Gravid adult filarial worm in fine needle breast aspirate masquerading as carcinoma

Respected Sir,

Filariaasis is endemic in southern Asia, with Wuchereria bancrofti accounting for over 90% of infections1. Breast is an unusual site of affection in filariasis and presence of this infection in fine needle aspirate (FNA) has been documented in the form of case reports only2,3. The gravid adult worm has been described even on fewer occasions in FNA3. We describe one such interesting case that clinically masqueraded as carcinoma. A 30-year-old female presented with two nodules felt in her left breast. Examination revealed two firm, non-tender, mobile nodules in the left breast, measuring 1.5 cm and 2 cm in diameter respectively. There was no axillary lymphadenopathy and her general physical examination was normal. The clinical impression was that of carcinoma breast. Fine-needle aspirate of the swellings was performed under negative suction using 23-G needle and 20 ml disposable syringe. The material aspirated was smeared onto slides and stained with May-Grunwald-Giemsa and haematoxylin-eosin stains. FNA smears from both the breast nodules revealed numerous sheathed microfilariae and parts of two adult female worms. The microfilariae lacked terminal and subterminal nuclei at the caudal end, thus confirming them to be Wuchereria bancrofti. A large number of coiled larvae and microfilariae were seen within the gravid adult female worm. The cuticle was breached in one of these and many microfilariae were seen to come out of the adult worm (Fig.1). The organism incited a florid mixed inflammatory reaction along with foreign body type of giant cells. There was no peripheral eosinophilia or microfilaraemia. The pathogenesis of breast involvement remains conjectural1. It is likely that retrograde lymphatic spread would have occurred to the breast from the axillary lymphnodes. This case is a pointer to the unusual modes of presentation in a common parasitic disease. Fine needle aspiration can effectively provide a quick diagnosis, thus allaying patient’s anxiety and preventing an unnecessary surgical procedure in a medically treatable condition. This patient was successfully treated with diethylcarbamazine.

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References

Microfilaria of Wuchereria bancrofti in cervicovaginal smear

Sir,

Lymphatic filariasis is a major health problem in tropical countries especially in India, China, Indonesia and parts of Africa4. In spite of effective control measures, the disease is reported to be increasing, mainly as a result of the human population explosion in endemic areas of the world5. Despite the large number

Fig. 1. Photomicrograph showing adult filarial worm with many microfilariae (MGG, x140).
of people affected, it is unusual to find microfilariae in routine cytologic smears. There have been reports of single or small number of cases of microfilariae at various sites e.g. bone marrow, breast, bronchial aspirate, pleural fluid, cervico-vaginal smears and pericardial fluid.

Walter et al suggested that microfilariae appear in tissue fluids and exfoliated surface material due to lymphatic or vascular obstruction and subsequent extravasation. Aberrant migration is probably determined by local factors, such as lymphatic blockage by scars or tumors and damage to vessel walls by inflammation, trauma or stasis. The phenomenon of cell adherence is interesting because it reflects some part of the immune status of the patient. Cell adherence to microfilariae of W. bancrofti was first described by Pandit et al who noted that leukocytes did not adhere to dead microfilariae. They concluded that cell adherence is probably due to presence of filarial antibodies in the sera of these patients.

Here we report a case of a 35 years old female who attended the Gynaecology O.F.D for II degree prolapse. There was history of irregular bleeding with bloodstained discharge for the last 2 months. Pap smear was done as a routine procedure. Cytological examination revealed many superficial and intermediate cells with abundant RBCs and also polymorphs in the background. The most remarkable finding, however, was the presence of microfilariae. One or more microfilariae present in the smear showed a significant adherence of inflammatory cells (Fig. 1). Further investigations in the form of peripheral blood smear revealed 15% eosinophilia and wet mount of blood revealed moving single microfilaria respectively. The case reported by us did not have clinical filariasis and the disease was not suspected prior to the cytology report. It was an incidental finding. The patient was subsequently investigated and was found to have microfilaraemia. This finding may be consistent with the observation that in endemic areas, filariasis can exist without microfilaraemia, or microfilaraemia may be extremely transient and therefore overlooked.

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References


Fig. 1. Photomicrograph showing adult filarial worm with many microfilariae (MGG, x140).