

Case Report

A RARE CASE OF JUVENILE FIBROADENOMA REPORTED TO TERTIARY CARE TEACHING HOSPITAL

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Article Received: 08-10-2022

Revised: 28-10-2022

Accepted: 18-11-2022

ABSTRACT:-

INTRODUCTION:- Juvenile fibroadenoma is a rare variant of fibroadenoma and is characterized by rapidly enlarging, painless, and unilateral masses. **CASE REPORT:-** We have reported a rare case of juvenile fibroadenoma of the breast in a 13 year old girl, presented with complaints of rapidly growing mass in the left breast for 3 months duration. On local examination a solitary, firm, mobile, unilateral, non-tender mass was felt in the upper and lower outer quadrant of the left breast, measuring 6.4 x 4.0 x 3.4cm. The overlying skin was normal. There was no axillary lymphadenopathy. **RESULTS:-** The ultrasonography of the left breast showed a single, oval, hypoechoic, well circumscribed mass lesion with cleft like spaces features suggestive of complex fibroadenoma BIRADS IV a. On fine needle aspiration cytology showed sheets of hyperplastic benign ductal epithelial cells with myoepithelial cells and a background of benign bipolar nuclei and blood, without inflammatory cells. It was suggestive of fibroadenoma. She underwent left lumpectomy with breast conservation. We received left breast lumpectomy specimen. On gross showed a well-circumscribed, grey white, firm mass m 6.2 x 4.0 x 3.1 cm. On histologic features reported as juvenile fibroadenoma left breast. The postoperative period was uneventful and the patient recovered well and advised for regular follow up. **Conclusion:** In Fibroadenomas, Juvenile type of fibroadenoma are reported as rare case that should be differentiated from other types of breast masses. In this we reported a rare case of Juvenile fibroadenoma for its clinicopathological, Imaging(ultrasonography breast) and management.

Keywords:- Rare, Fibroadenoma, breast, tumor

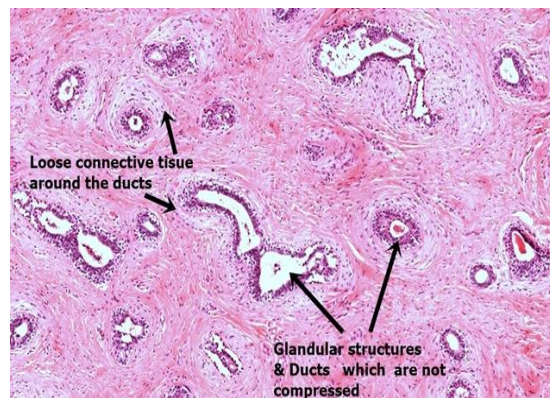
INTRODUCTION:-

Benign Breast Diseases in children and adolescents are rare.¹ The most frequently considered breast tumour in adolescent girls is Fibroadenoma. Fibroadenoma is categorised into many variants, one of them is Juvenile which occurs in children and adolescents of the age 10 to 18 years.² Juvenile fibroadenoma presents with rapidly growing mass to a large size and the patient presents with breast enlargement, nipple displacement, stretching of overlying skin, pain etc. In some cases it shows a prominent vasculature. On ultrasonography it is mostly solitary, homogeneous, and hypoechoic mass. Fibroadenoma can also lead to aesthetic problem as well as mental burden for some females due to breast asymmetry or hypertrophy.³ Majority of paediatric female patients with breast lesions are of benign aetiology, therefore the management should be specific.

CASE REPORT:-

A 13 year-old female patient presented to our surgery outdoor with chief complaints of having a rapidly growing mass in the left breast in the upper outer quadrant for last 3 months. There was no history of any trauma, fever, nipple discharge, loss of appetite or weight loss. There was no similar complaint in family. She has normal menstrual history with normal regular flow and normal duration of around 30 days. Menarche since 12 years of age. The Left breast mass which is noted is also associated with pain during

menstruation Cut section view of Left breast mass well circumscribed ,grey white along with slit like spaces.



On local examination:-

A firm, mobile, solitary and unilateral, non tender mass was felt in the upper outer quadrant of the left breast, measuring 6.4cm x 4.0cm x 3.4cm. The overlying skin of breast was normal. There was no axillary lymphadenopathy. The Right breast was normal.

Investigations :- Routine Blood and biochemical investigations were within normal limits.

The **Ultrasonography** of the left breast showed a 6cm x 6cm x 5 cm, oval, hypoechoic, well circumscribed mass lesion with cleft like spaces. Sonomammography Features are suggestive of complex fibroadenoma -BIRADS IVa.

On **Fine needle aspiration cytology** showed sheets of hyperplastic benign ductal epithelial cells with myoepithelial cells and a background of benign bipolar nuclei and blood, without inflammatory cells. It was diagnosed as benign fibroepithelial tumor suggestive of fibroadenoma.

Management:-

She underwent left lumpectomy with breast conservation. The postoperative period was uneventful, and recovered well and also advised for regular follow up. The left breast lumpectomy specimen received on gross examination defines a firm, solitary, circumscribed, mass of the left breast measuring 6.2cm x 4.0cm x 3.4cm was noted. On Cut section, the specimen defined as grey white, firm, with cleft like spaces was noted. There was no areas of any necrosis or haemorrhages. On histopathology, there is well-circumscribed lesion which is uniform ,biphasic, stromal and proliferation of epithelium with predominantly pericanalicular growth patterns. Glandular elements have intact myoepithelial cell layer. The leaf-like fronds are not seen. There was no nuclear atypia. On histologic features this diagnosed as juvenile fibroadenoma Left breast.

DISCUSSION:-

In adolescent girls the breast masses are very rare and mostly benign in nature. Juvenile fibroadenomas are such rare that accounts for 0.5% and 4% of all fibroadenomas.⁴ Juvenile fibroadenoma is a rare variant of fibroadenoma and is defined by rapidly enlarging, painless, and unilateral masses occurring usually in age group between 10 and 18 years. Juvenile fibroadenoma undergoes rapid growth and large size as noted in this case in 13 year old girl since 3 months with large breast mass of size of 6.4cm x 4.0cm x 3.4cm. These are mostly unilateral, rarely bilateral juvenile fibroadenomas are reported.⁵ The etiology of the fibroadenomas is still not well defined , but hormonal factors are held responsible. Clinically, Fibroadenomas are characterised by massive and rapid enlargement of breast. The fibroadenoma of breast have few variants like juvenile, myxoid, complex, cellular fibroadenoma. One of the rare variant Juvenile fibroadenoma have increased epithelial hyperplasia rarely with micropapillary projections along with increased stromal cellularity called pericanalicular growth pattern with fascicular arrangement. These all findings were noted in this case. The incidence of transformation into malignancy ranges from 0.002% to 0.1% cases.⁶ Giant juvenile fibroadenomas are found only in 0.5% of all fibroadenomas.⁷ Fibroadenomas are defined to be Giant when weighs more than 500gm or found disproportionally large compared to rest of breast. Rarely there are multiple juvenile fibroadenomas found⁸ If Fibroadenomas have hypercellular stroma and prominent intracanalicular pattern, they can be morphologically overlapped with benign phyllodes tumors. The differential diagnosis of fibroadenomas are phyllodes tumor, virginal hypertrophy, juvenile papillomatosis, etc. Histopathology is the gold standard for diagnosis of fibroadenomas.⁹ On the basis of histopathological evaluation, phyllodes tumor of breast is differentiated from giant

fibroadenoma by the presence of leaf-like fronds and stromal cell atypia. There is Prominent mitotic activity of $\geq 3/10$ high power fields are found. The tumor may also infiltrates into surrounding breast. In the virginal hypertrophy, there is diffused growth, not circumscribed and on microcopy it is characterized by abundant connective tissue with duct proliferation and lack of lobule formation. Management of Juvenile Fibroadenoma may be only observation to Excision of tumor.¹⁰ The Management is complete excision of the tumor with preservation of the areola and nipple, along with the achievement of symmetrical breasts. Surgical management is indicated in the fibroadenomas that are more than 50mm in diameter, rapidly growing in size, causes severe pain, distort the breast morphologically, or in cases of overlying skin changes. Clinical assessment followed by histopathological investigations provides final diagnosis of breast fibroadenomas.¹¹

CONCLUSION:-

Juvenile fibroadenoma is a rare variant of Fibroadenoma that should be differentiated from other breast tumors. This is a rare case of Juvenile fibroadenoma reported for its clinical, radiological, pathological features and management. Juvenile fibroadenomas if not managed properly can become challenging situation in adolescent age group.

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