



1: Assistant Professor,  
Department of Pathology.  
Muhammad Medical College.  
Mirpurkhas.

2: Assistant Professor.  
Department of Surgery.  
Muhammad Medical College.  
Mirpurkhas.

3: General Surgeon Combined  
Military Hospital Chhor Cantt,  
District: Umerkot.

\*=corresponding author

## Bilateral multiple giant juvenile fibroadenomas of breast.

Ghulam Rasool Memon<sup>1,\*</sup>, Mairaj Muhammad<sup>2</sup>, Major Amir Iqbal Ali<sup>3</sup>,

### Abstract

A case of adolescent girl, with bilateral giant fibroadenomas. On history first appeared as small nodules at the age of eleven years and attempt mass of 1855 grams by seven nodules of various sizes measuring, largest 15 x 14 x 10 cm and smallest 1.5 x 1.5 x 1 in dimensions. Although these developed insidiously over the period of seven years, patient ignored the lesion as well the increased in size. Soon after marriage, her husband realizes that the lesions needs consultation and brought her to Combined Military Hospital Chhor Umerkot.

**Key Words:** Giant, Juvenile, Fibroadenoma, Nodule.

### Introduction:

Fibroadenoma is common benign tumor of breast at the onset of puberty. It is new growth comprises of both glandular and stromal tissue. The incidence is more at child bearing age between 18 – 30 years due to ovarian hormones<sup>1</sup>. Giant fibroadenoma is characterized by a tumor with a mass greater than 5 cm or weighing more than 500 gm. The term Juvenile is applicable to fibroadenoma when it appears in children and adolescents of age between 10 – 18 years<sup>2</sup>. Giant fibroadenoma form 4% of total fibroadenomas and giant Juvenile fibroadenomas constitute 0.5% of all fibroadenomas. Bilateral multiple fibroadenomas are very rare entity<sup>1-3</sup>.

### Case Report:

An 18 years old girl presented with bilateral multiple nodules in the breast. She belongs to remote area of "Thar" desert, in the province of Sindh, south east of Pakistan. On history she told that there were small nodules first appeared in breasts at age of eleven years. On clinical examination were stretched asymmetrical breasts. Huge lumps, palpable in both breasts. After radiology and ultrasonography assessments, seven nodules of various sizes isolated and removed surgically and sent for histopathology. Gross examination revealed grayish white hard, nodular, well capsulated tumors. From largest to smallest all

nodules measure (1) 15x14x10 cms (2) 9x8x8 cms (3) 6x4x4 cms (4) 5x5x4 cms (5) 5x4x3 cms (6) 5x3x3 cms (7) 1.5x1.5x1 cms. Grossly the cut surface of all nodules found almost identical. The cut surface found glistening, looking grayish white, fibrous, hard and nodularity noticed.



**Figure:1.** Gross appearance. Multiple grayish white hard encapsulated, nodules.



Fig: 2. Cut Surface. Fibrous demarcated nodules.

Microscopical examination showed biphasic benign proliferation of glandular and stromal components. Both pericanalicular and intracanalicular patterns were discernible. There was no leaf like growth pattern and focal periductal concentration of cells which is characteristic of phyllodes tumor.



Fig:3. Microscopic view of Fibroadenoma showing intracanalicular and pericanalicular types.

#### Discussion:

The major function of breast is nutritional support to infant. The breast tissue undergoes periodic changes at adult hood during menstruation and pregnancy. Endometrium responds same way. The tissue changes due to ovarian hormones such as excessive estrogen stimulation , receptor sensitivity or reduced levels of estrogen antagonist during puberty are causative factors of giant Juvenile fibroadenomas<sup>4</sup>. In breast tissue there are two types of epithelial and stromal cells. Epithelial cells are Luminal and myoepithelial while stromal cells are interlobular and intralobular. The tumors arising in these structures have a different behaviour. The fibroadenoma and phyllodes tumors most commonly arise from intralobular stroma. Fibroadenoma is

benign neoplasm with clonal cytogenic aberration associated and are confine to stromal element. According to Stanford school of medicine "A Juvenile fibroadenoma of breast is define as circumscribed, often large breast mass occurring in adolescent female with stromal and epithelial hypercellularity, lacking leaf like growth pattern of phyllodes tumor". Most patient are in their "teen" with mean age of 15 years<sup>5</sup>. Phyllodes tumor also arises in intralobular stroma must be differentiated from fibroadenoma. Phyllodes are incidentally rare tumors of any age but frequently occur in women over age of 35 years<sup>6</sup>. Etymologically phyllode is Greek term, means "Leaf like", it is due to proliferation of nodules covered by epithelium. These tumors are more hypercellular with increased mitoses. The high-grade neoplasms may difficult to differentiate from sarcomas. Recurrence is frequent after resection. Etiological factor is clonal acquired chromosomal changes, aberrations and over expressions resulting in high-grade aggressive behavior. Bilateral giant Juvenile fibroadenomas may presented as syndrome, with cardiac myxoma, cutaneous hyperpigmentation and other abnormalities<sup>7</sup>. Fibroadenoma is considered as proliferative change without atypia but risk of carcinoma prevails if it is associated with cysts larger than 0.3 cm in diameters, sclerosing adenosis, epithelial calcification or papillary apocrine change<sup>8</sup>. In our study on histopathological examination, there were no cysts of any size, nor metaplastic change or associated sclerosing adenosis. On clinical examination, cardiac myxoma, cutaneous hyperpigmentation or other abnormalities were absent. These precancerous (sarcomatous) changes must be excluded for treatment and prognosis. Bilateral giant Juvenile fibroadenomas with solitary nodules are frequently reported<sup>9</sup> but bilateral multiple giant Juvenile fibroadenomas are rare and only four cases were reported in English literature<sup>10</sup>. A giant Juvenile fibroadenoma weighing 3020 gm unilaterally as solitary mass has been reported in right breast<sup>11</sup>. In our study multiple fibroadenoma found bilaterally in breast with total mass weighing 1855 gm, that taken seven years to attend giant fibroadenomas, which indicates the slow rate of growth. It was childhood growth harboring in breasts till marriage. This carelessness and neglect pretense to poverty, gender discrimination and forwardness of culture and society.

#### Conclusion:

Fibroadenoma is a benign neoplasm, but any growth in breast should be evaluated on time to manage accordingly. Not gratifying to present a case of adolescent girl with huge nodules present bilaterally in breasts, harbored seven years and attempt 1855 gm to weigh with dragging sign.

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