

CASE REPORT

A RARE CASE OF RECURRENT GIANT FIBROADENOMA

Shanta B. Patil¹, Avinash Odugoudar², Somshekar Solpure³

HOW TO CITE THIS ARTICLE:

Shanta B. Patil, Avinash Odugoudar, Somshekar Solpure. "A rare case of recurrent giant fibroadenoma". Journal of Evolution of Medical and Dental Sciences 2013; Vol. 2, Issue 45, November 11; Page: 8813-8817.

ABSTRACT: Fibroadenomas are benign solid tumor associated with aberration of normal lobular development. Giant fibroadenoma is usually single and >5 cm in size /or >500 gms in weight. Their rapid growth, associated with skin congestion and ulceration, and tendency to recur, gives rise to a suspicion of malignancy.[1,2]. Important differential diagnoses are: phyllodes tumor and juvenile gigantomastia. These tumours are almost always benign and should be treated with breast conserving surgery. We present a case of 40year old female who presented with a large lump in the right breast. The diagnosis was made on fine needle aspiration cytology, mammography and ultrasonography. Simple excision of the lump was done. The diagnosis was confirmed on histopathology. Patient again presented twice with similar complaints with no evidence of malignancy of histopathology.

CASE REPORT: A 40 year old female presented to surgical opd with complaints of large lump in the right breast since 2months.It was insidious in onset and rapidly progressive in nature, pt also complained of associated pain since 15 days, dragging type nonradiating type. No history of discharge or ulcer over the skin. No history of fever, weight loss loss of appetite. On examination there was a large mass measuring 8*10cm occupying all the four quadrants of the right breast. Surface was bosselated. Dilated veins were noted over the lump. The lump was tender to palpate and margins were irregular. Lump was mobile .Skin was pinchable. Axillary nodes were not enlarged. Left breast and axilla was normal. All routine blood investigations and urine examinations were within normal limits. Fine needle aspiration cytology revealed –features suggestive of benign lesion, s/o giant fibroadenoma.

USG of the right breast showed a solid mass with features suggestive of fibroadenoma. Patient was posted for surgery and simple excision of the lump was done. Post operative histopathology revealed it as a benign lesion of right breast. After 3 years patient presented with similar complaints again on the right breast. On examination, there was large lump occupying all the four quadrants of the right breast measuring 8*8cm. Surface was bosselated and dilated veins were noted .The lump was tender to palpate with variable consistency. Skin was pinchable and lymph nodes were not palpable in the right axilla. Left breast and axilla were normal. FNAC and ultrasonography showed features suggestive of fibroadenoma which had recurred. Mammography also revealed features suggestive of fibroadenoma Patient was operated again and simple excision of the lump was done. Histopathology of the specimen showed pericanalicular and intracanalicular type of fibroadenoma. No features suggestive of malignancy. Patient presented again with similar complaints after 5 years of initial presentation. The lump was excised for the third time and the histopathological specimen showed no evidence of malignancy.

CASE REPORT



Fig. 1: Fairly large well defined mixed echogenic mass (both hyperechoic, hypoechoic and few anechoic) noted in the right breast involving all the quadrants.



Fig. 2: Gross appearance of the excised mass

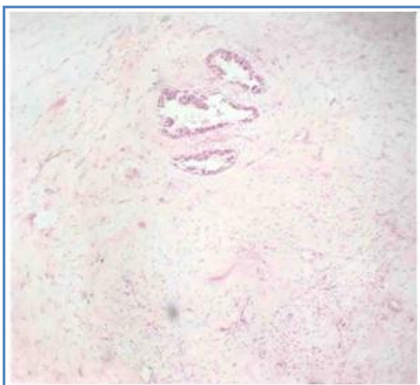


Fig. 3: Microscopic picture showing proliferation of ductal and stromal elements of breast.

DISCUSSION: Fibroadenomas are the most common cause of a breast mass in young females, accounting for approximately 75% of all breast lesions in young females [4]. However only 0.5-2% of all cases of fibroadenomas can be classified as giant fibroadenomas [5]. Furthermore, the development of multiple fibroadenomas, as presented in this case, occurs in only 15% of cases of giant fibroadenomas [6].

Giant fibroadenomas typically present clinically with pain and breast enlargement. They are usually smooth, firm, nontender and mobile to palpation, and most often occur in the upper outer quadrant of the breast [7]. There may be overlying skin changes. Other potential causes of significant breast enlargement, or macromastia, which must be considered when evaluating a patient presenting with this complaint include juvenile hypertrophy, macrocyst, lipoma, hemangioma, pseudoangiomatous stromal hyperplasia, cystosarcoma phyllodes and fibroadenoma. A thorough

CASE REPORT

history and physical exam, coupled with appropriate imaging evaluation, allows for narrowing of the differential. Juvenile (benign virginal) hypertrophy is a rare condition caused by an abnormal response to estrogen resulting in tissue hypertrophy, either unilaterally or bilaterally. This condition is not associated with the presence of a definable mass lesion on physical or imaging evaluation [5]. Macrocysts may present with both pain and breast enlargement, however on ultrasound these masses will appear as anechoic, fluid-filled lesions [8]. The mass lesion caused by a lipoma will be soft and is typically neither mobile nor discrete, while a large haemangioma would typically have associated cutaneous signs of vascular proliferation. Pseudoangiomatous stromal hyperplasia (PASH) is a rare condition which usually presents as small incidental foci or tumors in premenopausal women, rather than large nodular masses in young women, with only 4 documented cases of the latter presentation. Thus, while the categorical exclusion of PASH as a diagnosis requires histological examination, it remains epidemiologically an extremely unlikely diagnosis [9]. Therefore despite the multiple diagnoses that must be considered with such a presentation, most diagnoses have specific clinical or imaging features that distinguish them. However, there is no such distinguishing clinical or imaging feature that discriminates between cystosarcoma phyllodes and giant fibroadenoma, and thus determination of a final diagnosis is particularly challenging.

The appearance of a giant fibroadenoma on mammography is consistent with that of a benign fibroadenoma: a dense, sometimes lobulated, well-circumscribed mass with sharp margins. There may be a surrounding lucent halo. However, since giant fibroadenomas most commonly occur in pre-menopausal women, the pathognomonic "popcorn-like" calcifications that may be appreciated on mammographic imaging of fibroadenomas are rare in giant fibroadenomas, since these finding results from involution of the tumor in post-menopausal women [6].

A giant fibroadenoma can be distinguished histologically from a phyllodes tumor by the lack of stromal atypia, stromal overgrowth, stromal condensation surrounding ducts, and leaf-like architecture typical of a phyllodes tumor [12]. Rather, a giant fibroadenoma will have histology consistent with that of a fibroadenoma: a well-circumscribed proliferation of stromal and epithelial tissue, which can be classified as pericanalicular, intracanalicular, or variant, referring to the location of the stromal proliferation. This subclassification is a histologic distinction and carries no prognostic value. The distinction between phyllodes tumor and giant fibroadenoma however is prognostically significant: phyllodes tumors may be malignant while fibroadenomas are benign, with no association between the presence of a fibroadenoma and subsequent breast cancer development [13]. Though benign, because of their size giant fibroadenomas are nonetheless associated with significant morbidity, including venous congestion, glandular distortion, pressure necrosis, and occasionally ulceration [5, 14].

Of note, there is a documented association between the use of cyclosporine A therapy in renal transplant recipients and the occurrence of multiple fibroadenomas. Specifically, several cases of multiple giant fibroadenomas in association with cyclosporine A therapy have been reported. Possible mechanisms to account for this effect include direct effects of cyclosporine A on fibroblasts of the breast tissue, antagonism of prolactin receptor sites, effects on the hypothalamic-pituitary axis, and resolution of uremia [11, 15]. Though a well-recognized side effect of cyclosporine A is increased incidence of malignancy, the incidence of de novo breast cancer in women who are chronically immunosuppressed following transplant is lower than that of the general population, and thus development of fibroadenomas in association with cyclosporine A therapy should not raise

CASE REPORT

increased concern for malignancy [1]. Resolution of the fibroadenomas upon cessation of cyclosporine A therapy has been observed in one case, however more commonly the breast masses persist unchanged in size or appearance.

The management of a giant fibroadenoma differs from that of a phyllodes tumor. Typical surgical intervention for a fibroadenoma is enucleation, while excision with wide margins is the standard of care for a phyllodes tumor [16]. However, there is no definitive means of distinguishing between these two possible diagnoses without pathologic examination of the entire specimen. Thus, surgeons are left with a conundrum: a decision regarding surgical approach must be made prior to the ascertainment of the diagnosis on which such a decision should be predicted. Specifically, neither fine-needle aspiration (FNA) nor core biopsy has been proven efficacious in the definitive diagnosis of a phyllodes tumor, since the microscopic heterogeneity of both lesions introduces significant sampling error to these more conservative diagnostic approaches. Cytological features of specimens from FNA biopsy, such as hypercellular stromal fragments, can be present in both phyllodes tumors and fibroadenomas. Multinucleated stromal giant cells are less common in fibroadenomas than phyllodes tumors but considered non-specific and cannot be used as a diagnostic criterion [16]. Histologic features of a sample garnered from core needle biopsy similarly can be interpreted as consistent with either a phyllodes tumor or a fibroadenoma.

CONCLUSION: It is the combination of meticulous history taking, an attentive physical exam, a thorough imaging survey, and microscopic pathological examination, which will allow for tailored and definitive care to be delivered to women presenting with large breast masses. It is the duty of those clinicians caring for such women to strive to address this chief complaint in a manner sensitive to the needs and concerns of this demographic. Knowledge of the limitations of traditional diagnostic modalities such as fine-needle aspiration and core-needle biopsy contributes to the ability to deliver such sensitive care.

REFERENCES:

1. Muttarak M, Peh WC, Chaiwun B, Lumlertgul D. Multiple bilateral giant fibroadenomas associated with cyclosporine A therapy in a renal transplant recipient. *Australas Radiol* 2001;45(4):517-9 [PubMed]
2. Hanna RM, Ashebu SD. Giant fibroadenoma of the breast in an Arab population. *AustralasRadiol* 2002;46(3):252-6 [PubMed]
3. 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. *CurrProblDiagnRadiol* 2007;36(2):66-82 [PubMed]
4. Musio F, Monzingo D, Otchy DP. Multiple, giant fibroadenomas. *American Surgeon*. 1991;57(7):438-441 [PubMed]
5. Park CA, David LR, Argenta LC. Breast asymmetry: Presentation of a giant fibroadenoma. *The Breast Journal* 2006;12(5):451-461 [PubMed]
6. 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 [PubMed]

CASE REPORT

7. De Silva NK, Brandt ML. Disorders of the breast in children and adolescents, part 2: breast masses. *J Pediatr Adolesc Gynecol* 2006;19:415-18 [PubMed]
8. Muttarak M, Chaiwun B. Imaging of giant breast masses with pathologic correlation. *Singapore Med. J* 2004;45(3):132-9 [PubMed]
9. Zubor P, Kajo K, Dussan CA, Szunyogh N, Danko J. Rapidly growing nodular pseudoangiomatous stromal hyperplasia of the breast in an 18-year-old girl. *APMIS* 2006;114(5):389-92 [PubMed]
10. Eberl MM, Fox CH, Edge SB, Carter CA, Mahoney MC. BI-RADS classification for management of abnormal mammograms. *J Am Board Fam Med* 2006 Mar-Apr;19(2):161-4. [PubMed]
11. Cyrlak D, Pahl M, Carpenter SE. Breast imaging case of the day. Multiple giant fibroadenomas associated with cyclosporine A therapy. *Radiographics* 1999 Mar-Apr;19(2):549-51 [PubMed]
12. Jacklin RK, Ridgway PF, Ziprin P, Healy V, Hadjiminias D, Darzi A. Optimizing preoperative diagnosis in phyllodes tumor of the breast. *J Clin Pathol* 2006;59:454-459 [PubMed]
13. Ashbeck EL, Rosenberg RD, Stauber PM, Key CR. Benign breast biopsy diagnosis and subsequent risk of breast cancer. *Cancer Epidemiol Biomarkers Prev* 2007;16(3):467-72 [PubMed]
14. Raganonnan C, Fairbairn JK, Williams S, Hughes LE. Giant breast tumors of adolescence. *Aust NZ J Surg* 1987;57:243-247 [PubMed]
15. Alkhunaizi AM, Ismail A, Yousif BM. Breast fibroadenomas in renal transplant recipients. *Transplant Proc* 2004 Jul-Aug;36(6):1839-40 [PubMed]
16. Anderson BO, Lawton TJ, Lehman CD, Moe RE. Phyllodes tumors. In Harris JR, Lippman ME, Morrow M, Osborne CK, ed. *Diseases of the breast*, 3rd ed. New York, NY: Lippincott Williams & Wilkins; 2004: 991-1004.

AUTHORS:

1. Shanta B. Patil
2. Avinash Odugoudar
3. Somshekar Solpure

PARTICULARS OF CONTRIBUTORS:

1. Associate Professor, Department of General Surgery, Mahadevappa Rampure Medical College, Gulbarga.
2. Post Graduate, Department of General Surgery, Mahadevappa Rampure Medical College, Gulbarga.

3. Post Graduate, Department of General Surgery, Mahadevappa Rampure Medical College, Gulbarga.

NAME ADDRESS EMAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Shanta B. Patil,
H. No. 10- 2/34, Sangameshwar Nagar,
SB College Road, Gulbarga-585101.
Email – drshantapatil44@gmail.com

Date of Submission: 25/10/2013.

Date of Peer Review: 26/10/2013.

Date of Acceptance: 31/10/2013.

Date of Publishing: 06/11/2013