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FNAC diagnosis of proliferative myositis in axilla - A case report

Singhal M.[1]*, Kalhan S.[2], Agrawal R.[3], Sharma S.[4], Dudani S.[4]

[1]Department of Pathology, SMS medical college, Jaipur, India
[2]Department of Pathology, SHKM Government medical college, Mewat, Haryana, India
[3]Department of Anatomy, SMS medical college, Jaipur, India
[4]Army college of medical science, Delhi Cantt, India
Correspondence Address: * Dr. Manish Kumar Singhal, Department of Pathology, SMS medical college, Jaipur, India

Abstract

Pseudosarcomatous lesions are reactive proliferative lesions of the soft tissue, that are likely to be misdiagnosed as malignant. Based on clinical and histological features, the most common lesions are nodular fasciitis (NF), proliferative fasciitis (PF), proliferative myositis and myositis ossificans (1).

A case of proliferative myositis (PM) diagnosed on fine needle aspiration cytology (FNAB) is presented herewith. A 30-year-old male presented with a one cm firm, tender mass involving the right axilla. FNAC showed loose clusters of uniform, fibroblast like spindle cells and admixed large, ganglion cell-like cells with eccentric nuclei, prominent nucleoli and abundant cytoplasm. Giant cells were numerous. The cytologic appearance of PM is characteristic, allowing exclusion of malignancy. Reliable FNAC diagnosis, supported by clinical findings eliminates unnecessary radical surgery. FNAC is an effective diagnostic tool for NF, PF, and PM.

Keywords:

Introduction

Nodular fasciitis (NF), proliferative fasciitis (PF) and proliferative myositis (PM) are reactive lesions that typically resolve spontaneously. The clinical course is completely benign, but the high risk of misinterpreting these lesions as malignant owing to their rapid growth, high cellularity and high mitotic activity on histology has been well documented (2).

These lesions are in fact, a major diagnostic pitfall in fine needle aspiration cytology (FNAC) (3).

Case report

A 30-year-old male presented with a firm, tender swelling in right axilla since 3 months. On examination, the swelling was 1x1 cm, nodular and firm. The patient also gave past history of similar such swelling. There was no other contributory history. FNAC was performed using standard procedure. May-Grünwald-Giemsa (MGG) and H&E stained smears were examined. The smears were richly cellular, showing plump spindle shaped cells in loose clusters as well as scattered singly. Bi and multinucleated cells also were also seen. Ganglion like cells with triangular shape and

ecentrically placed nucei were present. Background was myxoid. Numerous polymorphs were seen.

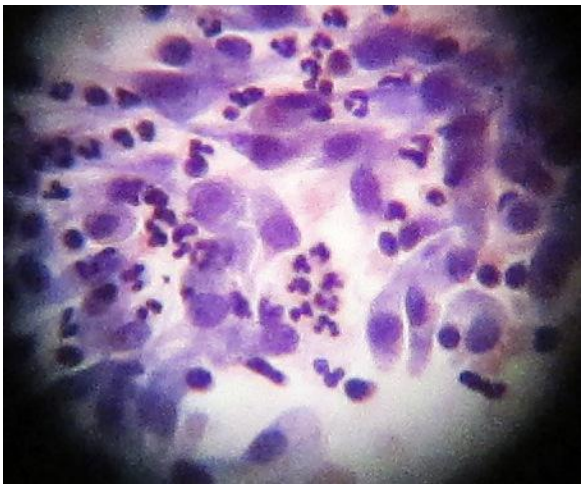

Fig 1: FNAC smears showing plump spindle cell with inflammatory infiltrate, MGG, 400X

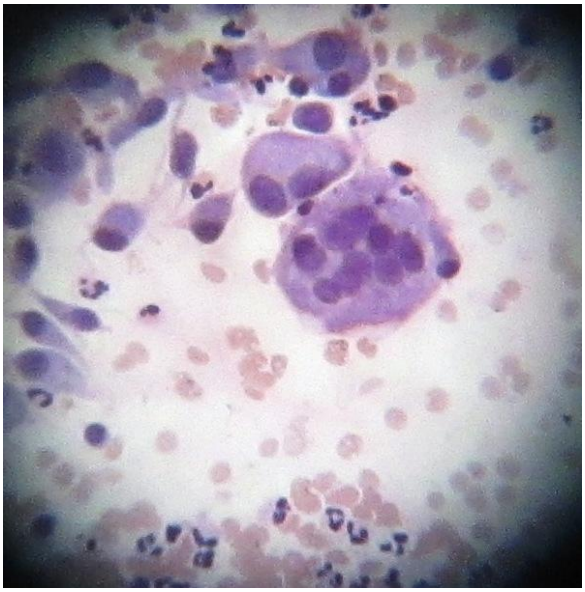

Fig 2: FNAC smears showing binucleate ganglion like cells and multinucleate giant cells, MGG, 400X

Discussion

The potential of FNAC as a diagnostic tool in the evaluation of soft tissue lesions is becoming indispensable as its usage becomes universal. On the other hand, benign spindle cell proliferations of soft tissue can be exceptionally difficult to interpret and subclassify using FNA-based smears. This is particularly true for benign lesions that mimic sarcoma paradoxically. Pseudosarcomatous soft tissue lesions are a major diagnostic pitfall in the FNAC interpretation of spindle cell lesions (4). The dilemma is compounded when such pseudosarcomatous lesions occur in uncommon sites or have unusual characteristics.

NF, PF and PM are a group of closely related self-limiting, benign proliferative lesions of fibroblasts and myofibroblasts of unknown etiology. These lesions usually present as small, superficial nodules with rapid growth and with a short history in contrast to the deep, large masses and longer duration of sarcomas. Cytologically, a polymorphic pattern of cells, high cellularity, abundant isolated cells and ganglion-like cells with benign looking nuclei are the most characteristic features. Inflammation varies from minimal to marked and consists of neutrophils, lymphocytes, eosinophils, histiocytes and/or multinucleated giant cells. Given its variable morphological appearance, ranging from myxoid to fibrous, NF can be difficult to distinguish from soft tissue neoplasms (5). The cytological features of NF and PF are essentially the same, except that PF shows less prominent myxoid matrix, more collagen fragments, and abundant ganglion-like cells. PM lesions are rather deep in location. Cytologically, the aspirates are moderately cellular with numerous regenerative multinucleated muscle fibers. In our case, although axilla was a rare site, a short clinical history, the correct identification of reactive nature of the spindle cells, ganglion-like cells and muscle giant cells in an inflammatory background was crucial in making the correct diagnosis. Spontaneous resolution provided objective evidence that the FNAC diagnosis was correct, thus avoiding unnecessary surgery. (6,7)

It is well known that NF, PF and PM are self-limiting diseases. The cytological diagnosis of these lesions can be challenging. In spite of atypical nuclei, fine chromatin, smooth nuclear membranes, giant cells and inflammatory cells should guide the pathologist towards the correct diagnosis. A correct identification on FNAC will obviate the need for radical surgery with its attendant complications.

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