A case of soft-tissue swelling due to Lymphatic filariasis in a Chronic Myeloid Leukemia patient – a case report


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ABSTRACT
Filariaisisis a vector borne disease caused by nematodes which is an important endemic disease in tropical countries like India. Wuchereria bancrofti accounts for the majority of cases of lymphatic filariasis. However, bancroftian filariasis presenting as soft tissue swelling is very rare. Here, we report such a case of a 38years male known case of leukemia presenting with soft tissue swelling, FNAC from which revealed W. bancrofti. Thus, the aim is to highlight the fact that filariasis should be kept in differential diagnosis cause of a soft tissue swelling in an endemic area.

Keywords: Lymphatic filariasis, Wuchereria bancrofti, soft tissue swelling

INTRODUCTION
Filarisisisis a chronic parasitic disease prevalent in tropical and sub-tropical countries like India. It is caused by nematodes of the family Filarioidea which has affinity for affecting skin, subcutaneous tissue or lymphatic system. Wuchereria bancrofti, Brugia malayi and Brugia timori cause lymphatic filariasis of which W. bancrofti accounts for 99.4% cases in India. Humans are the definitive host. W. bancrofti is transmitted in much of rural Africa by Anopheles species, whereas in many urban areas including India and in the Western hemisphere W. bancrofti is transmitted by Culex mosquitoes.Main vectors in India are Culex quinquefasciatus(C. fatigans) for Bancroftian filariasis and Mansonia (Mansonoids) mosquitoes (M. annulifera/ M.uniformis) for Brugian filariasis.Lymphatic filariasis presenting as soft tissue swelling is very rare. Here we report such a case
presenting as subcutaneous soft tissue swelling diagnosed to be caused by *W bancrofti*.

**CASE:**

A 38 years male, resident of Birbhum of West Bengal, known case of Chronic myeloid leukemia (CML) on Chemotherapy- Tablet Imatinib (400mg) presented with low grade intermittent fever with multiple swellings for last 4 months. Swelling first started at inguinal region, associated with mild pain, followed by appearance of swelling in axilla. When he presented to us, swelling was present only at right side of his back region. He was receiving treatment for CML in a cancer hospital where he was initially investigated. He was a case of BCR/ABL positive cytogenetic variant of CML.

On local examination, a swelling of 7 x 6 cm, subcutaneous, non-tender, with restricted mobility, semi-solid in consistency was noted over back of chest on right side. On general and systemic examination he had only mild pallor.

His complete blood count showed – Hb-10.3g%, normocytic normochromic, TWBC – 2610/mm3, neutrophil – 47%, lymphocyte -44%, eosinophil-4% ; platelet- 1.87 lakhs/mm3.

LFT, urea, creatinine were WNL. Chest Xray, USG W/A were WNL.

MRI back of chest done at the cancer hospital showed fairly large heterogenous lesion seen involving back of thorax on right side with features suggestive of inflammation and areas of necrosis. Radiologist gave impression of necrotic sarcomatous lesion. FNAC done from right sided axillary and back swelling at the same hospital revealed: smears show blood component having chronic myeloproliferative disorder, and few microfilaria noted in smear.

When he was referred to and admitted in our hospital, FNAC was repeated from his right back swelling, and blood for microfilaria drawn at night were sent.

FNAC smear showed presence of thin, slender thread like larvae with blunt head and tail tip free of nucleus which led to diagnosis of *Wuchereriabancrofti*. However, Night blood sample failed to demonstrate microfilariae.

Patient was treated with Tab Ivermectin 12mg single dose at night, Tab DEC (diethylcarbamazine) 300mg stat and then weekly, Tab Albendazole 400mg for 2 days, tab Doxycycline 100mg twice daily for 4 weeks, Tab levocetrizine 1tab at night for 10 days and tab Paracetamol for fever.

There was a notable decrease in swelling with the therapy.

The patient was then discharged and asked to come for follow up at intervals but he did not show any sign of recurrence.

Fig 1: soft tissue swelling seen at the back of right chest (depicted by red arrow)
Figure 2: soft tissue swelling at back of right chest (closer view)

Figure 3: Giemsa stain showing *Wuchereria bancrofti*

Figure 4: Giemsa stain showing *Wuchereria bancrofti* (tail end)
DISCUSSION:

Usually, bancroftian filariasis presents as lymphedema and lymphadenitis due to lymphatic blockage caused by the worms. Adult worm resides in lymphatics and lymph nodes while larval form circulates in peripheral smear. However, extralymphatic filariasis is rare and reported in uncommon sites. The larval form possibly reaches tissue space due to lymphovascular obstruction causing extravasation. Two peculiar findings in our case were that – peripheral blood smear for differential count did not reveal eosinophilia and the midnight blood sample did not reveal any microfilaria. FNAC done from the swelling helped to diagnose our case.

Possibility of filariasis should always be kept in mind in endemic areas in patients presenting with soft tissue swelling, cause of which remains uncertain. Cytopathological confirmation with a strong clinical eye are the diagnostic mainstays in such cases. Early initiation of treatment with anthelmintics results in prompt regression of infection.

REFERENCES: