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Phyllodes Tumour; A Rare Finding

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Abstract: **Breast cancers, which develop inside the ducts or lobules of the breast, phyllodes tumors start outside the ducts and lobules. Phyllodes tumours develop in the breast's connective tissue, called the stroma. In addition to stromal cells, phyllodes tumours can also contain cells from the ducts and lobules. In this case 35 females were identified to have a mass in the breast. All of them underwent mammography and showed the palpable mass as fibroadenomas. But one female of age 48yrhad a breast mass. The size of the mass is 125X112X85mm in the upper quadrant of left breast. A variation of size which is different from 5mm to 12mm normal for the fibroadenomas in other females.**

Keywords: **Breast cancer, Phyllodes tumour, Fibro adenoma, Ducts, Lobules, Stroma.**

I. INTRODUCTION

The Phyllodes tumour a lesion limited to mammary tissue was first described by Mullerian in 1838. It is a rare condition seen in 1 in 10000 and its cause remains unclear. It occurs most often in the 3rd and 4th decades of life exclusively in females this is more seen in whites, Latin whites and east Asians as per epidemiological data.

Most patients have a smooth, round, firm, well-defined, motile, painless mass on examination. These do not have any pathognomic, mammographic or ultrasonic features. They are difficult to distinguish from fibroadenoma on physical or radiological examination, except for its large size. So the behaviour of Phyllodes tumour cannot be assessed on this basis.

Palpable axillary lymph nodes are encountered in 20%, but histological evidence of malignanacy is less than 5%. The stroma shows monoclonal and neoplastic cells. Cytogenetic study reveals similarities between fibro adenomas and Phyllodes tumours and there is evidence that fibroadenomas have the ability to progress into Phyllodes tumour.

They display a broad range of clinical and pathological behavior and are regarded as falling within the spectrum of fibroepithelial neoplasms. Surgery has been the primary modality of treatment. However the extent of resection and the role of adjuvant radiotherapy and chemotherapy are still controversial. The risk of recurrence is (4.7% - 30%) for benign phyllodes tumour and (30% - 65%) for borderline and malignant phyllodes tumour (Popescu *et al.,* 1991).

II. CASE STUDY

35 patients were initially examined during a period of 2011-2014. All of them had benign fibroadenomas except one case.

A 48 year old female admitted with complaints of lump of left breast since one year but increased in size within a span of 3 months duration without any associated symptoms. She was married since 34 years of married life and had 3 children. There was no morbid illness. On local examination of left breast a lump of size 12.5x11.2 cms, occupied in the left upper quadrant of breast with multiple dilated veins noted over the entire breast. The mobility of the lump was within the left breast. No other significant findings noted over the left breast. No enlarged lymph nodes noted. There was no significant mass noted on right breast. (Figure 1.). All basic investigations were within normal limits. The bilateral mammogram showed grade 4 lesion in the left breast and no lesion in the right breast(Fig.2). Then we proceeded for preoperative biopsy confirmed as phyllodes tumour. Hence we performed left simple wide excision.Fig.3. The post operative period was uneventful. The final excised specimen HPE was consistent with benign phyllodes tumour of left. The report showed smooth and nodularity of the mass, Grey white ,firm, in appearance with cystic areasFig 4,5. Section revealed

breast tissue with cystic spaces with broad papillary projections lined by flattened to coloumnar epitheliam with no atypical features. Stroma is composed of cellular spindle cell type. Nuclear atypia is minimal and no gaint cells are seen.

Table 1

Period of study- Years	No. of cases
2011-2012	10
2012-2013	10
2013-2014	6

All of them had palpable mass in the breast. The palpable mass was asymptomatic. All the cases(26) were found to be foibroadenomas on histopathological findings. There were left side in 10 cases and 16 were right sided lesions. Allof them are parous. In those with left sided had 10 in upper outer quadrants and those right sided were 16 in upper outer quadrant. Except in these cases during 2013-2014, the breast mass was very large in the left upper quadrant. The masses measured between 5mm to 12 mm. n = 34

Table 2. (2011-2012)

S.no	Size of mass(cms)	Quadrant right/left
1	4x3x2	left upper
2	5x3x1	Right upper
3	2x2x1	Right upper
4	4x2x1	Left upper
5	6x3x4	Right upper
6	4x3x2	Right upper
7	3x3x2	Left upper
8	6x4x2	Right upper
9	3x2x1	Right upper
10	3x2x1	Left upper

Table 3 (2012-2013)

S.no	Size of mass(cms)	Quadrant right/left
1	4x3x2	Right upper
2	5x3x1	Left upper
3	2x2x1	Right upper
4	4x2x1	Right upper
5	6x3x4	Left upper
6	4x3x2	Right upper
7	3x3x2	Left upper
8	6x4x2	Left upper
9	3x2x1	Right upper
10	3x2x1	Left upper

Table 4 (2013-2014)

S.no	Size of mass(cms)	Quadrant right/left
1	4x3x2	Right upper
2	5x3x1	Left upper
3	2x2x1	Right upper
4	4x2x1	Right upper
5	6x3x4	Left upper
6	12.5x11.2	Left upper

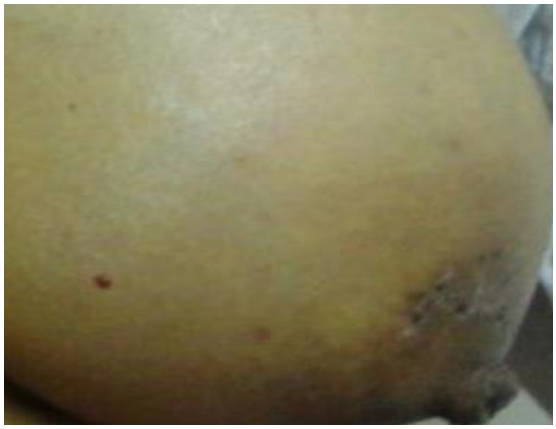


Fig:1

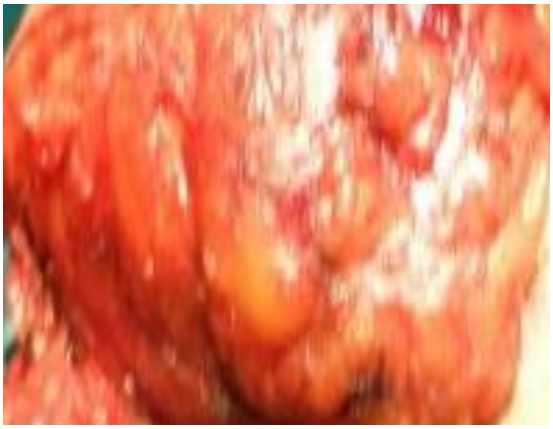
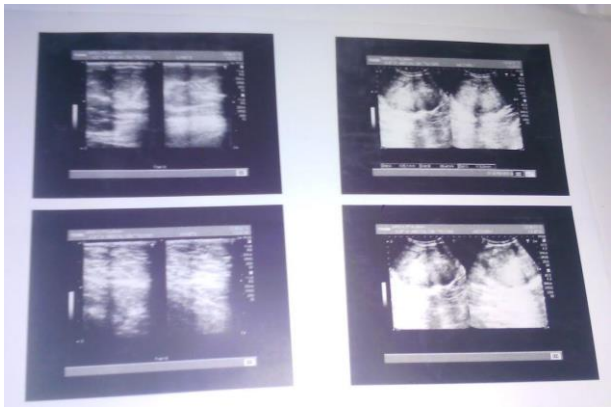


Fig: 2 Showing mammogram of both Rt and Lt Breast



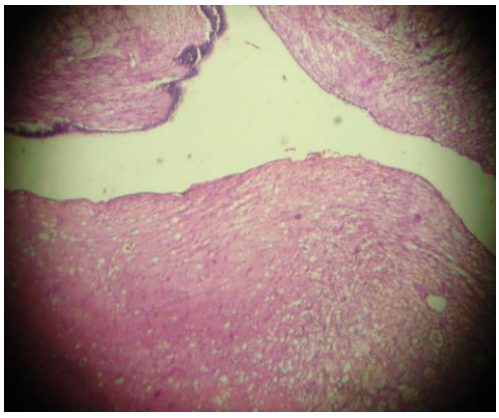
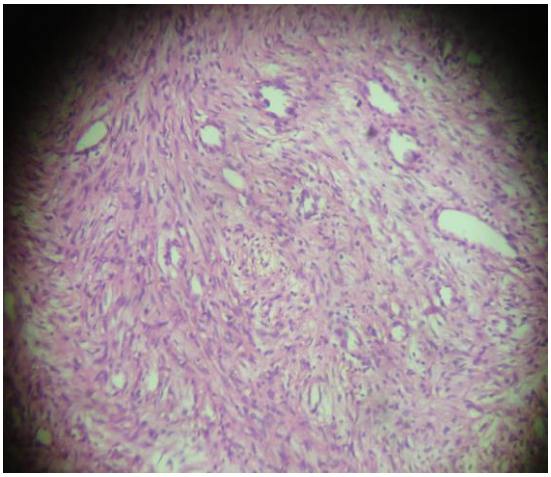


Fig: 3 , 4



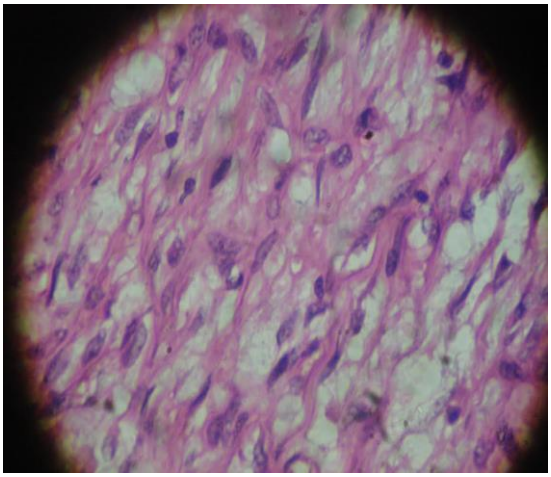


Fig: 5,6 Normal spindle shaped stromal cells

III. DISCUSSION

Phyllodes tumours are rare fibroepithelial lesions that account for less than 1% of all breast neoplasms (Dyer *et al.*, 1966). In our case it is about 1% among 26 cases seen. With the non-operative management of fibroadenomas widely adopted, the importance of phyllodes tumours today lies in the need to differentiate them from other benign breast lesions. All breast lumps should be triple assessed and the diagnosis of a phyllodes tumour considered in women, particularly over the age of 35 years, who present with a rapidly growing ―benign breast lump. Treatment can be by either wide excision or mastectomy provided histologically clear specimen margins are ensured. In this case surgery was done with wide margins of excision and sent for biopsy as for routine. Nodal metastases are rare and routine axillary dissection is not recommended. Few reliable clinical and histological prognostic factors have been identified. Local recurrence occurs in approximately 15% of patients and is more common after incomplete excision. It can usually be controlled by further surgery. Repeated local recurrence has been reported without the development of distant metastases or reduced survival. Approximately 20% of patients with malignant phyllodes tumours develop distant metastases. Long term survival with distant metastases is rare. Phyllodes tumours are rare fibroepithelial lesions that account for less than 1% of all breast neoplasms (Dyer *et al.*, 1966; Popescu *et al.*, 1991; Buchanan, 1995). First described by Johannes (1838) he coined the term C*ystosarcoma phyllodes*; a misleading description as the tumours are rarely cystic and the majority follow a benign clinical course. In total, more than 60 synonyms have been reported (Fiks, 1982) but today, the World Health Organisation regards phyllodes tumour as the most appropriate nomenclature World Health Organisation (1982). Displaying a broad range of clinical and pathological behaviour, phyllodes tumours should be regarded as a spectrum of fibroepithelial neoplasms rather than a single disease entity. At one extreme, malignant phyllodes tumours, if inadequately treated, have a propensity for rapid growth and metastatic spread. In contrast, benign phyllodes tumours on clinical, radiological, and cytological examination are often indistinguishable from fibroadenomas and can be cured by local surgery. With the non-operative management of fibroadenomas widely adopted, the importance of phyllodes tumours today lies in the need to differentiate them from other benign breast lesions.

A Medline search of the English literature published since 1975 was performed using the medical subject heading ―phyllodes tumour. Further articles were identified from the reference lists of papers reviewed. In view of the rarity of these tumours, most reported clinicopathological series are small, retrospective in nature, with limited long term follow up. As both phyllodes tumours and fibroadenomas belong to a spectrum of fibroepithelial lesions, accurate cytological diagnosis of phyllodes tumours by fine needle aspiration can be difficult (Chua *et al.*, 1989). Cytologically, it is often easier to differentiate benign from malignant phyllodes tumours than to separate benign phyllodes tumours from fibroadenomas (Stebbing and Nash, 1995). The presence of cohesive stromal cells (phyllodes fragments), isolated mesenchymal cells, clusters of hyperplastic duct cells, foreign body giant cells, bipolar naked nuclei, and the absence of apocrine metaplasia are highly suggestive of a phyllodes tumour (Umpleby *et al.*, 1889). In the correct clinical setting, the presence of both epithelial and stromal elements within the cytological smear supports the diagnosis (Ciatto *et al.*, 1992). Epithelial cells may, however, be absent from specimens taken from malignant lesions (Iau *et al.*, 1998). The reporting of C3 (possibly benign) or C4 (possibly malignant) cytology from what appears to be a fibroadenoma should raise clinical suspicion of a phyllodes tumour (Oberman, 1965). With the increased use of core biopsies, preoperative diagnostic accuracy should improve and confusion with breast carcinomas should rarely occur (Amerson, 1970). The natural history of fibroadenomas has recently been clearly defined. With the negligible increased risk of malignancy and the recognition that 40% of fibroadenomas reduce in size over a two year period, non-operative management has been widely adopted (Adachi *et al.*, 1993). 91 With the low prevalence of phyllodes tumours among all benign breast lumps, routine excision of all benign breast lumps cannot be advocated. However, treatment protocols need to be adopted that allow the timely identification of phyllodes tumours. As most phyllodes tumours grow faster than fibroadenomas, histological assessment and possible excision of a benign breast lump should be considered if rapid growth is seen during a period of observation (Nambiar and Kutty, 1974).

IV. CONCLUSION

Hence we reported the benign phyllodes tumour to give the following information. All rapidly growing benign breast lesions require histological assessment. Wide excision or mastectomy should be performed ensuring histological clear margins. Mastectomy for malignant tumours offers no survival advantage. Axillary nodal dissection is not required.

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