

CASE REPORT

A CYTOLOGICALLY DIAGNOSED CASE OF GIANT FIBROADENOMA: A CASE REPORT

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ABSTRACT: Fibroadenomas are benign solid tumors which occur most frequently in child bearing age with 68% occurrence in adolescents. Giant fibroadenomas are uncommon variants of fibroadenomas usually presenting in adolescents characterized by massive and rapid enlargement of breast tissue which may be quite alarming to the young girls. We present a case of giant fibroadenoma diagnosed by FNAC in the 14 yr adolescent who presented with large unilateral left breast enlargement which grew rapidly over a period of 10 months.

KEYWORDS: Giant fibroadenoma, breast mass, adolescent.

INTRODUCTION: Breast development is one of the first obvious signs of puberty. Any rapid enlargement of unilateral or bilateral breasts is alarming to the pubertal girls. Majority of breast masses in the young girls are benign but cause significant psychological trauma to them. Fibroadenoma is a benign tumor occur most frequently in women of child bearing age, especially under 30 yrs of age with 68% occurrence in adolescents.^{1,2}

Fibroadenomas are most common benign breast tumors comprising of both fibrous and glandular tissue and if fibroadenoma occupy major fraction of breast and weigh more than 500gms,³ they are named as giant fibroadenomas. Giant fibroadenomas constitute less than 4% of all fibroadenomas.⁴ Giant fibroadenomas are uncommon and needs to be differentiated from non-neoplastic lesions like virginal hypertrophy, breast abscess and neoplastic lesions like phyllodes tumor and malignancy. We present a case of giant juvenile fibroadenoma in a 14 yr old girl.

CASE REPORT: A 14yr old girl presented with large unilateral left breast enlargement over a period of 10 months with dull dragging pain. There was no history of nipple discharge. No history of trauma, fever or weight loss. There was no family history of similar complaints.

On examination, there was a 17 x 10 cm mass in the left breast with blackish discoloration of skin, nipple and areola are normal (Fig. 1). It was soft to firm in consistency. Skin over the mass is pinchable. There is no fixity to underlying structures. The clinical impression was phyllodes tumor. The patient was subjected to FNAC at multiple sites. The smears cellular, showed monolayered sheets of benign ductal epithelial cells and bipolar bare nuclei (Fig. 2 and Fig. 3) with occasional benign spindle cells and was diagnosed as giant fibroadenoma.

DISCUSSION: Fibroadenoma is a benign, biphasic solid tumor which occur most frequently in women of child bearing age, especially under 30 yrs of age with 68% occurrence in adolescents.^{1,2}

CASE REPORT

Fibroadenoma is usually considered a neoplasm, some believe fibroadenoma results from hyperplasia of normal lobular components rather than being a true neoplasm¹. Fibroadenomas typically present as firm, mobile, painless easily palpable breast nodule most commonly located in the upper outer quadrant of breast up to the size of 3 cm. Grossly, it is a firm mass, the cut section shows solid, grey white with whorl like pattern and slit like spaces.⁵ Juvenile/Giant/cellular fibroadenoma is an uncommon pathology usually presenting in adolescents characterized by massive and rapid enlargement of an encapsulated mass sometimes compressing and displacing normal breast tissue and stretching overlying skin, nipple and areola complex.^{6,7}

According to Stanford school of medicine, giant fibroadenoma of breast is defined as circumscribed, often large breast mass occurring in adolescent females with stromal and epithelial hypercellularity and by lacking leaf like pattern of phyllodes tumor.^{8,9}

Most patients of giant fibroadenoma are of age between 10-20yrs, mean age is 15rs. In our case the patient age is 14yrs. More frequently it is seen in young and black females of African and American race. Exact etiology is not known but chromosomal influences thought to be contributing factors, excessive oestrogen stimulation or reduced levels of oestrogen antagonists during puberty have been implicated in pathogenesis.

Giant fibroadenoma should be distinguished from entities like phyllodes tumor, virginal hypertrophy, giant lipoma, hamartoma and breast abscess. This differentiation pre operatively is important as they have different therapeutic approach.

Phyllodes tumors of breast are uncommon fibroepithelial tumors with epithelial and more cellular stromal component and comprise only 1% of all breast tumors. They are sharply demarcated and typically and freely mobile. They occur in all age groups but uncommon in adolescents and more likely to occur after 35yrs of age.¹⁰ Giant fibroadenoma is differentiated from phyllodes tumor by lack of leaf like structure and stromal cell atypia histopathologically.

Virginal hypertrophy is rapid and distressing enlargement of one or both breast which is often asymmetrical. Treatment for this is by reduction mammoplasty. Giant lipoma can cause unilateral breast hypertrophy it is a soft, mobile mass felt on palpation. Breast abscess developing during puberty cause sudden and rapid growth in breast but it is associated with pain, fluctuation and erythema.

Clinical examination is essential in evaluating the location, size and number of palpable lesions. Ultrasonography and mammography are two basic techniques for routine imaging in diagnosis of breast diseases. MRI allows exact evaluation of size and location.¹¹

In our case of 14yr female, FNAC reveled, monolayered sheets of benign ductal epithelial cells, bipolar bare nuclei, which favored fibroadenoma and ruled out non-neoplastic lesions like abscess. The possibility of phyllodes tumor was also ruled out due to lack of significant stromal component and predominance of ductal component with no significant atypia. This case was diagnosed by FNAC. Marginal excision of the encapsulated tumor is the standard treatment of fibroadenomas sparing the remaining breast tissue. In our case surgeon is planning to carry out the excision of the lesion.

Giant fibroadenomas may recur after complete excision and chance of recurrence is less after third decade.¹² Although malignant tumors of breast are rare in adolescent, 2% of all

CASE REPORT

primary malignant lesion occur under age of 25yrs in female.^{8,9} Breast malignancies always treated with surgery followed by radiation and chemotherapy.

CONCLUSION: Fibroadenomas greater than 5 cms are considered as giant fibroadenomas. It is more common in adolescents. Diagnosis of giant fibroadenoma is challenging to pathologist & Surgeon. If diagnosed surgical excision is necessary.

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CASE REPORT

Figure 1: Clinical photograph showing enlarged left breast of size 17x10 cms, with blackish discoloration of the skin. The other breast is normal.



Figure 1

Figure 2: Cellular smear showing cohesive monolayered sheets of benign ductal epithelial cells and bare nuclei in blood cellular background. 100x, H & E.

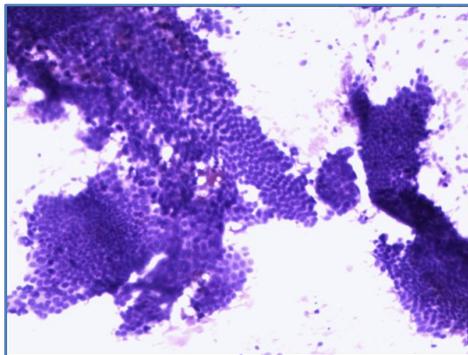


Figure 2

Figure 3: Cellular smear showing cohesive monolayered sheets of benign ductal epithelial cells. 400x, H & E.

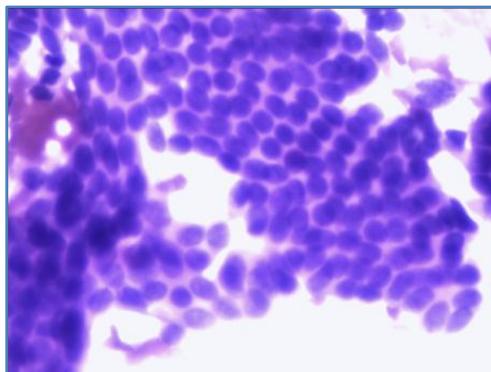


Figure 3

CASE REPORT

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