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Case Report

Phyllodes tumor of right breast with metastasis to lungs, rare presentation

Prabhat B. Nichkaode[1]*, Sachin Kumar Patel[2]

[1]Department of Surgery, Chandulal Chandrakar Memorial Medical College, Kachandur, Durg, Chhattisgarh, India
[2]Department of Surgery, NKP Salve Institute of Medical Sciences, Maharashtra, India

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***Correspondence:**
Dr. Prabhat B. Nichkaode,
E-mail: rajanichkaode@gmail.com

ABSTRACT

Incidence of Phylloids tumor of the breast is between 0.5% to 2% of all breast tumors. Most common age of occurrence is between 45-49 years but it can occur even at younger age. It is important to distinguish it from more benign tumors of the breast like fibroadenoma as far the management is concerned. Phylloids are fibroepethilial tumors with malignant potential, so needs complete excision. We present a case of 53 years female who underwent simple mastectomy for high grade Phylloids tumor in her right breast a year back, presented with breathlessness and local recurrence, proved to be metastatic Phylloids to lung causing left pleural effusion and nodule in the right upper lobe of lung. When the effusion was tapped it appeared to be pleomorphic spindle cell metastasis.

Keywords: Breast, Malignant potential, Metastasis, Phylloids tumor, Surgery

INTRODUCTION

Phylloids tumor are uncommon fibroepethilial tumors of the breast, accounting for 0.5 to 2% of all breast tumors.[1] They usually present as large masses with or without involvement of nipple and areola complex. Usually they do not involve axillary lymph nodes. But their biological behavior may be variable, from benign fibroadenoma to boarder line behavior with local recurrence, to frankly malignant behavior with metastatic potential.[2] Imaging of breast identifies Phylloids as solid hypoechoic masses indistinguishable from fibroadenoma, but those that contain cystic areas raise suspicion for Phylloids.[3] The primary diagnosis of Phylloids is made on core needle biopsy, usually to differentiate from more benign tumors like fibroadenoma. There are reports suggestive of false negative with core needle biopsy, so excisional biopsy is the only method of definitive diagnosis.[4,5] Because the number of stromal mitoses on a core biopsy is not easily achieved due to limited tumor sampling.[5] Sub-classification of Phylloids as benign, borderline, or malignant is based on stromal overgrowth, increased stromal cellularity and pleomorphism.[5,6] Histopathology reveals a characteristic appearance leaf-like architecture consisting of long, cleft-like spaces and papillary projections of hyperplastic or atypical epithelial-lined cellular stroma, increased stromal overgrowth and mitoses, predicting high grade Phylloids or malignant and metastatic potential.[2,6] The choice of treatment for Phylloids is surgical, current guidelines indicate that excisional biopsy or partial mastectomy for tumors less than 5 cm. Total mastectomy for patients with tumors larger than 5 cm.[7,8] As the lymph node involvement is seen very rarely axillary sampling is not required even in tumors larger than 10 cm.[9,10]

CASE REPORT

A 53 years post-menopausal female patient presented to us in September 2016 with huge right breast lump with a

history of about 8-9 months. There was a small area of redness because she had applied some local medications on the lump. There was large mass of about 12×10 cm almost occupying the whole right breast with no fixity to skin, nipple areola complex was normal. The surface was bosselated, there were prominent veins over the swelling, consistency was cystic at places and firm to hard at places. The lump was mobile over pectorals, and not fixed to the chest wall. There were no ipsilateral axillary lymph nodes, nor ipsilateral supraclavicular Lymph nodes. There was no history of breast cancer in family. She had menarche at the age of 12 years and menopause at the age of 45 years. She was gravida 6 and para 4. Contralateral breast was normal.

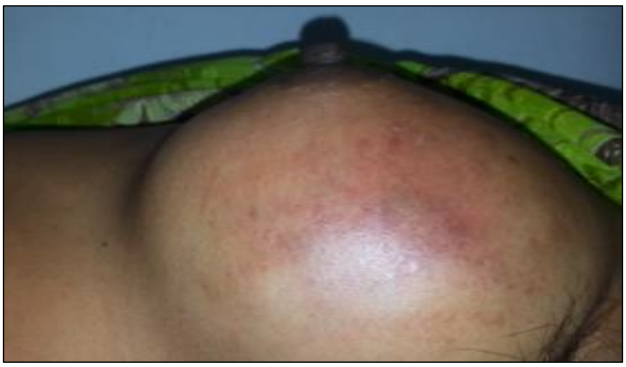


Figure 1: Phylloids tumor of the breast.

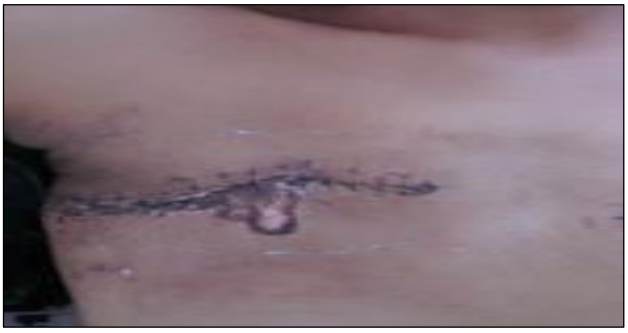


Figure 2: Wound primarily closed with absorbable sutures.

Figure 3: Specimen of total Mastectomy in our case

Ultrasound examination of right breast showed a large, lobulated solid mass that was hypoechoic and involved the entire right breast. Ultrasound guided core needle biopsy specimen revealed microscopic appearance of Phylloids with cellular spindle cell tumor with stromal overgrowth. The report was high grade Phylloids tumor with evidence of high pleomorphism and high mitotic index. CT Scan of the chest and upper abdomen revealed no metastasis in lungs or in liver, neither the patient is symptomatic for any bony pains or any other symptom. The patient had no co morbidities. As per the current guidelines on surgical treatment of Phylloids simple (total) mastectomy was done, large tumor with significant vascularity. There was no involvement of Pectoral muscle, no axillary lymph node sampling was done. The wound was irrigated with normal saline and a 16-no. suction drain kept and wound closed with 3-0 monocryl sutures. The procedure was uneventful, drain removed on 4th day and patient was discharged on seventh postoperative day.

The report on histopathology was suggestive of a large tumor of 12×10 cm. Well-circumscribed tan mass with areas of hemorrhage and necrosis, consistency was rubbery. Microscopic examination revealed a fibroepethilial tumor with prominent stromal overgrowth, hypercellular stroma, and multifocal tumor necrosis mixed with hyaline and myxoid degeneration, increased mitoses up to 15 per 10 high power fields, consistent with a diagnosis of high grade phyllodes tumor. All surgical margins were free from tumor.

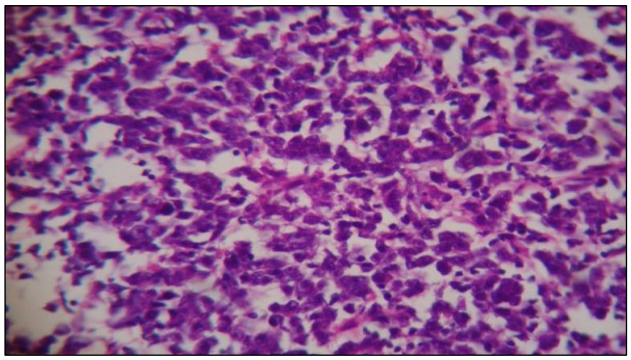
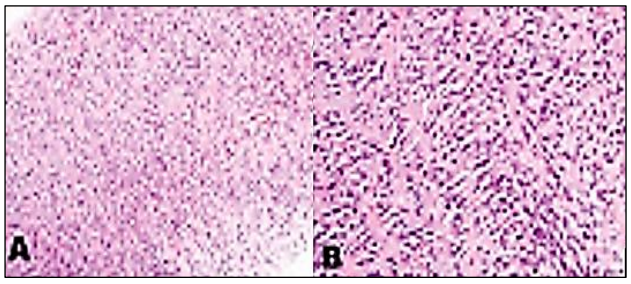


Figure 4: Histopathology, spindle cells (stromal component)



A: H and E stain low magnification, B: H and E stain high magnification.

Figure 5: USG guided core biopsy-histopathology.

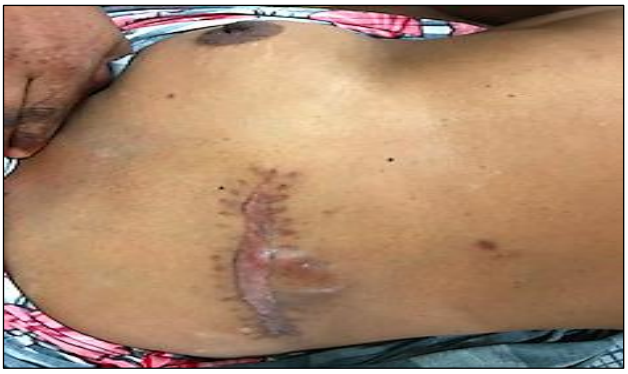


Figure 6: Local recurrence on the previous scar.

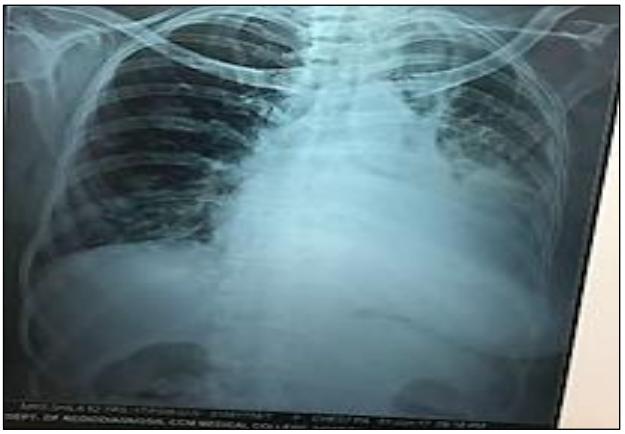


Figure 7: X ray chest showing left Pleural effusion positive for metastatic cells.

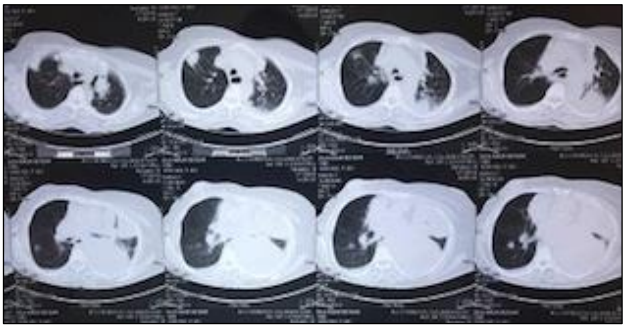


Figure 8: CT Scan of chest, nodules in the right lung positive for metastasis.

The patient was advised close follow up every three months, but she was lost to follow up and presented after 9 months with breathlessness and local recurrence at the suture line. USG of liver was normal; X ray chest is suggestive of left pleural effusion.

FNAC from the tumor recurrence site confirmed that it is local recurrence of Phylloids, cytology of the left pleural fluid is consistent with metastasis. Chest CT scan shows left massive pleural effusion with metastatic nodules in right upper lobe of lung. CT guided FNAC from the right pulmonary nodule is consistent with metastasis.

DISCUSSION

Johannes Müller, reported the first case in 1838. Phylloids derive their name from their histological appearance which is characterized by a leaf like architecture containing varying degrees of epithelial and mesenchymal elements. They are considered Biphasic tumors of breast, consisting of epithelial and stromal components, with the latter representing the neoplastic process.[4] It is of paramount importance to distinguish between a benign fibroadenoma from Phylloids tumor. The classic presentation is indistinguishable from fibroadenoma as patients present with a firm, mobile, well-defined, lobulated, and painless mass.[5] Imaging investigations are not always diagnostic, the only definitive method of diagnosis is Histopathology. Recently few reports are favoring the use of MRI for preoperative diagnosis.[6-9] The clinical behavior of Phylloids tumor is unpredictable and distant metastasis though rare but known in borderline and even seen in benign Phylloids.[10,11] In order to prevent the development of giant, or malignant, and metastatic tumors, early identification is of utmost importance, such as the one described in our case. Use of preoperative core needle biopsy has a sensitivity of 75% in separating PT from fibroadenoma, therefore, any solid mass that was previously deemed benign but subsequently showing rapid growth would necessitate excisional biopsy.[12,13] Surgery is the mainstay of treatment in Phyllodes tumor for local disease. Current guidelines by National Comprehensive Cancer Network, malignant phyllodes are to be treated like sarcoma, rather than typical carcinoma breast. No randomized trials for the role of chemotherapy and radiotherapy in adjuvant settings. NCCN suggests radiation therapy for local recurrence, although this is controversial.[13-15] The incidence of distant metastasis in malignant Phylloids is estimated to be between 20-25%.[15-17] The treatment of distant metastasis because of malignant Phylloids is a matter of debate. The prognosis is also very poor, and the average survival in such patients is not more than 2 years.[18,19] The role of surgery and radiotherapy is limited, and there is no role of hormonal therapy.[16-19] The value of chemotherapy is difficult to assess as the available sample size is small.

CONCLUSION

Phyllodes tumor is a rare mesenchymal primary breast tumor, which occurs in middle aged women, exhibits rapid growth and shares many clinical, imaging and histopathological similarities with the benign fibroadenoma. Breast imaging, Phyllodes may have no pathognomonic features, and definitive diagnosis is only be possible on histopathology. Primary treatment of Phyllodes revolves around surgical resection to either tumor-free or negative margins. Adjuvant treatment for Phyllodes is currently limited to radiation therapy. The value of chemotherapy is difficult to assess as the available sample size is small.

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