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Original Research Paper

Pathology

MICROFILARIA ON LIQUID BASED CYTOLOGY OF BREAST LUMP- AN UNUSUAL FINDING

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ABSTRACT Extranodal filariasis occurs rarely and breast is an uncommon site for filariasis. This is a case of a 35 year female presented with the breast lump which was firm , with regular edges and movable. A provisional diagnosis of fibroadenoma was made. Fine needle aspiration cytology was performed from the lump and material was taken for conventional cytology and liquid based cytology. Conventional smears showed only blood, whereas Liquid based cytology smears showed microfilaria. Thus a definitive diagnosis of microfilaria was made on liquid based cytology. Patient was put on conservative treatment and she recovered well. Thus it was found that using liquid based cytology, an usual diagnosis was made which was missed on conventional smears.

KEYWORDS : Breast lump,Liquid based cytology, FNAC

INTRODUCTION:

Filaria is a major health problem.Lymph nodes and lymphatic vessels are the most common sites which are affected. In India this infection is caused by two nematodes i.e, Wuchreria bancrofti and Brugia malayi , are transmitted by female culex mosquito.[1] . Filariasis breast is a very unusual finding on FNAC [2] and very rare on Liquid based cytology. Literature is full of articles on filarial present in Fine needle aspiration cytology breast but is lacking in diagnosis of the the same on liquid based cytology.

CASE REPORT:

A 35 yr old female patient presented with the chief complaint of painless, lump in her left breast for 3 months duration. No history of cough, fever, weight loss, trauma or nipple discharge could be ilicited. There was no family history of breast carcinoma. Palpation of the breast revealed a firm, discrete non tender mass, 3.0 x 2.0 cm in size, located in the upper, outer quadrant of left breast. The lump was mobile within the breast tissue and was free from overlying skin and muscles underneath. There were no enlarged axillary lymph nodes. The opposite breast appeared normal. Other physical and medical examinations did not reveal any significant findings.

A 22 gauge needle fitted fitted to a 10 cc syringe was used to perform FNAC. Two pricks were taken One whole prick was immersed in ethanol based sure path LBC fixative. LBC was done for our academic interest. From other prick conventional smears were made that is Smears were air dried and wet fixed immediately in fixative (95% ethanol). They were subsequently stained with May-Grunwald-Giemsa and H&E stain.

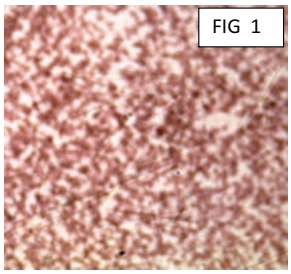
Conventional smears showed only blood(Fig 1) whereas liquid based cytology showed microfilaria and scattered inflammatory cells including lymphocytes(Fig 2 -4)

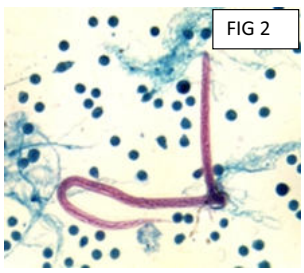
A cytological diagnosis of breast filariasis was made on liquid based cytology. A conservative treatment plan was selected for the patient. On follow up, patient showed response to the therapy.

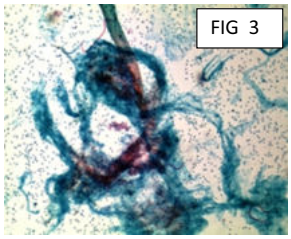
DISCUSSION:

Filariasis is more prevalent in Asia, Africa and some south American countries, although it occurs worldwide. The most common causative agent is Wuchreria bancrofti followed by Brugia malayi and Brugia timori. The two most common sites involved by the nematode are lymph nodes and lymphatic vessel. Breast filariasis is very rare and there is lack of literature in diagnosing filarial on liquid based cytology. The most common site is upper outer quadrant which is involved in breast filariasis same is in our case. However few studies also reported central or periareolar sites[3] involvement in breast filariasis. In our case Liquid based cytology proven as a effective tool in diagnosing breast filaria than conventional smear cytology. Only blood and its elements were seen on conventional cytology. Kaya and colleagues showed that presence of Microfilaria in blood examinations may not be useful as positivity rate is very low (approximately 12%)[4] Therefore, peripheral blood smear examination as a means of diagnosis in such cases is highly unreliable. Thus, in patients with mass lesions, Liquid based cytology can be used as an effective diagnostic tool. In conclusion, demonstration of the parasite in the cytology smear is a reliable mode of diagnosis which prevents unnecessary surgical intervention in such patients.

IMAGES:







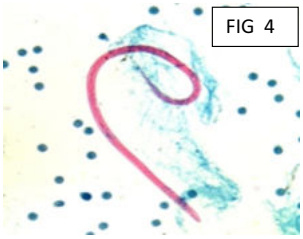


Figure 1- H and E stain 800x showing only blood.
Figure 2 and 4 - Liquid based cytology 800x showing microfilaria
Figure 3- Liquid based cytology 200x showing many microfilaria

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