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## Carcinoma Breast in a Young Girl-Case Report.

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### ABSTRACT

Breast cancer in patients under 40 years is uncommon. In this case we have reported a high grade breast carcinoma in a 19yr old girl. 19 year old student attended surgical Out Patient Department for pain and swelling in the right breast since one month. Surgical diagnosis was fibro adenoma. Ultrasound report was bilateral fibroadenoma , fine needle aspiration cytology for the right breast was reported cellular fibroadenoma and we recieved the resected nodule for which haematoxylin eosin stain was done which revealed a high grade ductal carcinoma and to know the molecular status immune his to chemistry was done and it was negative for eostrogen, Progesterone and HER2/nu receptors. We are presenting this case to emphasize the usefulness of pathological diagnosis in early detection of tumour and to avoid radical mastectomy in young girl. Since early detection and aggressive therapy are required for a good survival, awareness among radiologists, clinicians and pathologists is very essential.

**Keywords:** carcinoma breast in young, triple negative breast carcinoma

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## INTRODUCTION

Breast cancer in patients under 40 years is uncommon. Surveillance, Epidemiology and End Results (SEER) program reveals that 75% of breast tumors occur in women age > 50 years, only 6.5% in women age < 40 years, and a mere 0.6% in women age < 30 years [1]. Hence pathological diagnosis using haematoxylin and eosin staining along with immune his to chemistry plays a very important role in diagnosis and to decide the right management therapy for the patient [2].

**Case report:** A 19 year old engineering student attended surgical OPD for pain and swelling in the right breast for one month. Surgical diagnosis was fibroadenoma. She was referred to Radiology department. Ultrasound report was bilateral fibroadenoma. During FNAC, an ill defined nodularity 3 x 4 cm was detected in the upper inner quadrant of right breast. Left breast did not show any palpable mass.

**FNAC report** of right side lesion was given as Cellular Fibroadenoma (Fig I & ii). Patient underwent resection of the nodule and specimen was sent for histopathology.

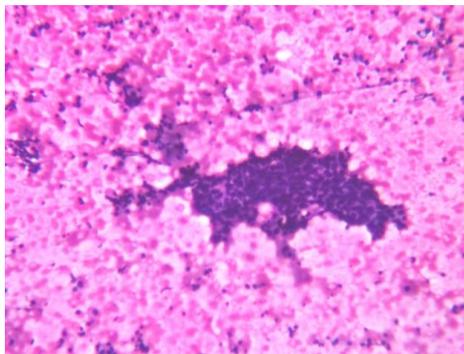


Figure i: H&E 10X – Cellular Cluster in a Hemorrhagic Background

## HISTO PATHOLOGY

**Gross:** Resected nodule was measuring 4 x 5 cm of fragmented soft tissue bits, all were embedded.

**Microscopic Examination:** Showed a cellular neoplasm composed of oval to polygonal cells with eosinophilic cytoplasm, enlarged nuclei and prominent nucleoli (Fig ii, iv) arranged in small clusters, nests and sheets in a background of dense aggregates of lymphocytes. Focal necrosis and infiltration into surrounding stroma (Fig iii) are seen. Immuno his to chemistry revealed negativity for ER {Fig iv}, PR {Fig Vi} and HER2/neu {FIG VII}.

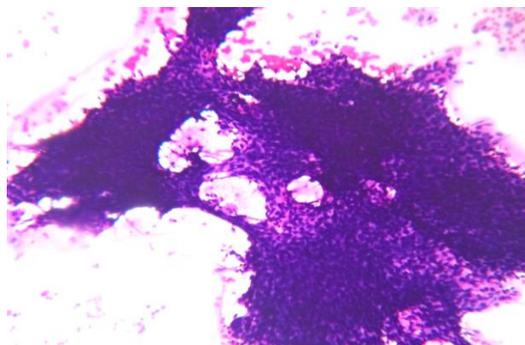


Figure ii: H&E- Syncytial Cluster in a Hemorrhagic Background

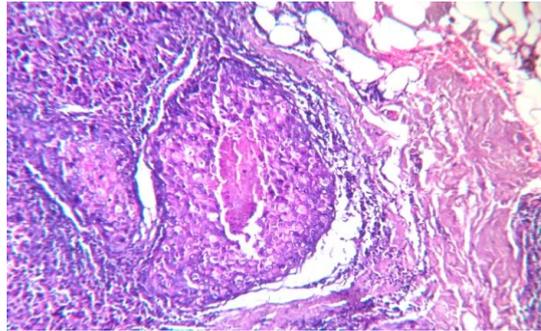


Figure iii: H&E 40x- Areas of Necrosis Surrounded by Tumor Cells

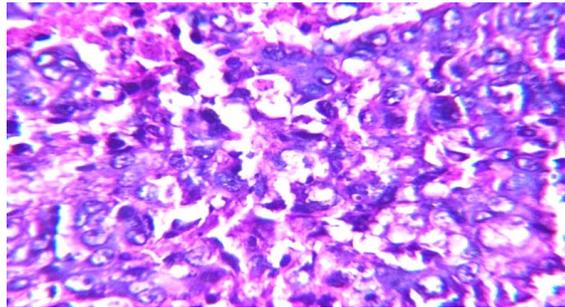


Figure iv: 40x Pleomorphic Cells With Mitotic Figures And Prominent Nucleoli

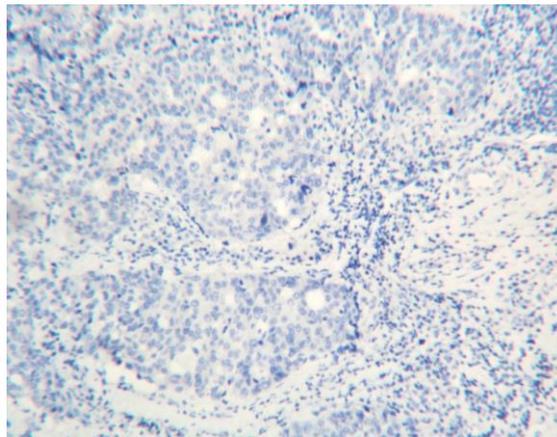


Figure v: Immunohistochemistry Er- Negative

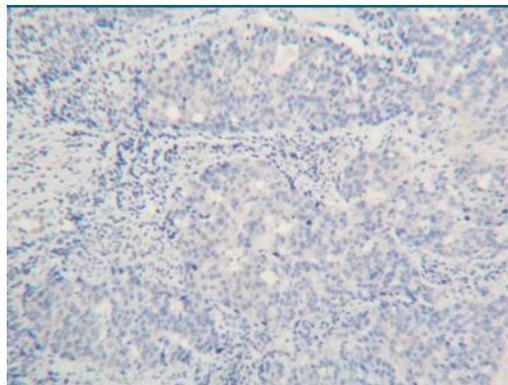


Figure vi: PR negative

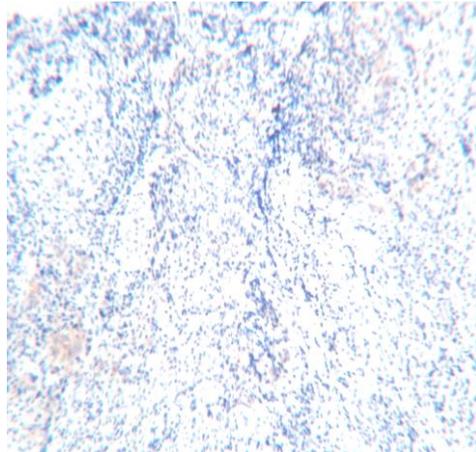


Figure vii: HER/2u negative

An impression of High grade infiltrating ductal carcinoma of the breast- Triple negative molecular type was given.

### DISCUSSION

Incidence of carcinoma in patients younger than 30 years is less than 0.6% [1].The prognosis is poor because patients present usually at a late stage, the tumor is high grade, requiring aggressive chemotherapy and may not be diagnosed initially due to its rarity [2].

In this case the clinical opinion and radiological opinion was benign lesion, FNAC also could not pick up the neoplasm as the aspirate was haemorrhagic.

Though sporadic cases are more common than hereditary, molecular events play a major role in pathogenesis among the other etiological factors like BMI, radiation exposure and hormonal exposure [3]. Hereditary etiology is considered whenever there is positive family history, bilateral breast involvement, if there are more than one primary, in male breast carcinoma and if the age is premenopausal. Many genes are involved –BRCA 1;BRCA 2;PTEN ;p 53;CDH1;ATM;PALB 2; Chek2.Molecular study and counselling are essential for siblings and if the patient is successfully treated for future [4].

Classification of breast carcinoma according to molecular types is as follows:

- 1 Luminal A – ER PR Positive; HER2/neu Negative –Gr 1 and 2 belong to this type
- 2 Luminal B - ER PR Positive ;HER2/neu Positive - Gr 3 belongs to this type
- 3 Normal breast like
- 4 ER PR Negative : HER2/neu Positive
- 5 ER PR and HER2/neu negative –Triple negative.

This classification is very useful for taking therapeutic decisions, to assess response to targeted therapy and to predict survival [5].

Microarray technology helps to find out intrinsic molecular subtypes. Recently followed method is a 50 gene signature with PAM 50. This helps to evaluate the risk of relapse and to assess patient specific prognosis [4].

### CONCLUSION

Clinical stage, histology and grade were considered important to assess prognosis previously. Of late molecular sub type is considered essential for treatment as well as to predict outcome of therapy and to know risk of relapse.



Since carcinoma in the young is very rare and always tends to be aggressive, awareness among patients and medical personnel are very essential to give maximum benefit of the recent developments to the patient.

#### **REFERENCES**

- [1] Sariego et al. Am Surg 2010;76(12);1397-400.
- [2] Hankey BF, Miller B, Curtis R et al. J Natl Cancer Inst Monogr 1994; 16:7-14
- [3] Ashley S, Royle GT, Corder A et al. Br J Surg 1989; 76:835-837
- [4] Vetto J, Pommier R, Schmidt W et al. Am J Surg 1995; 169:519-522.
- [5] Breast Cancer in young patients: Batori M, Ruggieri M, Chatelou E. Eur Rev Med Pharmacol Sci 2006; 10(2): 51-2.