTRACT *Filariasis is a parasitic infestation caused by the nematode Wuchereria bancrofti. It is a major public health problem and socio-economical problem in tropical and sub-tropical countries. The clinical manifestations of filariasis depend upon the stage in the course of infection in the human host and the worm load. It is a rarity to document filarial worms in histopathology from the epididymus. We present a case of epididymal filariasis where the patient had presented to us with pain in the right scrotum of 20 days duration.*

Introduction:
Filariasis is caused by several round, coiled and thread-like parasitic worms belonging to the family filaridea. Filariasis is a global problem. It is a major social and economic courage in the tropics and sub-trophics of Asia, Africa, Western pacific and parts of the America, affecting over 120 million people in 80 countries. More than 1 billion people live in areas where there is a risk of infection (1).

It is estimated that 600 million people are living in areas endemic for lymphatic filariasis in SEAR. There are about 60million people infected in the region and about 31 million people have clinical manifestation of the disease (2). Surveys carried out indicate that areas previously known to be free from filariasis are showing evidence of low degrees of transmission (3). An estimated 553.7 million people are at risk of lymphatic filariasis infection in 243 districts in India.(4)

Epididymis is a site for a variety of non-neoplastic and neoplastic lesions, predominantly the former (5) The clinical manifestations of filariasis depend on the stage in the course of infection in the human host and the worm load. The urogenital manifestations of filariasis can be of many types. Genital filariasis becomes manifest in a number of ways. It can present as an acute inflammatory disease like funiculitis or epididymo-orchitis. This is by far the most frequent manifestation. Chronic manifestations include hydrocele, lymph varix, lymph scrotum, filarial penis or elephantiasis of the genetalia and chyluria. Hydrocele accounts for 90% of the morbidity due to the above genital manifestations.(6).

In India, description of a disease that resembles filariasis was found in Chapter 12 of the 'Susruta Samhita', 6 th century BC. The description of signs and symptoms of this disease by Madhavakara (7 th century AD) in his treatise 'Madhava Nidhana' (Chapter 39) holds good even today. Several studies were carried out on the epidemiological aspects and population dynamics of parasites, vectors and human hosts over the years. (7,8)

Conventional diagnostic procedures include the demonstration of microfilaria in the blood smears or in the skin snips. In surgical material, the diagnosis is relatively easy when viable filarial worm is present. Necrotic and calcified worms may require special stains for identification. Similarly, microfilaria may be missed if you are not aware of the possibility, particularly in cases where tissue eosinophilia is minimal. The purpose of this paper was to illustrate these examples and to review the appropriate literature, in order to make physicians aware of this uncommon entity

Case Report
A 34-year- old patient presented with complaints of pain in the right scrotum and a mass of 20 days' duration. On examination there was a palpable nodule in the right epididymus. Left epididymus was normal. Right testis and left testis were normal. There was no lymphadenopathy. Abdominal examination and rest of the genital reexamination wass unremarkable.

For further evaluation following investigations were done. Ultrasonography revealed small hypoechoic cystic lesion with poor vascularity seen in the lower pole of right testis. Haematological investigations such as complete blood count was normal and Differential count was normal.No eosinophilia. Serological investigations such as HIV, HBsAg, HCV & VDRL were non-reactive at the time of examination.

Epididymal cyst was made as clinical diagnosis. A Cyst was excised with a provisional clinical diagnosis of Epididymal cyst. Gross findings showed thick grey-white soft tissue measuring 2x1x0.5 cms homogeneous structure

Microscopic features : Section studied shows fibro - collagenous tissue and mixed inflammatory cells predominently lymphocytes, neutrophils and few eosinophils seen. A dilated lymphatic channel is seen within which a larval form of filarial worm seen (Fig 1).

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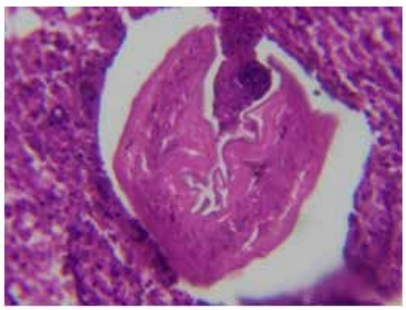
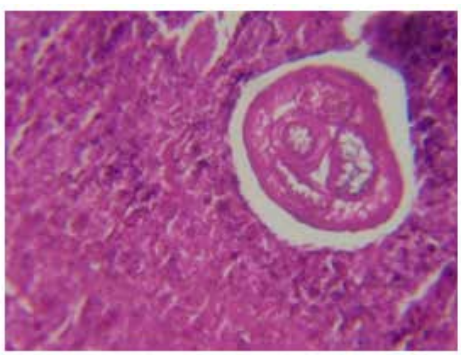


One more section showing the larval form in the dilated lymphatic channel (Fig 2)



An entire adult worm was seen along with the hyaline sheath of the parasite (Fig 3)

Discussion:

Epididymal cysts can be very small, but some can grow to the same size as a testicle or even as large as a grapefruit! There are normally no symptoms unless a cyst becomes infected, in which case it may drain fluid and become painful or swollen. Larger epididymal cysts can cause some discomfort, which is usually the reason why some men opt to have them removed. This procedure involves a simple operation to cut the cyst out of the epididymis. However, if a cyst is not infected and does not cause any pain or discomfort, it is not necessary to treat it.

The disease epididymal filariasis should always be taken into consideration in the differential diagnosis in patients with acute scrotal pain coming from tropical areas even in no – endemic areas.

Microfilarial infection patients present with nodular swelling of the epididymus approximately 2-3 cm in size. Tissue biopsy evolved microfilaraial worm along with the hyaline sheath with few eosinophils in the background.

Bancroftian filariasis is caused by the nematode *Wuchereria bancrofti*. Living and dead adult worms cause symptoms. Adult worms live in the lymph channels near the major lymph glands of the lower half of the body and cause dilatation of the channels, interfering with lymph flow and resulting in lymphoedema and leakage of lymph into the tissues.(9)

The adult produces millions of very small immature larvae known as microfilariae, which circulate in the peripheral blood with marked nocturnal periodicity. The worms usually live and produce microfilariae for 5-8 years.

Man is the definitive host i.e. where the mature adult male and female parasites mate and produce microfilariae whereas the mosquito is the intermediate host. The adult parasites are usually found in the lymphatic system of man. They give birth to as many as 50,000 microfilariae per day, which find their way into blood circulation. The life span of microfilaria is not exactly known which preferably may survive up to a couple of months.

Conclusion

Filariasis is caused by nematodes (roundworms) that inhabit the lymphatics and subcutaneous tissues. Three species cause filariasis: Wuchereria bancrofti, Brugia malayi, and Brugia timori. Infection is transmitted by mosquito vectors; humans are definitive hosts. Filariasis is a major cause of disfigurement and disability in endemic areas, leading to significant economic and psychosocial impact.

Definitive diagnosis can be made by demonstration of microfilariae in the blood, or of adult worms in the lymphatics. Rarely, microfilariae and/or adult worms are identified incidentally in tissue biopsies or cytological specimens.

REFERENCE

1. WHO (1998), World Health Report 1998,Life in the 21st century, A vision for all, Report of the Director General,WHO. | 2. WHO (1999), Health situation in the South-East Asia region 1994-1997, Regional office for SEAR, New Delhi. | 3. National Institute of Communicable diseases (1979). Operation Manual NFCP, Delhi. | 4. WHO (2006), Weekly Epidemiological Record No.22, 2nd June 2006 | 5. Perez-Guillermo M, Sola Perez J. Aspiration cytology of palpable lesions of scrotal content. Diagn cytopathol. 1990;6:169–77.[Pub Med] | 6. Surgical approaches to the urogenital manifestations of lymphatic filariasis. Global programme for the elimination of lymphatic filariasis. WHO/CDS/CPE/CEE/2002.33. | 7. Raghavan N G National filaria control programme: A review. Bull Nat Soc Ind Mal Mosq Dis 1955;3:175- 84. | 8. Rajagopalan P K, Das PK, Subramanian S, Vanamail P, Ramaiah KD. Bancroftian filariasis in Pondicherry, South India: 1, Pre-control epidemiological observations. Epidemiol Infect 1989;103:685- 92 | | | 9. Neva FA and Brown HW, editors. Basic Clinical Parasitology. 6th edition. Norwalk (Connecticut): Appleton & Lange; 1994.