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Giant Juvenile Fibroadenoma of the Breast – A Case Report

KEYWORDS: Fibroadenoma, juvenile, Giant

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ABSTRACT *Palpable breast masses in young patients are uncommon, generally they are benign and mostly fibroadenoma is considered. An eleven year old pre pubertal girl with unilateral breast enlargement was diagnosed as giant juvenile fibroadenoma which was later confirmed by histopathology. We present this case to highlight the approach and management.*

CASE REPORT:

An 11 years Old Pre Menarche girl, born for consanguineous parents presented to our hospital with unilateral enlargement of her left breast for 3 months. There was a history of dull ache in the breast, no history of trauma, fever, discharge from nipple, loss of weight, and loss of appetite. No family history of similar problem.

On examination of breast there was a large, smooth, well circumscribed (6 X 5 cm) Palpable mass present in the outer lower and upper quadrant of the left breast. The mass was freely mobile, not adherent to underlying structure, skin over the swelling was stretched, and few prominent superficial veins were seen. There was no nipple retraction or axillary lymphadenopathy. Right breast was normal. The child was having associated congenital anomaly of both hands and feet like polydactyly.

Routine Hematological and biochemical examinations were normal. Hormonal Study was also within normal limits. Chest X Ray was normal. ECG and ECHO were normal. Ultrasonagram of left breast revealed (5 X 6 X 5 cm) Hyperechoeic lesion. The patient was subjected to fine needle aspiration cytology, which revealed cohesive clusters of benign ductal epithelial cells and myoepithelial cells in a fibromyxoid background suggestive of fibroadenoma breast.

A curvilinear incision made over the swelling in the breast extending from lateral aspect to inframammary fold. The incision was taken down to the pectoralis fascia, the tumour was palpated and excised along with surrounding fat without opening the capsule. Complete hemostasis obtained, dead space was obliterated by 2 – 0 catgut. Skin closed by subcuticular suturing with 3 – 0 ethilon. Compression dressing was done to prevent hematoma or seroma formation. On 7th POD suture removal done as the wound healing was good, the post operative follow up was uneventful.

DISCUSSION:

Palpable Breast masses in young patients are very rare (2) and mostly they are considered as benign inflammatory masses or benign tumours such as abscess or fibroadenoma respectively (1). In an adolescent female, fibroadenoma is a second major cause of unilateral breast mass next to fibro cystic diseases (2). Fibroadenoma is extremely rare in very young children (9) Juvenile Fibroadenoma is used to define fibroadenomas presenting in girls with the age range between 11 and 18 years which constitutes about 4% of all fibroadenomas(3,7). Giant Juvenile Fibroadenoma constitutes only 0.5% of all Fibroadenomas (4). Bilateral Giant Juvenile Fibroadenoma is extremely rare in pre pubertal girls (4, 10).

Fibroadenoma is an abnormality of breast development, but are not considered to be neoplasm. These tumors have both connective tissue and epithelial proliferation. Fibroadenoma is extremely rare in very young children; the earliest known published case was 13 months old girl (9). Special variants of fibroadenoma include giant fibroadenoma, juvenile fibroadenoma, fibroadenoma in pregnancy and lactation and multiple fibroadenoma.

Giant fibroadenoma is defined to be more than 5 cm in diameter and/or weighing more than 500 gm (7) or disproportionately large when compared to rest of the breast (5, 6). Giant fibroadenoma may be either adult or juvenile type. Juvenile fibroadenoma is described as giant fibroadenoma occurring in young female in the age range between 10 and 20 years with a mean age of 15 years, which approximately coincide with the onset of puberty (3, 7). Juvenile fibroadenoma is painless, solitary and unilateral mass with no evidence of infection, within 3 to 6 months it may reach a size of 15 to 20cm. It grows rapidly and distorts over lying skin, there may be presence of prominent veins (3).

The exact etiology of giant juvenile fibroadenoma is not known. Hormonal influence is thought to be a contributory factor (6). Excessive estrogen stimulation and/or receptor sensitivity or reduced levels of estrogen antagonist during puberty (6, 8).

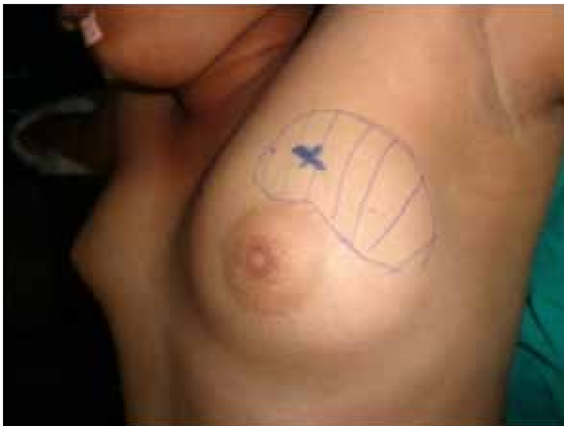
According to Stanford school of Medicine, juvenile fibroadenoma of the breast is defined as, large circumscribed, breast mass usually occurring in young females with stromal and epithelial hypercellularity without leaf-like growth pattern of phylloides tumors [5]. Diagnostic criteria for Juvenile Fibroadenoma are

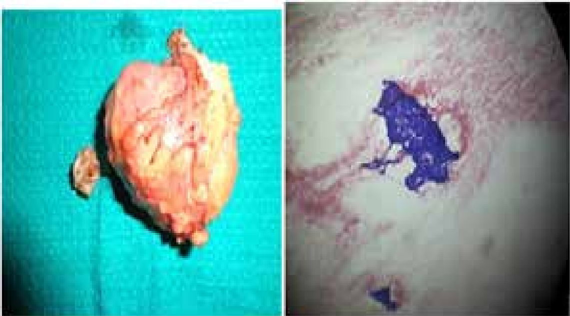
a) Circumscribed and rarely multiple
b) stromal and epithelial process of pericanalicular pattern

c) Fibrotic areas may be present
d) Lack of leaf-like growth pattern in the stroma
e) Lack of atypical features like stromal over growth, cytologic atypia, and mitotic rate >3/hpf, periductal increase in cellularity
f) Frequent myoepithelial and epithelial hyperplasia
g) Mostly in girls of prepubertal age group
h) Juvenile Fibroadenomas may be multiple also (5).

Differential diagnosis of Fibroadenoma include virginal hypertrophy, Fibrocystic diseases, low grade Cystosarcoma phylloides, Fibrosarcoma, Lipoma, hamartoma, macrocyst, adenocarcinoma, pseudoangiomatous stromal hyperplasia, lymphangioma, abscess (3,7,9).

Some of the lesions may be treated by mastectomy; some lesions may require only local excisions, aspiration or conservative management. Though giant juvenile fibroadenoma is a benign tumor, total excision of the lump with conservation of nipple and areola is the appropriate treatment (8). Giant juvenile fibroadenoma may recur after complete excision, the chance of recurrence become less after 3rd decade.





REFERENCE

1. Boothroyd A, Carty H. Breast masses in childhood and adolescence. A presentation of 17 cases and a review of the literature. Pediatric Radiology. 1994; 24(2):81 – 84.[PubMed] | 2. Valdes EK, Boolbol SK, Cohen J, Feldman SM. Malignant transformation of a breast fibroadenoma to cystosarcoma phyllodes: Case report and review of the literature. Am Surg. 2005;71:348-53. [PubMed] | 3. Davis S, Wallace A. A 19 year old with complete androgen insensitivity syndrome and juveile fibroadenoma of the breast. Breast J. 2001;7:430-3. [PubMed] | 4. Moore RL, Murugara A, Shayan K, Wallace AM.Bilaterally symmetric juvenile fibroadenomas and tubular breast deformity in a prepubescent girl.Journal of peadiatric Surgery.2007;42(6):1133-1136. [PubMed] | 5. Kempson RL, Rouse RV. Juvenile Fibroadenoma of the breast. Stanford school of medicine, http://surgpathcritercia.stanford.edu/breast/juvfibroadenoma/ | 6. Musio F, Mozingo D, Otchy DP. Multiple, giant fibroadenoma. American Surgeon. 1991;57(7):438-441. [PubMed] | 7. Wechselberger G, Schoeller T, Piza-Katzer H. Juvenile fibroadenoma of the breast. Surgery. 2002;132:106-7. [PubMed] | 8. Issam M. Giant fibroadenoma. Case report and review of literature. Basrah Journal of Surgery. 2006;12:1-4. | | | 9. Jung YS, Lee KJ, Yoon TI, et al. Juvenile fibroadenoma in 13 month-old female child. J Paediatr Child Health. 2005;41:78-9. [PubMed] | 10 Baxi M, Agarwal A, Mishra A Agarwal G, Mishra SK. Multiple bilateral giant juvenile fibroadenoma of breast. European Journal of Surgery. 2000;166(10):828-830. [PubMed] |