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A Rare Case of Recurrent Malignant Phyllodes Tumor in Young Female

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Abstract
Phyllodes tumors are rare fibro epithelial lesions of the breast. Women of 5th decade are commonly involved. Phyllodes tumor can be benign, borderline and malignant. Recurrence is seen early in malignant tumors. Prompt preoperative cytological diagnosis is necessary for adequate surgical planning, reducing recurrence and subsequently reoperation. Preoperative differentiation between benign and malignant phyllodes is possible by cytology. Palpable lymph nodes, chest wall infiltration and distant metastasis are less frequent in malignant phyllodes tumors. Surgical management is the mainstay can be either wide local excision or mastectomy, but achieving histologically clear margins by surgery is crucial as local recurrence has been associated with inadequate local excision. Our report of similar case of recurrent malignant phyllodes tumor is to enlighten about the need of better surgical management and close follow up of the patients.
Keywords: *phyllodes tumors, fibro epithelial lesions, mastectomy.*

Introduction

Phyllodes tumors are among the rare tumors of breast. Their occurrence is between 0.3-0.5% of all female breast tumors.(1) They are fibro epithelial lesions; presence of epithelial components and stromal components in the tumor differentiates them from other sarcomas.(2) They have a high propensity for local recurrence. Muller was the first to use the term cystosarcoma phyllodes which is misleading as tumors are mainly benign and they are rarely cystic.(3) The peak of occurrence of Phyllodes tumor is in 5th decade, very rarely they present in young and adolescents.(4) Rosen sub classified phyllodes tumor based on histological feature in benign, borderline and malignant.(2) Surgery is the main modality of treatment. However preoperative diagnosis by cytology is must for surgical planning and to reduce the chances of local recurrence of the tumor. Age, tumor size, surgical approach, mitotic activity, stromal over growth and surgical margin have been reported as prognosis-predictive factors related to relatively high incidence of local recurrence of phyllodes tumor.(5) The risk of recurrence is (4.7% - 30%) for benign phyllodes tumor and (30% - 65%) for borderline and malignant phyllodes tumor(6). Surgery ranges from wide local excision to

mastectomy. Herein we present a case of young adult female with recurrent lump in right breast which turned out to be malignant phyllodes tumor, which is uncommon in young age group.

Case Report

A 32 years old female presented to us with a lump in her right breast for 1 year duration. Her further history revealed that the lump gradually progressive initially but from past 3 months it was rapidly enlarging progressing to about 6cm * 6cm size. She has regular menstrual cycles, and a mother of 2 children. There is no relevant family history of breast cancer. There was no co morbid illness. She has undergone surgery was a large lump in right breast 3 years back. On examination left breast is normal; there is lump in right breast of size 7*6 cm occupying the outer upper quadrant of right breast, with presence of a healthy scar in outer upper quadrant. The lump was fixed with the breast tissue but not to the pectorals, chest wall or skin. There were no axillary or other groups of lymph nodes palpable. Other basic routine investigations were normal. FNA cytology confirmed the diagnosis of malignant phyllodes tumor. Patient was taken up for surgery; we planned wide local excision with 1cm clear margins, and the same was done. In the postoperative period drains were removed after 3 days, otherwise the period was uneventful. The biopsy specimen on histopathological examination was consistent with malignant phyllodes tumor and surgical margins were clear. The patient is in follow up and healthy.

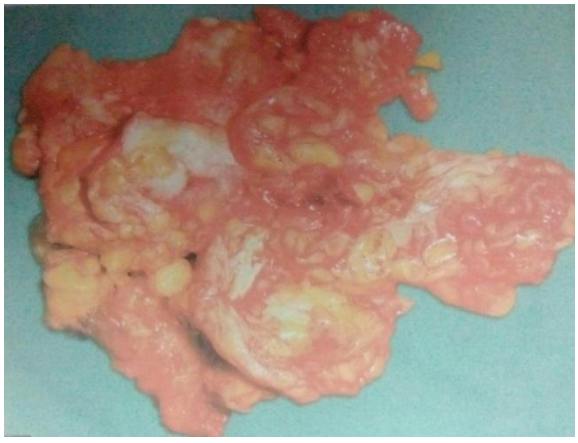

Fig 1: specimen of wide local excision

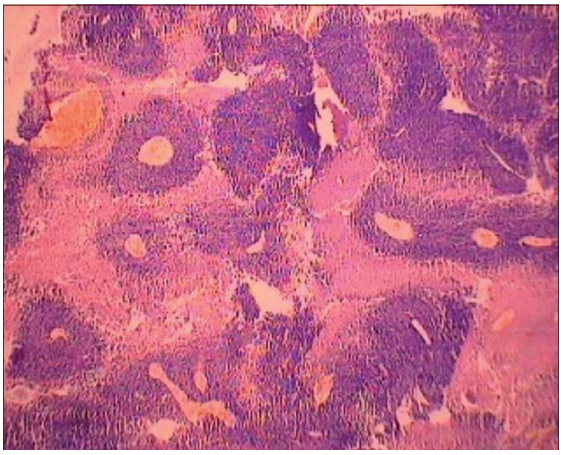

Fig 2: HPE showing malignant phyllodes

Discussion

Phyllodes tumors are rare fibro epithelial neoplasms of the breast accounting for less than 1% of the breast tumors.[1] They are composed of epithelial and cellular stromal components and this cellular stroma is responsible for neoplastic process, local recurrence and metastases.[2] The most common age group of presentation is 45-49 years, and tumor is rarely seen in adolescents.(4) In our case report age of the patient is 32 years which is quite unlikely age for the tumor. Presentation of the tumor is similar to other benign lumps but history of rapid enlargement of lump to a considerably large size is often seen and is suspicious of the condition.[7] Phyllodes tumors divided histologically as benign, borderline, or malignant according to the features such as tumor margins, stromal overgrowth, tumor necrosis, cellular atypia, and number of mitosis per high power field and pleomorphism.[2,8]. The majority of phyllodes tumors have been described as benign, and 15-30% being malignant subtype.[9] Malignant phyllodes tumors, if inadequately treated, have a propensity for rapid growth and metastatic spread.[9,10] However palpable axillary lymph nodes, chest wall infiltration and distant blood borne metastasis are less frequently seen.[10] With the non-operative management of fibro adenomas widely adopted, the importance of phyllodes tumors today lies in the need to differentiate them from other benign breast lesions. As both phyllodes tumors and fibro adenomas belong to a spectrum of fibroepithelial

lesions, accurate cytological diagnosis of phyllodes tumors by fine needle aspiration can be difficult [7]. Cytologically, it is often easier to differentiate benign from malignant phyllodes tumors than to separate benign phyllodes tumors from fibro adenomas [11]. The presence of cohesive stromal cells (phyllodes fragments), foreign body giant cells, bipolar naked nuclei, and the absence of apocrine metaplasia are highly suggestive of a phyllodes tumor[12]. With the increased use of core biopsies, preoperative diagnostic accuracy should improve and confusion with breast carcinomas should rarely occur[13]. Komenaka et al. [14] found the sensitivity of core needle biopsy to be 99% and negative predictive value and positive predictive value 93% and 83%, respectively, for the diagnosis. Surgery is the main modality of treatment, either breast conservative surgery or mastectomy, however there is no difference in overall survival rates in both even though there is more local recurrences in breast conservative surgery.[15] Local recurrence in phyllodes tumors is seen between 10-20% and has been associated with inadequate local excision and narrow surgical margins.[16] Recurrences in malignant phyllodes are early to occur than in benign disease but there is no clear association with rate of recurrence. Local recurrence usually occurs within few years of surgery and histologically resembles the original tumor. Occasionally, recurrent tumors show increased cellularity and more aggressive histological features than the original lesion.[16] In most patients, local recurrence is isolated and is not associated with the development of distant metastasis as also in our case. Tumor size and surgical margins were found to be the principal determinant of local recurrence[10]. Local recurrences can be managed by further wide local excision with clear margins and mastectomy may be considered as a surgical option. [7]

Conclusion

Phyllodes tumors even though are rare should be considered as a differential diagnosis for the breast lump. This case report is to put light for the need of good preoperative diagnosis and better management and regular follow up of the patients. As this disease has a high propensity for recurrence because of inadequate surgical excision. Importance lies in ensuring clear surgical margins. Further, majority local recurrences can be controlled with wide local excision. A close follow up is necessary in all cases of phyllodestumor.

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