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Lymphadenovarix of the Neck region---A Rare case of Bancroftian Filariasis

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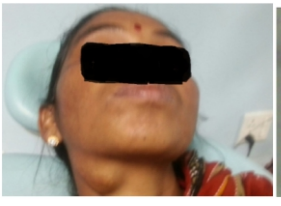
ABSTRACT Cystic swellings of the neck have limited differential diagnoses, either lymphatic or vascular malformations. Other cystic inflammatory lesions may be tuberculous abscess, suppurated lymph nodes and actinomycosis. Microfilaria causing lymphadenovarix of neck region has been rarely reported in the literature. A 23 years Hindu, female presented with a cystic neck mass for 3 months duration. On aspiration of the swelling, W. bancrofti microfilariae were seen and patient responded well with Diethylcarbamazine citrate [6 mg/kg/day]
Though rare, but filariasis should be considered as a d/d of aberrant swellings where lymphatic filariasis is endemic

KEYWORDS :

Introduction:- Lymphatic filariasis affects over 120 million people worldwide. Filariasis and its complications are major health problem in tropical countries. Majority of the infected individuals in filariasis endemic communities are asymptomatic. At present 23 million cases of symptomatic filariasis and about 473 million individuals potentially at risk of infection in India (2) are reported. The state of Bihar has the highest endemicity (over 17%) followed by Kerela (15.7%) and UP (14.6%) (2). Despite its high incidence, it is unusual to find microfilaria in FNAC smears. Very few cases have been diagnosed by FNAC from different sites in the body like breast, thyroid, lymph node, liver, lungs, skin nodules, bone marrow and body fluids (3-8), but microfilaria from lymphadenovarix of neck region is rarely been reported in the literature until now.

Case Report:- A 23 years Hindu female(Fig:-1) presented with an asymptomatic swelling in the right side of neck for 3 months duration, in the Surgery OPD of Rajendra Institute of Medical Sciences, Ranchi. On inspection swelling was 3cmsx2cms, well defined cystic, non tender and compressible. The temperature of the swelling was not raised. It was non pulsatile and not associated with cough impulse. USG of swelling confirmed the findings of a cystic in nature. A fine needle aspiration was performed. The aspirate was sero-sanguinous, smeared on slide, air dried and stained by



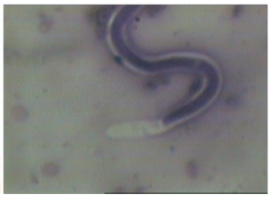


Fig:-1 **Fig:-2**
Microfilaria in Fine Needle Aspirate (Giemsa stain x 40)

Giemsa. The cytologic examination revealed sheathed microfilaria with granules (nuclei) not extending to the tip of the tail (Fig:-2). A caudal space was seen at the posterior end, confirming to be Wuchereria bancrofti. Cells like eosinophils, neutrophils and histiocytes are also seen in the smear. Routine haematological examinations were normal and the peripheral blood smear failed to reveal eosinophilia or presence of any microfilaria. The aspirate was also cultured for bacteria but was found to be sterile.

The patient was given DEC (6mg/kg/day) for 21 days. Patient responded well, swelling was reduced in size. DEC was continued for 6 weeks, swelling subsided completely. Several blood smears (nocturnal and diurnal) were done for follow up, but yielded no microfilaria.

Discussion:- filariasis is a major public health problem in India. It is mainly a disease of adults and is more common in men (9,10) with most infections caused by W.bancrofti. The definitive diagnosis of filariasis depends on demonstration of the parasite either in peripheral blood or in the aspirate. Microfilaria or adult worm fragments may be seen with FNAC (11). Indirect haemagglutination, ELISA, immunoassays and polymerase chain reaction (PCR) are also helpful in making the diagnosis (12,13). If microfilaria cannot be found, DEC challenge test needs to be done to demonstrate microfilaria. The diagnosis must be made on clinical grounds by the exclusion of other causes.

Clinical features and pathology depend on the sites occupied by developing and mature worms, the number of worms present, duration of infection and the immune response of the host, especially to damaged and dead worms. The disease has a wide spectrum of presentation e.g. asymptomatic lymphatic filariasis, acute lymphatic filariasis and chronic lymphatic filariasis . Many patients remain asymptomatic despite the presence of a microfilaremia in peripheral blood.

Chronic lymphatic filariasis is frequently found and may be the only manifestation of filariasis, hydrocele being the most common feature. Other manifestations of chronic disease are elephantiasis of the limbs and chyluria.

The diagnosis of a filarial infection can also be made by detecting microfilariae on microscopic examination of the fine needle aspirates from lymph nodes (3, 14). FNAC of breast mass, thyroid mass, hydrocele fluid, pericardial fluid, pleural fluid, ascetic fluid and cytology of cervicovaginal smears, bronchial aspirates, urine, nipple secretion, bone marrow and joint fluid aspirate have also been reported to yield microfilariae (15, 16). Moreover, in these patients the peripheral smears rarely revealed microfilaremia or eosinophilia (12, 16) as was also seen in our case.

Present case did not have any clinical evidence of filariasis and there was no microfilaremia, i.e. the patient has occult filariasis. In occult filariasis, microfilariae are found in affected tissues but not in peripheral blood. This can be seen in endemic areas like ours where

filariasis can exist without microfilaremia or microfilaremia may be extremely transient and hence overlooked (17).

In conclusion, filariasis should be considered as a differential diagnosis for aberrant swellings where lymphatic filariasis is endemic.

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