

Case Report

Giant Juvenile Fibroadenoma of the Breast: Report of 2 Cases.

SK Biswas¹, ASMT Rahman², AC Paul³, MSI Mollah⁴, V Chowdhury⁵

Abstract

Giant fibroadenomas are benign tumors, but their rapid growth and large size together with their rarity may determine difficulties in the clinical approach. The authors present 2 cases of giant juvenile fibroadenoma of the breast in girls aged 14 and 16 years, and the respective diagnostic workup and conservative surgical treatment. The diagnosis was made on fine needle aspiration cytology which was confirmed on histopathology. These tumours are almost always benign and should be treated with breast conserving surgery.

Key words: Giant, juvenile, fibroadenoma, breast.

Introduction :

Fibroadenoma is the most common benign tumour of female breast which implies a new growth comprising of both fibrous and glandular tissue. Fibroadenomas are somewhat more common before 30 years of age, but can occur at any age group within reproductive period of life. In rare occasions, fibroadenomas can show rapid and massive growth resulting in what is called giant fibroadenoma. Giant fibroadenomas are ≥ 5 cm in diameter and constitute less than 4% of all fibroadenoma^{1,2}. Giant fibroadenoma may be either adult type or juvenile type³. Giant juvenile fibroadenoma is an uncommon tumour presenting in adolescent female. We report 2 cases of giant juvenile fibroadenoma in adolescent female aged 14 and 16 years.

Case one:

A 14 years girl presented with rapidly enlarging right breast for 4 months (Figure 1). There was history of dull ache in the right breast. There was no history of trauma,

nipple discharge, fever, anorexia or weight loss. There was no significant family history. On clinical examination, huge enlargement of right breast was found while other breast was normal. There was an area of skin ulceration overlying the lump. It was firm to hard irregular mass, not fixed to underlying structure. There was no axillary lymphadenopathy. Routine haematological and biochemical examinations were within normal limits. Chest X-ray was normal. Ultrasonography was carried out which showed heterogenous parenchymal pattern suggestive of fibroadenoma. The patient was subjected to fine-needle aspiration cytology (FNAC) and the diagnosis was fibroadenoma. The patient underwent total excision of right breast lump conserving the normal breast tissue, nipple and areola. The excised lump measured 15 cm x 13 cm and weighed 600 gms (Figure 2). Cut surface shows multiple gray white nodule (Figure 3). The resected specimen was sent for histopathological study and report was giant fibroadenoma. The patient is on regular follow up and doing well at 12 months follow up.

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Figure 1: Right sided huge breast lump with overlying skin ulceration (Case-1)

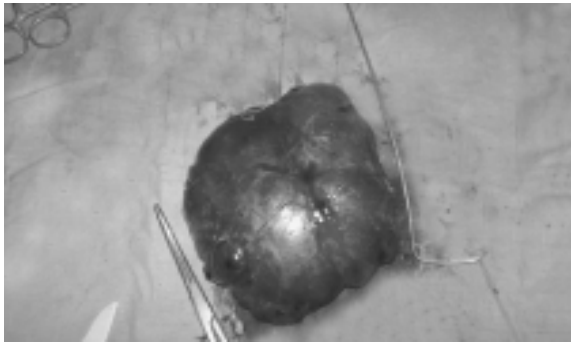


Figure 2: Excised breast lump (15 cm x 13 cm) (Case-1)

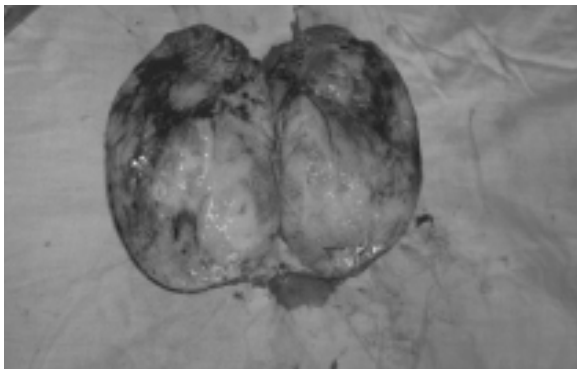


Figure 3: Bisected lump showing grey white nodule (Case-1)

Case two:

The age of our second patient was 16 years and presented with rapidly enlarging left breast for 3 months (Figure 4). There was no history of trauma, nipple discharge, fever, anorexia or weight loss. There was no significant family history. On clinical examination, huge enlargement of left breast was found while other breast was normal. Overlying skin is tense and shiny but no ulceration. It was firm to hard irregular mass, not fixed to underlying structure. There was no axillary lymphadenopathy. Routine haematological and biochemical examinations were within normal limits. Chest X-ray was normal. Ultrasonography was carried out which showed heterogenous parenchymal pattern suggestive of fibroadenoma. The patient was subjected to fine-needle aspiration cytology (FNAC) and the diagnosis was fibroadenoma. The patient underwent total excision of left sided breast lump conserving the normal breast tissue, nipple and areola by submammary incision. The excised lump measured 11 cm x 11 cm and weighed 480 gms (Figure 4). The resected specimen was sent for histopathological study and report was giant fibroadenoma. The patient is on regular follow up and doing well at 6 months follow up.



Figure 4: Left sided huge breast lump (Case-2)

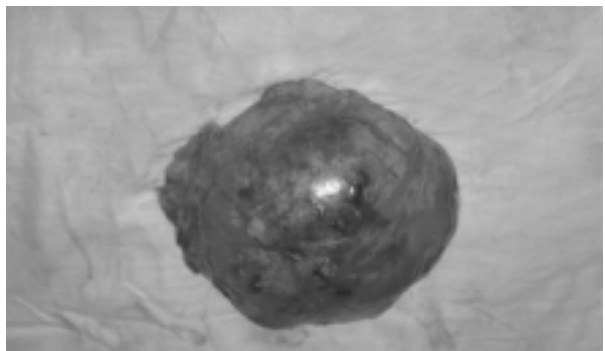


Figure 5: Excised breast lump (11 cm x 11 cm) (Case-2)

Discussion:

Breast fibroadenomas are the most common solid lesions found in young women. They typically present as firm, mobile, painless, easily palpable breast nodules. They occur in any part of reproductive life of female but more common before the age of 30 years. The nomenclature of fibroadenoma in younger women is confusing and a plethora of names exists to designate the lesion such as age related term juvenile fibroadenoma and size related term giant or massive fibroadenoma⁴. According to Stanford School of Medicine, juvenile fibroadenoma of breast is defined as circumscribed, often large, breast mass occurring in adolescent females with stromal and epithelial hypercellularity but lacking leaf like growth pattern of phyllodes tumors. Most patients age is 10-20 years with a mean age of 15 years. Juvenile fibroadenoma may be multiple⁵. Giant fibroadenoma is defined as tumour ≥ 5 cm in diameter or disproportionately large compared to the rest of the breast^{1,2}. It is more frequently seen in young and black female.

Giant juvenile fibroadenoma causes rapid and massive enlargement of breast in adolescent and is an

uncommon tumour. The mass can grow to immense proportions, compressing and displacing normal breast tissue and stretching the overlying skin and nipple areola complex. Exact etiology of juvenile giant fibroadenoma is not known; hormonal influences are thought to be contributing factors. Excessive estrogen stimulation and/ or receptor sensitivity or reduced levels of oestrogen antagonist during puberty have been implicated in pathogenesis^{6,7}.

A wide variety of breast conditions such as phylloides tumour, virginal hypertrophy, lipoma, hamartoma, cyst, abscess and carcinoma can result in solitary or multiple giant masses⁸. It is important to distinguish these pathological entities preoperatively as the treatment modalities and the prognosis differ quite significantly in these various condition. Some of the lesions were treated by mastectomy, but some other lesions may require only local excision, aspiration, or conservative management^{8,9}.

Phylloides tumour of breast is an uncommon fibroepithelial tumour with an epithelial and more cellular stromal components. They occur in all age groups, but are uncommon in adolescent, and are more likely to occur in women over 35 years¹⁰. Phylloides tumour can be benign, borderline or malignant depending on histological features including stroma, cellularity, mitotic activity, and infiltration along tumours border. About 90% of the tumors are low grade or benign¹¹. It is treated by wide excision with a margin of normal tissue or mastectomy. Virginal hypertrophy is rapid and distressing enlargement of one or both breast, which is often asymmetrical. It is treated by reduction mammoplasty. Giant lipoma can cause unilateral breast hypertrophy. Soft mobile mass can be felt on palpation. Breast abscess developing during puberty cause sudden and rapid growth in the breast with pain, flactutan and erythema. Although malignant tumors of the breast are rare in adolescent, two percent of all primary malignant lesions occur under the age of 25 years in female¹².

As with older patients, clinical examination is essential in evaluating the location, size and number of palpable lesions. Preoperative cytological examination is essential. Cytological diagnosis of phylloides tumor remains difficult with a significant overlap with fibradenomas. The cytological smears of malignant phyllodes tumour is quite easy and well established but the differential diagnosis between fibroadenomas and benign or broderline phylloides tumor is overlapping at times^{4,13}. Ultrasonography and mammography are two

basic techniques for routine imaging in the diagnosis of breast diseases and Magnetic Resonance Imaging (MRI) allows exact evaluation of size and location⁴.

A giant fibroadenoma should be excised as its increasing size may distort the shape of breast. Cosmesis is an important consideration when making breast incisions specially in young girls and generally performed through submammary incision with the hope that scar will be hidden by pendulous breast. It is essential to know that giant juvenile fibroadenoma may recur after complete excision, and the chance of recurrence become less after third decade^{3,14}.

Isolated case reports of unilateral juvenile fibroadenoma and multiple giant fibroadenoma in single breast were available^{6,9,14,15}. In the literature, only few case reports of bilateral giant fibroadenimas were reported^{3,14,15}. We present in this paper 2 cases of giant juvenile fibroadenoma of breast. The cases were diagnosed on FNAC and subsequently confirmed on histopathology. The patients were treated by removal of fibroadenoma with preservation of breast tissue, nipple and areola. Both patients are doing well with regular followup.

Conclusion:

Fibroadenoma 5 cm or more in diameter is considered as giant fibroadenoma. Giant fibroadenoma is the most common cause of breast enlargement and cause asymmetry of breast in adolescent and young adult female. It can grow to huge proportion and compress the surrounding normal breast tissue. If giant fibroadenoma is diagnosed, surgical excision is necessary.

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