



Case Report

GIANT JUVENILE FIBROADENOMA OF BREAST

KABM Taiful Alam¹, Toufiqul Haque², Shamim Hossain², Kuntal Das³, Tazul Islam⁴, Helena Ahmed⁵

Abstract:

Giant juvenile fibroadenoma occurs in adolescent girls. These tumours become enormous in size and grow rapidly, though these tumours are mostly benign. These patients are almost always treated by breast conserving surgery. Here we present a case having unilateral giant juvenile fibroadenoma with bilateral multiple small fibroadenomas in an adolescent female aged 16 years. The diagnosis of the patient was made on clinical examination, USG & FNAC. Confirmatory diagnosis was made by histopathology. We removed the giant one with "Swiss-Roll" procedure and others by simple enucleation. The aesthetic appearance of the breasts were preserved.

Key words: Fibroadenoma, Giant fibroadenoma, Juvenile fibroadenoma, Swiss-roll operation.

Introduction:

Fibroadenoma is the most common benign tumour of female breast. It usually arises in the fully developed breast during the 15-25 years age period. They arise from hyperplasia of both fibrous & glandular tissue of a single lobule & usually grow upto 2-3 cm in size.

Juvenile fibroadenoma is a benign tumour which occurs during puberty¹. It is a rare clinical condition and forms 4% of the total fibroadenomas^{2,3}. When fibroadenoma show rapid and massive growth then it is called giant fibroadenoma. They are > 5 cms in diameter and constitute only 0.5% of all fibroadenomas^{2,3}. It is an uncommon tumour in an adolescent girl. The masses

can grow to immense proportions, compressing and displacing normal breast tissue and stretching the overlying skin and nipple areola complex⁴.

Case report:

A 16 year old girl presented with bilateral breast lumps for 1 year. There were multiple lumps in the both breasts among them one lump in the left breast was rapidly enlarging during last 1 month. There was feeling of heaviness in the left breast. There was no family history of breast disorder or history of trauma, nipple discharge and anorexia or weight loss.

On local examination of left breast, it was found hugely enlarged and asymmetrical with its counterpart on the right side. The large lump was globular and lobulated, well circumscribed about 10 X10 cm in size and firm in consistency. The margin was well defined. Over lying skin was tense, shiny and free with prominent superficial veins and the nipple was slightly retracted. The lump was not fixed to the underlying structures.

On rest of the left breast and the right breast there were several small lumps which were freely mobile and firm in consistency. There was neither nipple discharge nor axillary lymphadenopathy on either side.

1 Associate Professor of Surgery, Shaheed Monsur Ali Medical College Hospital, Uttara, Dhaka.

2 Assistant Professor of Surgery, Shaheed Monsur Ali Medical College Hospital, Uttara, Dhaka.

3 Registrar of Surgery, Shaheed Monsur Ali Medical College Hospital, Uttara, Dhaka.

4 Asst. Registrar of Surgery, Shaheed Monsur Ali Medical College Hospital, Uttara, Dhaka.

5 Intern Doctor, Shaheed Monsur Ali Medical College Hospital, Uttara, Dhaka.

Correspondence to: Dr. KABM Taiful Alam, Associate Professor of Surgery, Shaheed Monsur Ali Medical College Hospital, Uttara, Dhaka.

Received 12 October 2012 **Accepted** 16 November 2012

Routine haematological and biochemical examinations were within the normal limit. In chest x-ray there was superimposed breast tissue shadow in the left side which was confirmed by lateral view. Otherwise chest x-ray was normal. USG of both breasts were done which revealed a large well defined hypoechoic area of 10.8 X 10.3cms at upper and inner quadrant of the left breast along with multiple small well defined hypoechoic areas in both breasts. USG did not find any microcalcification or any cyst in either breast. The patient was subjected for fine needle aspiration cytology (FNAC) of the breast lumps and diagnosis revealed the lumps as fibroadenomas.

Eneucleation of the large lump was done by "Swiss-Roll" operation and other lumps were removed by simple eneucleation. In "Swiss-roll" operation a 5cm semicircular circumareolar incision was made in the superio-medial aspect of the areola. Breast skin was mobilized over the lump and an incision was made over the capsule of the lump. The lump was mobilized from the rest of the normal breast tissue by finger dissection. The lump was then grasped by using sponge holding forceps and pulled up in to the skin. An incision was made into the lump and the incised portion was rotated out of the incision. The lump was progressively incised and rotated until the entire lump was rotated out of the incision in a "Swiss Roll" type fashion. Then a drain tube was placed in situ and the circumareolar incision was closed by 3-0 polypropylene. On 7th Post-operative day stitches were removed when some serous discharge was coming out and the wound healed by regular dressing only. The excised lump was sent for histopathology and was diagnosed as fibroadenoma.



Fig.-1: Preoperative state of the both breasts



Fig.-2: Semicircular circumareolar incision



Fig.-3: "Swiss-Roll" operation is proceeding



Fig.-4: Enucleated Lumps

Discussion:

Breast tumors are rare at puberty and among adolescents and they are most frequently benign. 75% of the benign tumors of the breast are fibroadenomas⁵.

They are characterized by proliferation of the epithelial and stromal structure but lacking the leaf like growth pattern of phyllodes tumour⁶. Fibroadenoma typically present with firm, mobile, painless and easily palpable lump. Juvenile fibroadenoma is common in age group of 10-20 yrs with a mean age of 15 years. It is a rare condition and occurs in only 4% of all fibroadenomas^{2,3}. The tumor is encapsulated. Juvenile fibroadenoma may be multiple⁶. Giant fibroadenoma is defined as tumour ≥ 5 cm in diameter or disproportionately large compared to the rest of the breast^{7,8}. It is most frequently seen in young and black female.

Giant juvenile fibroadenoma is an uncommon tumour in the adolescent female and the exact etiology is not known. An imbalance in estrogen levels, such as relative or absolute estrogen levels rise, local breast tissue over-sensitivity to estrogen during puberty have been implicated in pathogenesis^{9,10}.

In the differential diagnosis of giant juvenile fibroadenoma juvenile breast hypertrophy, giant lipoma, breast abscess, great hematomas, cystosarcoma phyllodes must be excluded¹¹⁻¹⁵. Juvenile breast hypertrophy shows diffuse growth of the breast without any nodule or tumour. In the giant lipoma soft mobile mass can be detected on palpation. Lobulated, homogenous solid mass with well defined margins occur in cystosarcoma phyllodes. They are most commonly seen in the 4th decade and rarely reported in puberty¹¹.

Clinical examination is essential in evaluating the location, size and number of the palpable lumps. Cytological examination is necessary preoperatively to ensure the diagnosis. Ultrasonography and mammography are two basic techniques for routine imaging in the diagnosis of breast diseases and MRI allows exact evaluation of the size and location.

Giant fibroadenoma is enucleated according to the size and shape. Cosmesis is an important consideration when making breast incision in the young adults. It is generally performed through a circumareolar incision. It can also be performed by submammary incision with the hope that the scar will be hidden by the pendulous breast. In case of smaller lumps a simple enucleation from an areolar incision may be done. When there is a gigantic tumour causing structural deformities it becomes necessary to reshape the breast by excision of excess skin^{16, 17}. When performing the excision the symmetry of the breasts should be maintained.

Giant juvenile fibroadenoma may recur after complete excision and the chances of recurrence decreases after the 3rd decade^{18,19}.

Conclusion:

Fibroadenoma 5 cm in diameter is considered as giant fibroadenoma. Pathogenesis may be due to an imbalance of the estrogen level. High index of suspicion is required for the diagnosis. Once the giant fibroadenoma is diagnosed surgical removal is necessary. Large size breast tumours in adolescent can be managed by breast conservation surgery. Depending on the size of the tumour, age of the patient and stage of sexual maturity reconstruction of the breast after removal of the tumour is mandatory. It should be removed through cosmetically acceptable circumareolar incision especially in unmarried females. In "Swiss -roll" operation a large lump can be enucleated through a small incision and it is superior in maintaining the size and shape of the breast.

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