

# Research Journal of Pharmaceutical, Biological and Chemical Sciences

## Unusual Benign Tumour of the Breast- A Case Report.

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### ABSTRACT

A 58 year female, presented with complaints of swelling in the breast for past 2 years. FNAC smears were unsatisfactory and excision biopsy was suggested. Histopathology of the specimen showed fibrocystic changes of the breast with benign granular cell tumour. Special stains (PAS -D) and immunohistochemistry (S100) were done and the diagnosis confirmed.

**Keywords:** Benign breast tumour, granular cell tumour, S100 IHC stain positive, PAS-D stain positive

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### Clinical History

A 58 year female, presented in the surgery outpatient department with complaints of swelling in the left breast for past 2 years. The swelling was painful and slowly increasing in size. On examination a 4 x 3 cm hard immobile lump was palpable in the upper medial quadrant of left breast. There were no palpable axillary nodes. The nipple and contra lateral breast were normal [1,2].

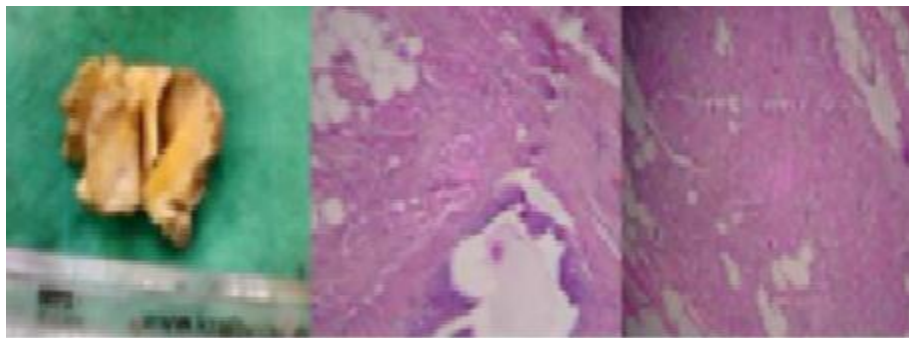
### Investigations

FNAC of the swelling was inconclusive. Ultrasound showed a diffuse hypo density along with a small cyst of 3mm diameter. Blood and urine parameters were normal. A tru-cut biopsy was done which showed no signs of malignancy.

### Histopathology

The sections showed breast tissue with dilated ducts lined by apocrine cells filled with eosinophilic secretions. The stroma showed cords and nests of polygonal cells with small round to oval centrally placed nucleus along with eosinophilic granular cytoplasm. The cells were crowded around nerve fibres. Mitotic figures were not evident. The granular cells were seen infiltrating the surrounding adipose tissue and associated with fibrosis.

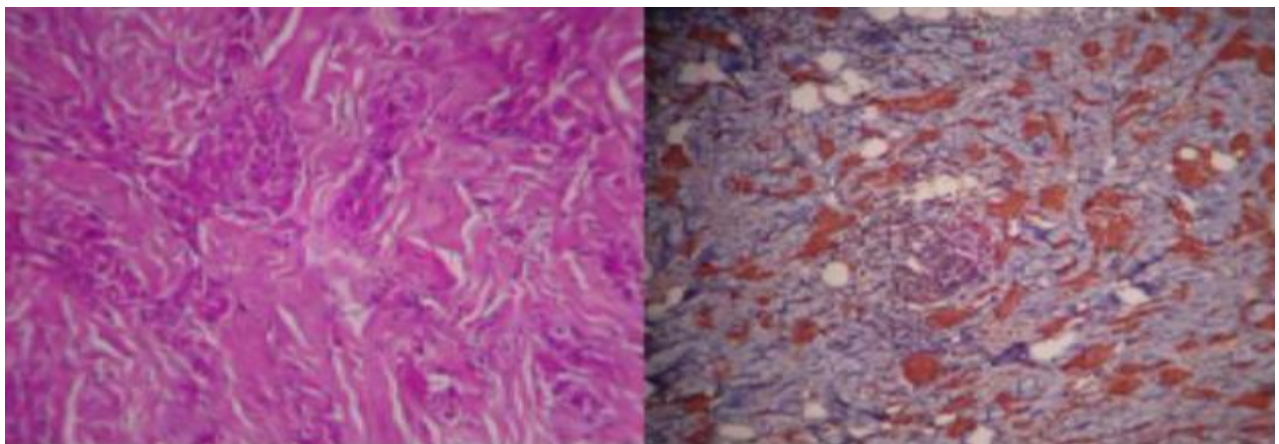
Figure 1: Gross Specimen, H&E Low Power, H&E High Power



### Impression

Granular cell tumour with fibrocystic change of breast tissue. Special stains- The granular cell granules were diastase resistant PAS positive. Immuno Histochemistry (IHC)- The granular cells showed diffuse positivity for S100.

Figure 2: PAS -D Stain, S100 IHC Stain



## DISCUSSION

Granular cell tumours [3-5] have been described in various organs, commonest being the tongue (30%). About 6% of these tumours arise in the breast. They are often seen in the superior medial quadrant of breast parallel to the skin distribution of supraclavicular nerve while carcinoma is common in superior lateral quadrant. Histogenesis currently favours a origin from Schwann cells of peripheral nerves [1,2]. Favouring this theory is strong positive for S-100 on IHC. The infiltrative growth pattern with fibrosis resulting in fixation to underlying pectoral muscles makes them difficult to differentiate from breast cancer based on clinical and mammographic findings. The granular appearance of the cytoplasm may be caused by accumulation of secretory granules, mitochondria, or lysosomes and the granules are diastase resistant and PAS positive.

Granular cell tumor should be distinguished from mammary carcinoma, histiocytic lesions and metastatic neoplasms. Granular cell tumour are positive for S-100 and CEA and negative for ER and PR. Granular cell tumor of the breast is treated by wide excision. Prognosis- Though local recurrence may occur<sup>[6]</sup>, it is less common even following a positive margin resection. Less than 1% of all granular cell tumors are malignant.

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