

Giant fibroadenoma mimicking phylleoyeds tumor

Abstract

A 36-year-old lady presented with progressively enlarging mass in her right breast. Core biopsy showed a benign proliferative breast lesion. Total excision of the mass was done with and the final histopathology features were suggestive of giant fibroadenoma.

Keywords: Breast, Giant fibroadenoma, Phylleoyeds

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Introduction

Giant fibroadenoma, and phyllodes are rare breast pathologies but are essential differential diagnoses to be considered for any rapid enlargement large breast mass.¹ Since giant fibroadenoma, and phyllodes have different management approach, it is important to distinguish them preoperatively. However, distinguishing them preoperatively is challenging.² We report a case of giant fibroadenoma of the breast mimicking phylloides tumor in a 36-year-old lady.

Case report

A 36 year old lady was referred to the Breast Surgery Clinic of King Faisal Hospital and Research Center (KFSH&RC), Riyadh, Saudi Arabia, as a case of right huge breast mass. She present with history of right breast mass that was increasing in size during one year interval. There was no history of nipple discharge or breast skin changes. No history of previous breast trauma or breast pain. In addition, there was no history of swelling in any other part of the body including the axilla. The patient has a regular period and she did not receive any kind of hormonal therapy. The patient's past history was negative and her family history was negative for cancer. Physical examination showed an obese lady with a BMI of 31. She has a normal general examination with stable vital signs. Local examination revealed size asymmetry between left and right breasts. The left breast and axilla examination was within normal. However, there was a palpable big mass in the right breast 1 9x1 3 cm, freely mobile, not tender and with no skin changes. No palpable right axillary lymph nodes.

Routine blood work labs were within normal. Bilateral Mammogram was performed and showed dense left breast parenchyma with no suspicious masses or micro calcifications with no enlarged left axillary lymph nodes. However, there was huge circumscribed rounded high density mass measuring 19.2 cm in its maximum CC dimension with scattered benign calcifications (Figure 1). The findings demonstrated BIRDS 4 with an impression of phyllodes tumor. There was no enlarged right axillary lymph node. Ultrasound (US) breasts showed a heterogeneously dense breasts parenchyma with a large right hypoechoic well defined capsulated mass which is measuring about 15.8 x 4 cm (Figure 2). There is associated internal heterogeneity and cystic component with minimal increase in vascularity. The images demonstrate a BIRADS 4A with a differential diagnosis of pseudoangiomatous stromal hyperplasia (PASH), phyllodes tumor (PT) or stromal tumor. Core needle biopsy from the right breast mass showed a sclerosing adenosis and fibrocystic changes.

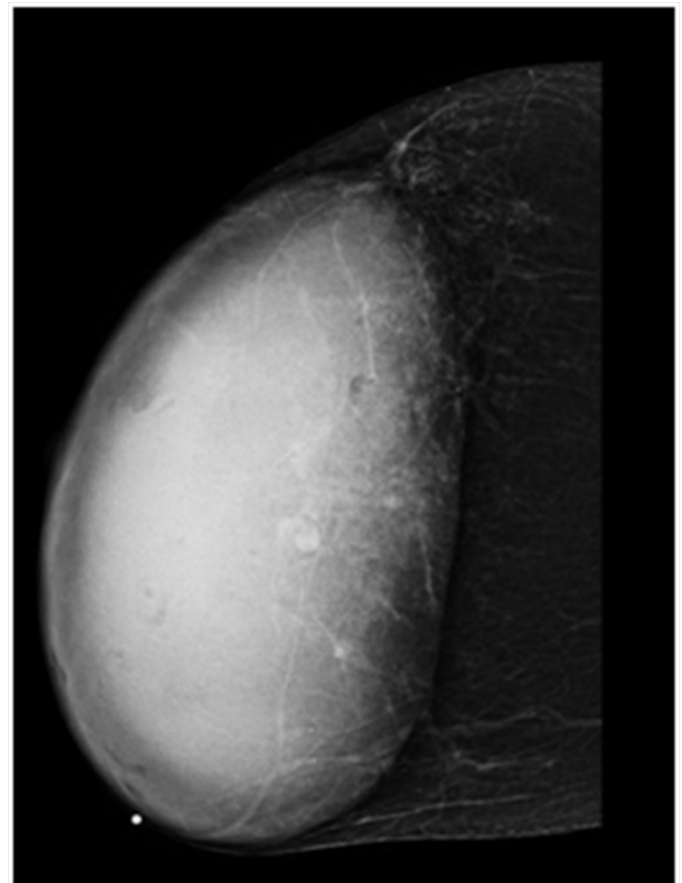


Figure 1 Mammography of left breast showing the giant fibroadenoma.

The patient was counseled for right nipple sparing mastectomy and left breast mastopexy but she refused. However, she agreed to go for right breast wide local excision and breast reduction. Intraoperative the patient found to have well circumscribed encapsulated mass, rubbery in nature with smooth surface. The final pathology revealed benign fibroadenoma-like lesion, containing areas of PASH, myofibroblastic proliferation, and fibrocystic changes including cysts, fibrosis, adenosis, apocrine metaplasia, and sclerosing adenosis (Figure 3).

The mass size was 16.5 cm with negative margins. So far the patient followed up for 9 months with no recurrent so far. He will be followed for another one year then the patient will be asked to go for annual screening mammogram.

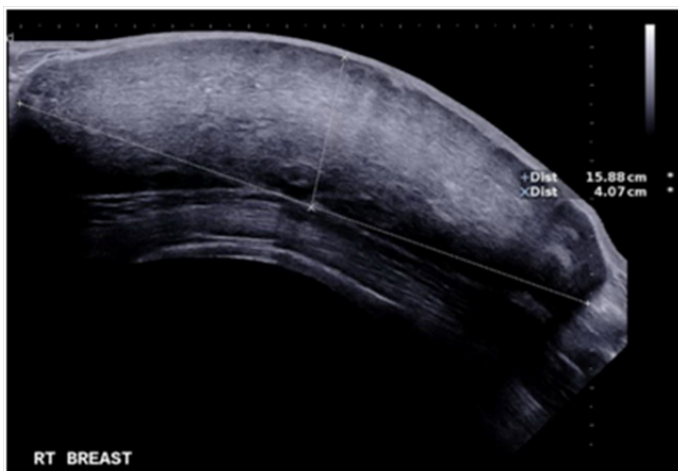


Figure 2 Breast ultrasound of left breast showing the giant fibroadenoma.

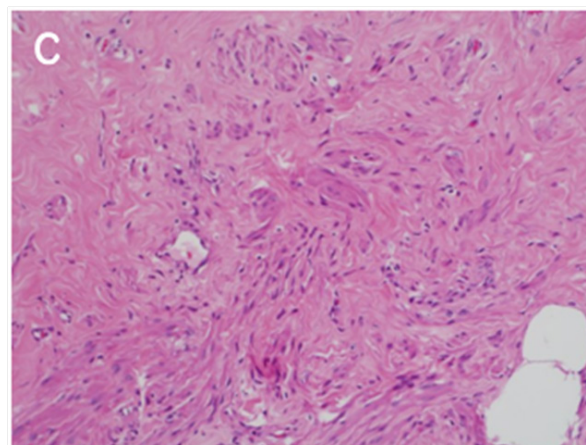
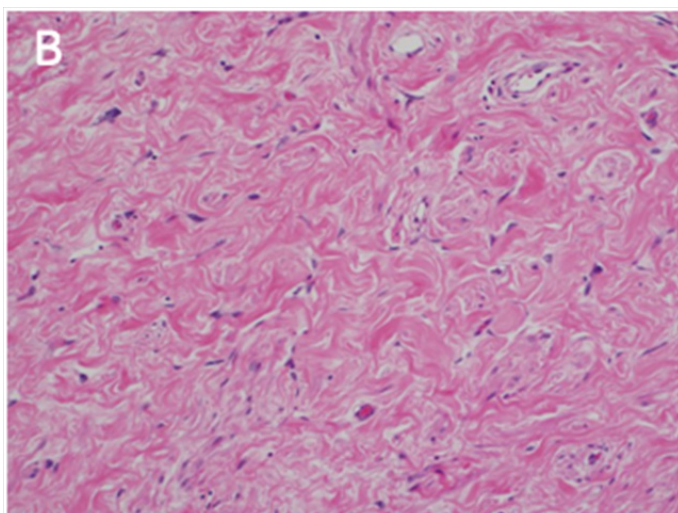
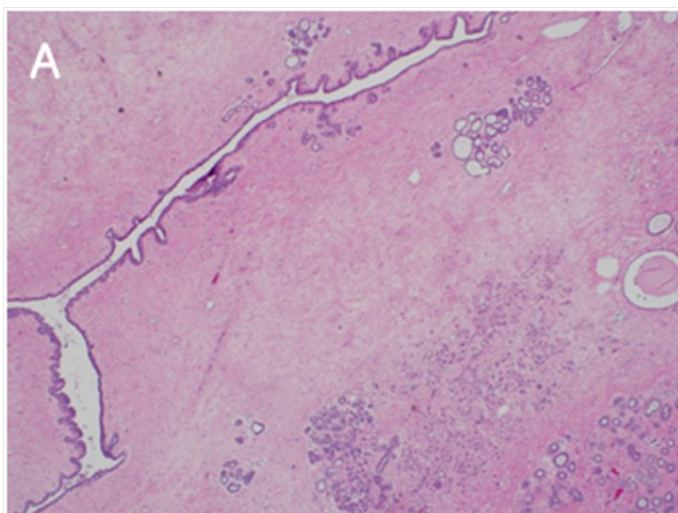


Figure 3 Final histopathology. A: Elongated dilated duct with surrounding fibrotic stroma and sclerosing adenosis. B: Focal areas showing slit like spaces lined by uniform spindle cells compatible with pseudoangiomatous stromal hyperplasia. C: Focal smooth muscle metaplasia in the stroma.

Discussion

Fibroadenoma is a common benign breast lesion that usually arises in young female with age range from 20 to 35 years old, but it can occur at any age. It is a benign lesion containing epithelial and stromal elements.³⁻⁵ Giant fibroadenoma is a rare form accounting for around 4% and is defined as a fibroadenoma measuring at least 5 cm in diameter.^{6,7} It requires surgical excision since it may lead to breast deformity, and it raises the suspicion of malignancy.⁸⁻¹¹ It is an estrogen-induced benign tumor, which may get stimulated by pregnancy and lactation and regress postmenopausally.^{10,12}

There are two major pathological types of fibroadenoma.¹³ The first type is simple fibroadenoma which has epithelial and stromal elements only and the second type is the complex fibroadenoma which may contain sclerosing adenosis, foci of cysts, papillary apocrine metaplasia, and epithelial calcifications.¹³ Patients with a complex fibroadenoma are at a higher risk of developing future breast cancer.¹³ Our patient was found to have the complex one.

Both giant fibroadenoma and phyllodes tumor (PT) arise from breast intralobular stroma.¹⁰ Therefore, there are a lot of overlaps between the giant fibroadenoma and PT, especially benign or borderline tumors, so it is critical for a surgeon to differentiate a giant fibroadenoma from PT. This is in fact important since the therapeutic approach may differ.^{14,15} Physical examination is not diagnostic since both may present as a big mass which may cause breast asymmetry or skin pressure changes. Mammography, breast ultrasound (US) and breast magnetic resonance imaging (MRI) help to identify the site and the size of the mass, and exclude multifocal disease.¹⁶⁻¹⁹ However, physical examination and standard breast radiographic evaluations could fail to differentiate giant fibroadenoma from PT in many cases.²⁰

The fine needle aspiration (FNA) cytology can diagnose phyllodes with an accuracy of only 63% which can rise up to 92.8%.²¹ In contrast, core biopsy can confirm the diagnosis and rule out other pathologies. In core biopsy malignant PT usually can be distinguished easily from fibroadenoma, however it is difficult to differentiate the giant fibroadenoma from benign and borderline PTs. Usually, PT has

an elements of columnar stromal cells with pleomorphism, nuclear atypia and low epithelial ratio in core biopsy.^{4,22,23} A core biopsy diagnosis of fibroadenoma does not completely exclude the diagnosis of phyllodes tumor.²⁴⁷

While surgical treatment for giant fibroadenoma is excision (as was done in our patient),⁹ surgical treatment for PT is wide excision with a 1 cm margin of normal breast tissue or mastectomy.²⁵ However, after complete surgical excision both giant fibroadenoma and PT can recur.^{11,26} but the possibility of giant fibroadenoma recurrence decrease after the third decade.^{11,14} For PT axillary lymph node dissection (ALND) is not required, except if they are involved with tumor.²⁷ Local recurrence occurs in 5-15% of benign PT and 20-30% of malignant PT.²⁶

Our patient found to have a complex giant fibroadenoma which was excised completely with negative margins. However, the patient need regular follow-up.

Conclusion

Diagnosis and management of large breast masses is still challenging. Giant fibroadenoma is a rare breast disease and should be histologically differentiated from phyllodes in clinical practice. Core cut biopsy is the most useful investigation, when clinical suspicion of phyllodes tumour is raised, but it is important to remember that a core biopsy diagnosis of fibroadenoma does not completely exclude the diagnosis of phyllodes tumor.

Acknowledgments

None.

Conflicts of interest

None.

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