

AN ADOLESCENT GIRL WITH GIANT FIBROADENOMA – A CASE REPORT

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Though fibroadenoma is the most common benign tumor of the breast and is more common under the age of 30, giant fibroadenoma is rare representing less than 4% of all fibroadenomas. A 12 years old girl presented with rapidly enlarging well-circumscribed firm, non-tender mass in right breast for 2 months which was painless and with no history of trauma, nipple discharge, fever, anorexia, weight loss or axillary lymphadenopathy. There was no family history of neoplasms. Clinically, the lump was about 12 x 12 cm and not fixed to skin or underlying structures with the absence of nipple retraction or discharge. There was no axillary lymphadenopathy. Fine needle aspiration cytology showed a benign proliferative breast disease. Total excision of mass was done preserving nipple and areola having weight of 535 gm with histopathological features suggestive of giant fibroadenoma. Giant fibroadenoma is a benign breast disease that may mimic rare malignant lesion. So, breast and nipple conserving surgery should always be performed irrespective of size of tumor as in this case.

Key words: Adolescent Girl, Breast Lump, Case Report, Giant Fibroadenoma

One of the obvious early signs of puberty in female is the development of breasts. Any deviation from its normal progression deserves attention. Giant fibroadenoma, virginal hypertrophy and cystosarcoma phyllodes are the important differential diagnoses to be considered when one encounters a large breast mass (1). Although the majority of breast disorder in pediatric and adolescent patients is benign, it is very difficult to diagnose above mentioned diseases preoperatively. But it is very important to diagnose properly as therapeutic approach and follow up is different.

In this paper, we presented a case of giant fibroadenoma in an adolescent girl which was treated by breast and nipple conserving surgery in a day care set up.

CASE DESCRIPTION

A 12 year old Muslim, unmarried girl hailing from Dhaka city was admitted in a private hospital with the complaints of rapidly growing

painless lump at right breast for 2 months. Her menstrual cycle was yet to onset. She had no positive family history of breast, ovarian or cervical cancer. History of trauma, nipple discharge, fever, anorexia and weight loss was absent. On general examination, her vitals were within normal limit. On local examination, enlargement of right breast was obvious with shiny, tense overlying skin and it revealed a firm, non-tender, mobile lump on palpation. The lump was about 12 x 12 cm, not fixed to skin or underlying structures, nipple retraction or discharge was absent and there was no axillary lymphadenopathy. Her left breast was completely normal. Routine hematological and biochemical examinations were within normal limit. Chest X-ray was normal. Ultrasonography was carried out which showed circumscribed homogenous mass not infiltrating margin of right breast suggestive of fibroadenoma. Fine needle aspiration cytology (FNAC) revealed cellular smear comprising of clusters and sheets of epithelial cells resembling fibroadenoma. Based on cytological findings,

diagnosis of benign proliferative lesion without atypia suggestive of fibroadenoma was given. The patient underwent total excision of breast lump under general anaesthesia by submammary incision. The resected specimen was sent for the histopathological study. The excised lump measured about 12 × 12 cm & weighed 535 grams. It was well circumscribed and encapsulated. Cut sections from the lump showed multiple gray white nodules showing myxoid, gray white appearance along with occasional slit-like spaces and tiny cysts. There was no leaf-like growth pattern and focal periductal concentrate of cells which was the characteristics of Phyllodes tumors. The final histopathological diagnosis of Giant Juvenile Fibroadenoma of right breast was given. Post-operative period was uneventful.

DISCUSSION

Fibroadenomas are the most common benign tumors of the breast and are more common under the age of 30. In rare occasions, they can show rapid and massive growth resulting in what is called giant fibroadenomas. Giant fibroadenoma is rare representing less than 4% of all fibroadenomas (4). It can be defined as a tumor >500 gms or disproportionately large compared to the rest of the breast. It is more common in young and black patients. It may be either adult type or juvenile fibroadenoma (5). It usually presents as a rapidly growing, well circumscribed unilateral mass. Histologically the tumor is composed of ducts and fibrous connective tissue and simple enucleation can be the treatment (4).

Giant juvenile fibroadenoma is an uncommon tumor presenting in adolescent females. Although exact etiology is unknown, hormonal influences are thought to be contributing factors. Excessive estrogen stimulation and/or receptor sensitivity or reduced levels of estrogen antagonist during puberty have been implicated in pathogenesis (5, 6). It is necessary to exclude the close differentials of juvenile fibroadenoma which are benign, low-grade phyl-



Fig. 1. Giant fibroadenoma after resection (gross specimen)

lodes tumor, virginal hypertrophy, and other rare differentials such as lipoma, hamartoma, macrocyst, adenocarcinoma, breast abscess, and pseudoangiomatous stomal hyperplasia. Treatment modalities and the prognosis differ quite significantly in these various conditions. Some of the lesions were treated by mastectomy, but some lesions may require only conservative management, aspiration or local excision (6, 7, 8). There are no clinical or imaging features that clearly distinguish between the giant fibroadenoma and the phyllodes tumor (9).

Histologically, giant fibroadenomas differ from cystosarcoma phyllodes by lack of leaf-like structures and stromal cell atypia and from asymmetrical breast hypertrophy in girls by the lack of lobules. Post-traumatic fat necrosis can be differentiated by the absence of discrete, palpable mass and from mastitis by signs of inflammation.

Giant fibroadenomas can be completely excised. There is no consistent surgical approach to giant fibroadenoma in literature. For cosmetic purpose, a technique with a small incision was found to be ideal which provides safe, easy and performed as day care surgery, as there is almost no risk of malignancy (10). Only complex fibroadenoma has a higher risk of malignancy.

There is chance of recurrence, but recurrence rate less after third decade. Our patient is doing well in the subsequent follow ups for about 1 year.

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