**Original article:**

**Multinucleated giant cell on FNAC of breast lesion: A not very uncommon occurrence with varied pathology**

**Sonia Gon , Debjani Mallick , Gayatri Ghosh**

Department of Pathology, ESI PGIMSR& ESIC Medical College, Joka , Kolkata, West Bengal, India

Corresponding author : Dr. Debjani Mallick

Date of submission: 02 November 2014 ; Date of Publication: 15 December 2014

**Abstract:**

**Introduction:** It is well-recognized that cells of the monocyte/macrophage lineage are capable of fusion to form multinucleated giant cells (MGCs). The presence of multinucleated giant cells on FNAC smears of breast lumps have been described only sporadically in the literature. As this is a common specimen in Cytopathology, knowledge of frequency of this variation can be valuable to cytopathologist who identifies the variation and clinician who is involved with the treatment modalities of different breast pathologies.

**Material and Methods:** The present retrospective as well as prospective study was conducted at the department of Pathology. The smears prepared were both wet and dry fixed and were subsequently stained with May Grunwald Giemsa (MGG) as well as Haematoxylin & Eosin (H& E) stain. The stained smears were observed under microscope by at least two expert cytopathologists. Orell was followed for categorizing different breast lesions and the findings were correlated with histopathology wherever available .

**Results:** Multinucleated giant cells found were foreign body type, Langhan’s type, multinucleated stromal giant cells ( MSGC), osteoclast like giant cell and tumour giant cells. Foreign body type giant cells were found in 7 out of 23 cases. Fibroepithelial lesion namely fibroadenoma showed multinucleated stromal giant cells in 5 out of 52 cases while no giant cells were seen in cases of Phyllodes tumour. Langhan’s giant cells, tumour giant cells and osteoclastic giant were seen in 2,3 and 1 cases of tubercular mastitis, duct carcinoma, duct carcinoma with osteoclastic giant cells respectively.

**Conclusion:** Presence of multinucleated giant cells on breast FNA smears, though not so common occurrence, demands recognition as well as correct interpretation to provide an accurate diagnoses to the surgeon. Cytomorphology of various multinucleated giant cells along with ductal epithelial cells help cytopathologists to reach at the correct diagnoses especially in cases of malignancy where various types of giant cells like benign multinucleated giant cells, osteoclast-like giant cells or tumour giant cells are encountered.

**Keywords:** FNAC, Giant cell