

Cervical lymphadenopathy in a Child – An unusual presentation of filariasis

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Abstract- Clinical manifestations of lymphatic filariasis depend on the area of lymphatic involvement and the duration of infection. An eight year old child presented with right cervical lymph node. Fine needle aspiration cytology (FNAC) with 22 Gauge needle from the lymph node revealed multiple coiled larvae of *Wuchereria bancrofti* in a background of reactive lymphoid cells with eosinophils. Diagnosis of right cervical Bancroftian lymphadenopathy was made. The case was followed by excisional biopsy of the lymph node and hence was confirmed histopathologically. We report this case because cervical lymphadenopathy is a rare presentation of filariasis in children.

Index Terms- Cervical lymphadenopathy, child, filariasis, fine needle aspiration cytology.

I. INTRODUCTION

Filariasis is a tropical disease transmitted by the *Culex* mosquitoes. The diagnosis of it is conventionally made by demonstrating microfilariae in the peripheral blood smear. However microfilariae and adult filarial worm have been incidentally detected in fine needle aspirates of various lesions in clinically unsuspected cases. Lymphatic filariasis is a major health problem in India especially in its southern states. A majority of the infected individuals in endemic areas are asymptomatic. Adult worms in the lymphatics cause progressive lymphatic vascular dilatation and dysfunction. Patients usually presents as lower limb lymphedema, hydrocele, chyluria or inguinal lymphadenopathy.^[1] Cervical lymphadenopathy is an extremely uncommon presentation of filariasis even in endemic communities. We thus present a case of filarial lymphadenopathy of the cervical region which was further followed by excisional biopsy.

II. CASE REPORT

An 8 year old male child presented to Surgical OPD for a painless enlarged lymph node in right side posterior cervical region since 6 months. He had no history of fever, cough, weight loss, swelling of the left upper extremity or any lumps elsewhere

in the body. On clinical examination there was a 2 x 2 cm in size firm, painless, mobile and non-tender swelling. No other lymph node groups were enlarged. External genitalia was normal. General examination revealed no other abnormalities. A clinical diagnosis of reactive lymphadenitis was made.

His chest x-ray was unremarkable. His total leucocyte count was normal with 6% eosinophils. Routine and microscopic examination of the urine was within normal limits. A scrotal ultrasound scan was not done as the external genitalia were normal.

FNAC from the lymph node was performed and smears were wet fixed in 95% ethanol and stained with haematoxylin – eosin (H-E) stain. Microscopic examination revealed multiple coiled larvae of *Wuchereria bancrofti* (*fig 1*) in a background of reactive lymphoid cells with eosinophils. The case was confirmed histologically after its excisional biopsy. Histology showed few histiocytic granulomas with presence of eosinophils with larvae of *W. bancrofti* present in the centre of the granulomas (*fig 2*).

III. DISCUSSION

Lymphatic filariasis is a major health problem in India with most infections caused by *Wuchereria bancrofti*. The presence of adult worms in the infected individuals is confirmed by detecting microfilariae or filarial antigens in the patient's blood.^[2] The diagnosis of a filarial infection can also be made by detecting microfilariae on microscopic examination of fine needle aspirates from lymph nodes.^[3,4] FNAC from breast mass, thyroid mass, hydrocele fluid, pericardial fluid, pleural fluid, ascitic fluid, and cytology of cervicovaginal smears, bronchial aspirates, urine, nipple secretion, bone marrow and joint fluid aspirates have also been reported to yield microfilariae.^[5,6] In these patients the peripheral smears rarely revealed microfilaremia or eosinophilia.^[5,6]

Kapila and Verma documented gravid adult female worms of *Wuchereria bancrofti* in two inguinal lymph nodes aspirates.^[7] Arora et al demonstrated the adult worm of *Brugia malayi* in an epitrochlear lymphnode aspirate.^[8] Trupti et al reported microfilaria in cervical lymphadenopathy in a patient with metastasis of squamous cell carcinoma of esophagus^[9]. Filariasis can be detected in a clinically unsuspected case, especially in an endemic zone. The spectrum of host response may vary from no

reaction to a marked inflammatory or granulomatous response. The entire spectrum of changes should be kept in mind while practicing cytopathology in filaria prone endemic area. In such situations, a high index of suspicion and careful screening of cytology smears are keys to a correct diagnosis. In conclusion, although scrotal lymphatics and inguinal lymph nodes are the preferred location for adult *W. bancrofti*, cervical lymph nodes may also be affected. These cases can be misdiagnosed as reactive hyperplasia and can be left untreated which can lead to progression of disease.

REFERENCES

1. Sen SB, Chatterjee H, Ramaprasad S et al. Chylous manifestations of filariasis: A clinical and lymphographic study. Part II. Lymphadenovariex, chylocele and chylous scrotum. *Ind Jour Med Res* 1969; 57: 1738-44.
2. Dreyer G, Santos A, Noroes J, Addiss D et al. Proposed panel of diagnostic criteria, including the use of ultrasound, to refine the concept of 'endemic normals' in lymphatic filariasis. *Tropical Medicine and International Health* 1999; 4: 575-9.
3. Dey P, Radhika S, Jain A et al. Microfilariae of *Wuchereria bancrofti* in a lymph node aspirate. A case report *Acta Cytol.* 1993; 37: 745-6.
4. Kapila K, Verma K et al. Diagnosis of parasites in fine needle breast aspirates. *Acta Cytol* 1996; 40: 653-6.
5. Varghese TR, Raghuvver CV, Pai MR, Bansal R et al. Microfilariae in Cytologic Smears. A Report of Six Cases. *Acta Cytol* 1996; 40: 299-01.
6. Walter A, Hemalatha K, Cariappa A et al. Microfilariae of *Wuchereria bancrofti* in cytologic smears. *Acta Cytol* 1983; 4: 432-6.
7. Kapila K, Verma K et al: gravid adult female worms of *Wuchereria bancrofti* in fine needle aspirates of soft tissue swellings: Report of three cases. *Acta Cytol.* 1989; 33: 390-2.
8. Arora VK, Sen B, Dev G, Bhatia A et al: Fine needle aspiration identification of adult worm of *Brugia malayi* and its ovarian fragment from an epitrochlear lymph node. *Acta Cytol* 1993; 37: 437-8.

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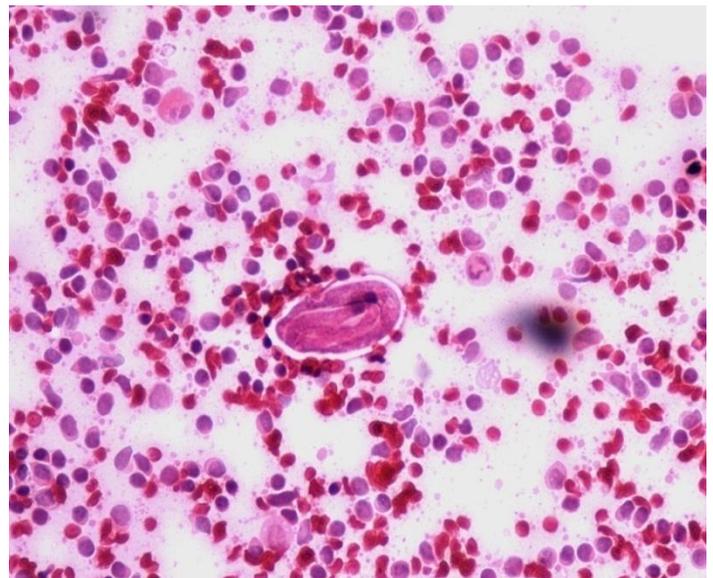


FIGURE 1: Cytosmears of lymph node showing coiled larva of *W. bancrofti* in the midst of reactive lymphoid infiltrate and eosinophils (H& E Stain, 400x)

No. of figures- Two

Source(s) of support- Nil

Conflict of interest- None

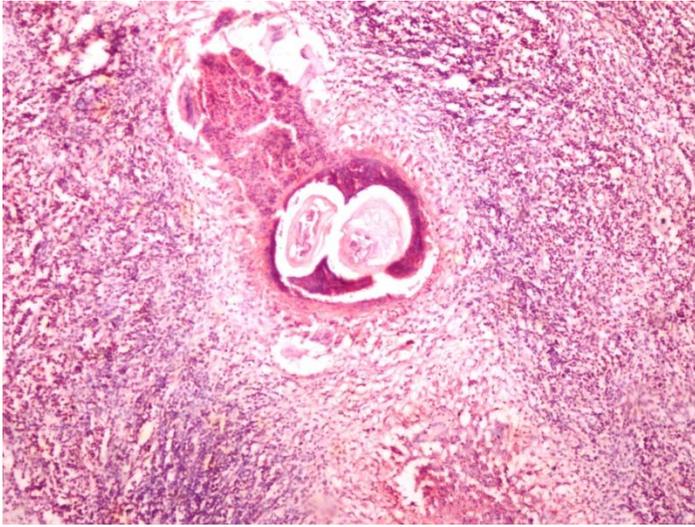


FIGURE 2: Tissue section showing larva surrounded by granulomatous reaction (H& E Stain, 100x)