

Case Report

Giant fibroadenoma of breast in an adolescent girl

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Abstract

The term "giant fibroadenoma" is a descriptive name given to a fibroadenoma that is greater than 5cm in diameter or weighs more than 500g. We are presenting a case of giant juvenile fibroadenomas in a 13-year-old pre-pubertal girl. The diagnosis was made on fine needle aspiration cytology and it is completely excised through a circum mammary curvilinear incision. Diagnosis was confirmed by the histopathology. Breast conserving surgery can lead a normal life without psychological implications in adolescent girls.

Introduction

Fibroadenoma of the breast is a benign tumour affecting females usually before the age of 30 (commonly between 10-18 years).¹ Juvenile fibroadenoma is a rare clinical entity and forms 4 % of the total fibroadenomas, and giant juvenile fibroadenoma constitutes only 0.5 % of all fibroadenomas.² These rare benign tumours most commonly affect females of Afro-Caribbean or East Asian descent and have a bimodal age distribution with occurrence typically either in adolescent or premenopausal women.³ Giant fibroadenomas can be variants of either adult type fibroadenomas or the less common juvenile fibroadenoma, both of which are benign circumscribed breast masses resulting from proliferation of stromal and epithelial (glandular) tissue ⁴. We report a rare case of giant fibroadenoma of the left breast in a young prepubertal female girl.

Case Report

A 13 year female girl presented with the chief complaints of an enlarged breast on left side since 8 months which was painless and gradually increasing to attain the present size of 11 X 9 cm.

On clinical examination, there a huge lump found within the left breast moving freely without any tenderness. It was firm, regular mass, not fixed to the underlying structures. Axilla examination was unremarkable. There was no other significant systemic illness. All haematological and biochemical investigations were within normal limits. Ultrasonography breast showed a well circumscribed, homogenous, regular mass with no enlarged lymphnodes in the axilla. Patient was subjected to fine needle aspiration cytology which revealed cellular smear comprising of clusters and sheets of benign epithelial cells revealing fibroadenoma breast. Based on the cytological and clinical findings a preliminary diagnosis of benign breast lump closest to giant fibroadenoma was made. However, a cytological possibility of benign phylloides tumor was not ruled out. Through left circum mammary curvilinear incision, total excision of the mass preserving the nipple and areola was done. Histopathological examination of the mass revealed to be a giant fibroadenoma. Patient is asymptomatic for last two years and still on follow-up.

Discussion

Fibroadenomas are the most commonly (68%) encountered breast mass in adolescents and are believed to be caused by an abnormal response to estrogen. The exact etiology of giant juvenile fibroadenoma is not clear. Fluctuation of estrogen hormones may affect the enormous growth of breast fibroadenoma. They typically present as rubbery, discrete, nontender mass, and may be lobular, bilateral (10%), or multiple (10% to 15%).⁵ The most common location is the outer upper quadrant of the breast.⁶ The giant fibroadenoma (juvenile cellular fibroadenoma) is an uncommon variant (4%) of fibroadenoma characterized by rapid growth. The underlying mass may cause a major distortion to the breast contour.⁷ Juvenile or Giant Fibroadenomas can be at times difficult to distinguish from phylloides tumors and virginal hypertrophy.

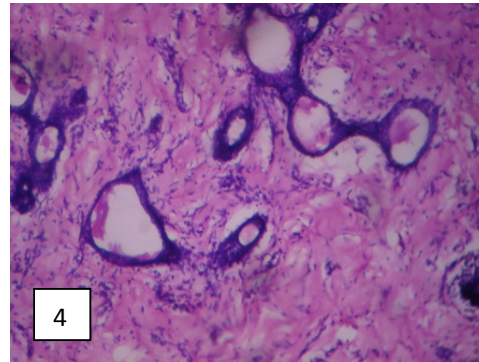
The presence of large tumor size, low epithelial stromal ratio, epithelial atypical, columnar stromal cells with visible cytoplasm and stromal giant cells favours a diagnosis of phylloides tumour over fibroadenomas.^{8,9} A wide variety of breast conditions such as lipoma, hamartoma, cyst, fibroadenoma, phylloides tumor, haematoma, abscess and carcinoma can result in solitary or multiple giant masses.¹⁰ Therefore despite the multiple diagnoses that must be considered with such a presentation, most diagnoses have specific clinical or imaging features that distinguish them. Specifically, on ultrasonographic evaluation, fibroadenomas appear as well-circumscribed elliptical homogeneous masses that are either hypo- or isoechoic, with smooth borders and posterior acoustic enhancement. They are typically larger in the transverse than the anteroposterior axis¹¹. Though benign, because of their size giant fibroadenomas are nonetheless associated with significant morbidity, including venous congestion,

glandular distortion, pressure necrosis, and occasionally ulceration.^{12,13} Giant juvenile fibroadenoma is a benign tumour, and total excision of the lump with conservation of nipple and areola is considered as the best treatment¹⁴. Fortunately, majority of these tumours can be excised completely with preservation of the nipple and areola, as was done in our patient. The biologic behaviour of the juvenile or cellular subtype of fibroadenomas is benign, but metachronous lesions are not uncommon. Giant juvenile fibroadenoma may recur after complete excision and the chance of recurrence becomes less after third decade¹⁵.

Conclusion

Giant fibroadenoma of the breast in a young female girl is the uncommon condition. The diagnosis is mainly established by the combined clinical examination and aspiration cytology. Complete excision with preservation of the nipple and areola is the standard surgical technique with subsequent confirmation by the histopathology.





References

1. Lo Martire N, Nibid A, Farello G, Gabriele A, Giuliani M. Giant fibroadenoma of the breast in an adolescent: a case report. *Ann Ital Chir*2002; **73**: 631-34.
2. Park CA, David LR, Argenta LC. Breast asymmetry: presentation of a giant fibroadenoma. *Breast J* 2006; **12**: 451-61.
3. Hanna RM, Ashebu SD. Giant fibroadenoma of the breast in an Arab population. *Australas Radiol* 2002;46(3):252-6
4. Iglesias A, Arias M, Santiago P, Rodriguez M, Manas J, Saborido C. Benign breast lesions that simulate malignancy: magnetic resonance imaging with radiologic-pathologic correlation. *Curr Probl Diagn Radiol* 2007;36(2):66-82
5. Arca MJ, Caniano DA. Breast disorders in the adolescent patient. *Adolesc Med Clin* 2004. Oct;15(3):473-485 10.1016/j.admecli.2004.06.003
6. West KW, Rescorla FJ, Scherer LR, III, Grosfeld JL. Diagnosis and treatment of symptomatic breast masses in the pediatric population. *J Pediatr Surg* 1995. Feb;30(2):182-186, discussion 186-187 10.1016/0022-3468(95)90557-X
7. Fallat ME, Ignacio RC., Jr Breast disorders in children and adolescents. *J Pediatr Adolesc Gynecol* 2008. Dec;21(6):311-316 10.1016/j.jpaga.2007.10.007
8. Tse GM, Ma TK, Pang LM, Cheung H. Fine needle aspiration cytologic features of mammary phyllodes tumors. *Acta Cytol* 2002;46(5):855-863.
9. Umberto S, Moretti D, Iaconi P, Arganini M, Roncella M, Miccoli P, Giacomini G. Fine needle aspiration cytopathology of phyllodes tumor. Differential diagnosis with fibroadenoma. *Acta Cytol* 1988;32(1):63-66.
10. Muttarak M, Chaiwun B. Imaging of giant breast masses with pathological correlation. *Singapore Med J* 2004;45(3):132-139.
11. Goel NB, Knight TE, Pandey S, Riddick-Young M, Shaw de Paredes E, Trivedi A. Fibrous lesions of the breast: Imaging-pathologic correlation. *RadioGraphics* 2005;25:1547-1559.
12. Park CA, David LR, Argenta LC. Breast asymmetry: Presentation of a giant fibroadenoma. *The Breast Journal* 2006;12(5):451-461
13. Raganonnan C, Fairbairn JK, Williams S, Hughes LE. Giant breast tumors of adolescence. *Aust NZ J Surg* 1987;57:243-247

14. Issam M. Giant fibroadenoma. Case report and review of literature. *Basrah Journal of Surgery* 2006; **12**:1-4.
15. Mukhopadhyay M, Patra R, Mondal S, Ghosh A, Ray AK. Bilateral giant juvenile fibroadenoma of breasts. *J Indian Assoc Pediatr Surg* 2009; **14**: 68-9.