



Splenic Filariasis In Post Traumatic Splenectomy

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ABSTRACT

A 42-year old presented in surgery emergency with ruptured spleen in a road traffic accident, for which splenectomy was done. Gross examination showed a spleen weighing 400 grams and measuring approximately 16 x 9 x 5 cm. Histopathological examination revealed well defined granulomas comprising of epithelioid cells and foreign body type giant cells along with fair number of uncoiled sheathed microfilariae in and around these granulomas.

KEYWORDS : splenic filariasis, extralymphatic, *Wuchereria bancrofti*

Introduction:

Filariasis is a common public health problem in the Southeast Asia. There are approximately 60 million people infected in the region and approximately 31 million people have the clinical manifestation of this disease. Filariasis in India is caused by two closely related nematode worms - *Wuchereria bancrofti* and *Brugia malayi*. The disease mainly involves the lymphatic system of the body. The most frequently involved lymphatics are those of lower limbs, retroperitoneal tissues, spermatic cord, epididymis, and mammary gland.^[1] Splenic filariasis is a rare presentation of extralymphatic sites involved by filaria.

Case History:

A 42-year old presented in surgery emergency with ruptured spleen in a road traffic accident, for which splenectomy was done. Gross examination showed a spleen weighing 400 grams and measuring approximately 16 x 10 x 5 cm. (Figure 1) Histopathological examination revealed well defined granulomas comprising of epithelioid cells and foreign body type giant cells along with fair number of uncoiled sheathed microfilariae in and around these granulomas. (Figure 2)

Discussion-

Filariasis is a common public health problem in the Southeast Asia. There are approximately 60 million people infected in the region and approximately 31 million people have the clinical manifestation of this disease. Filariasis in India is caused by two closely related nematode worms - *Wuchereria bancrofti* and *Brugia malayi*. The disease mainly involves the lymphatic system of the body. The most frequently involved lymphatics are those of lower limbs, retroperitoneal tissues, spermatic cord, epididymis, and mammary gland.^[1]

Recently, dramatic advances in our understanding of the pathogenesis of this disease have led to the recognition that subclinical lymphatic damage is present in all infected patients. Lymphatic dysfunction resulting from this damage predisposes to local microbial infection, which in turn exacerbates lymphatic pathology.^[2-4] However, little attention has been paid in recent years to clinical manifestations of extralymphatic disease caused by filariasis. It is intended to reemphasize the importance of extralymphatic morbidity in bancroftian filariasis, and to highlight the gaps in our knowledge of the pathogenic mechanisms that

underlie the various clinical syndromes.

The extralymphatic syndromes resemble clinical entities of nonfilarial origin, and it is often impossible to establish with absolute certainty the filarial etiology of extralymphatic disease manifestations in an infected individual. Similar diagnostic uncertainties also apply to some of the "classical" manifestations of lymphatic filariasis.^[4] Unlike lymphatic disease syndromes, the extralymphatic manifestations of Bancroftian filariasis are not caused by adult worms *per se*, but by microfilariae, by diffusible products from as yet undefined parasite stages, or by immune complexes. Extralymphatic filarial disease is thus heterogeneous in its pathogenesis and clinical manifestations. It may present as arthritis, renal disease, tropical pulmonary eosinophilia, skin rashes and splenomegaly.

Filarial splenomegaly-

The spleen is not usually involved in bancroftian or brugian filariasis although splenomegaly occurs in experimentally infected animals. Single-dose DEC treatment reduced splenomegaly in residents of an area of Papua New Guinea where bancroftian filariasis and malaria are co-endemic, a finding consistent with the notion that filarial infection associated with malaria resulted in higher spleen rates and sizes.^[5] This does not establish a causal relationship between *W. bancrofti* and splenomegaly because DEC has many properties besides being an antihelminthic. Further, reduction of splenomegaly in patients with concomitant filariasis and malaria can be achieved by treatment with antimalarials without associated DEC.

Conclusion-

In the present case, the patient did not have any signs and symptoms of filarial infection, and the disease was not clinically suspected. The main purpose of this case report is to raise the awareness that in tropical countries such as India where filariasis is endemic, it should always be considered as a differential diagnosis of granulomas at any site. Our presentation revealed that microfilaria may even be present at rare sites such as spleen.



Figure 1- Gross picture showing enlarged spleen

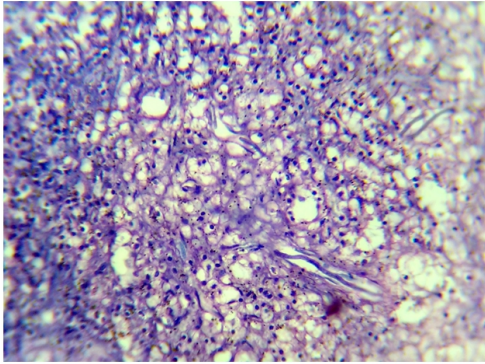


Figure 2- Histopathology showing Microfilariae seen within splenic tissue (Hematoxylin and Eosin Stain 200X)

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