

## Case report

# Phyllodes tumor of breast- 2 case reports

Dr.Anuradha Balasubramaniam, Dr.Sneha Joshi, Dr.Mangala Nagare, Dr.Smita Pathak, Dr.Deepa Tekwani

Department of Pathology, MIMER Medical College, Talegaon (Dabhade), Pune

Corresponding author : Dr.Anuradha Balasubramaniam

### Abstract:

Phyllodes tumor of breast is a borderline stromal tumor occurring in 2.5 % of all fibroepithelial tumors in breast in Asian countries in the 25-30 years age group and 0.3-1 % of all primary tumors in Western countries, viz. Central and South America in the age group of 40-50 years. In our hospital there were two cases in the 45-65 years age group, presenting with a rapidly growing unilateral breast lump with no axillary lymphadenopathy nor any nipple discharge.

On clinical examination, radiological examination and FNAC a provisional diagnosis of a benign breast pathology was made. The patients were treated surgically by a wide local excision in one and a simple mastectomy in the other. Both specimens were sent to the department of Pathology for further examination. Grossly both were 11-15 cms in size, well-encapsulated, lobulated and greyish-white on cut surface, with congested blood vessels. Microscopically both were diagnosed as benign phyllodes tumor of breast, though one of them showed osseous and squamous metaplasia in the stromal element. However there was no stromal atypia.

**Keywords:** Breast, phyllodes, stroma

### Introduction:

Phyllodes tumor of breast is a borderline stromal tumor occurring in 2.5 % of all fibro-epithelial tumors of breast in Asian countries, in the 25-30 years age group and 0.3 % of all primary tumors in the Western countries viz. Central and South America in the age group of 40 – 50 years<sup>[7]</sup> and sometimes in the sixth decade.<sup>[4]</sup>

### Case-reports:

In our hospital there were 2 cases aged 45 years and 65 years, both presenting with a unilateral, rapidly growing 9-14 cms sized painless breast mass in a preexisting lump of 1-3 years, but without any associated axillary lymphadenopathy, nipple discharge nor any ulceration due to pressure necrosis.

On clinical examination, in one patient (forty-five year old) dilated veins were visible over the bosselated breast mass.

On imaging, a spherical mass with well-defined borders and without any coarse calcifications was seen based on which a

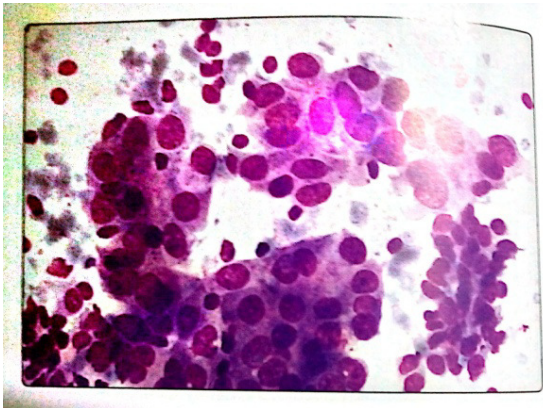
provisional diagnosis of a giant fibroadenoma was made in both our cases.

On FNAC, in the forty five year old case (case 1), a provisional diagnosis of a benign fibroadenoma (left) breast with fibrocystic change was made. However due to loose clusters of ductal epithelial cells with mild nuclear variation, prominence of nucleoli and an inflammatory background with foamy macrophages, malignancy could not be ruled out. Hence a simple mastectomy was done.

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FNAC Case 1: Epithelial atypia in fibroadenoma: Loose clusters of atypical epithelial cells showing prominent nuclear enlargement and some irregularity. The epithelial fragment of bland ductal cells of usual type at lower right with scattered, bare, bipolar nuclei.

(HE stain, HP)

In the sixty five year old case(case 2 ), on FNAC, a provisional diagnosis of benign fibroadenoma (right)breast was made based on the presence of a monolayer of uniform ductal epithelial cells and myoepithelial cells, with 'bare 'nuclei.

Hence a wide local excision was done.

Gross examination :

On external examination, both were 11-15 cms in size, well-encapsulated, large, fleshy greyish-white and covered by congested blood vessels.

Cut surface (Figure 1Case1) showed a lobulated appearance with leaf-like duct spaces. Consistency was firm, rubbery with few soft gelatinous areas. However there was no evidence of necrosis, hemorrhage or calcification.

Fig.1Case1 (Cut surface)

Leaf-like duct spaces, lobulated appearance, with firm, white, soft, gelatinous areas

Microscopy:

In both cases the sections showed a well encapsulated tumor mass composed of spindle stromal cells (figure 2) covering the epithelial component in a leaf-like fashion (figure 1). Stromal atypia was not seen. However in one case the epithelial component showed apocrine change and squamous metaplasia , while the stromal component showed focal hyaline change and areas of osseous metaplasia . In both cases a diagnosis of benign phyllodes tumor of breast was made.

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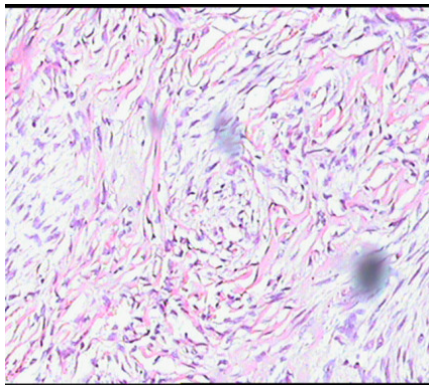
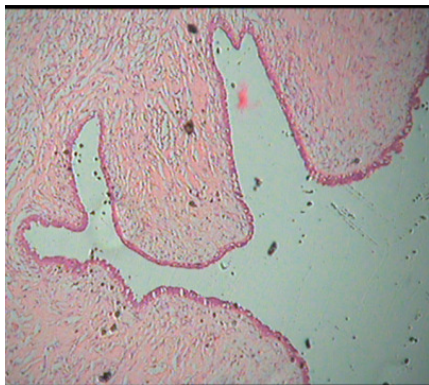


Fig .1(H&E stain, LP-10X)

Fig. 2(H&E stain, HP 45X)

Leaf-like epithelial component Spindiloid stromal cells

#### Discussion:

The term phyllodes tumor is recommended in the World Health Organization's classification for the tumor previously called cystosarcoma phyllodes<sup>[6]</sup>.

The cystosarcoma phyllodes term was chosen to emphasize the leaf-like pattern and fleshy, gross appearance of the lesion<sup>[5]</sup>. Phyllodes tumor generally occurs in 2.5 % of all fibroepithelial tumors of the breast in Asian countries in the 25 – 30 yrs age group<sup>[6]</sup> whereas in our hospital, both the cases were aged 45yrs and 65 yrs

Clinically the patients present with a unilateral, firm, painless breast mass not attached to the skin. Very large tumors (> 10 cms) may stretch the skin with striking distention of the superficial veins but ulceration is very rare<sup>[6]</sup>. Patients with

phyllodes tumor often have a history of a rapidly enlarging tumor, sometimes at the site of a pre-existing long-standing mass<sup>[6]</sup>, where a differential diagnosis of a malignancy is often considered.

All the above findings were present in our two cases.

USG can show a rounded sharply defined mass containing cleft-like spaces and cysts with or without coarse calcifications, but in our cases both were diagnosed as giant fibroadenoma on USG<sup>[5]</sup> and there were no calcifications.

The cytological findings in both our cases showed features of a benign fibroadenoma<sup>(3)</sup>. But in case 1, malignancy could not be ruled out due to loose clusters of ductal epithelial cells showing mild nuclear variation, prominent nucleoli against a hemorrhagic background with foamy macrophages. Hence a simple mastectomy was done. The gross and microscopy of the tumor mass also matched with the features of a giant fibroadenoma the synonym of which is a benign phyllodes tumor.

Phyllodes tumor of breast can be graded as benign, borderline and malignant<sup>[7]</sup> based on stromal hypercellularity, cellular pleomorphism, mitoses, margin invasion, stromal pattern and stromal differentiation (Table 1) As there were no such features in both our cases, we diagnosed them as benign phyllodes tumor.

Treatment: Complete wide local excision is the norm.

Prognosis: The 5 year survival is seen in 90% of the cases, local recurrence is seen in the 30 % of the cases. Hence wide local excision is advised. In both our cases the postoperative period has been uneventful till date.

# Note: Our two cases were specifically selected as they had presented in the older age group of 45 – 65 years where usually we expect a malignant pathology.

Histological feature	Fibroadenoma	Phyllodes tumour		
		Benign	Borderline	Malignant*
Tumour border	Well-defined	Well-defined	Well-defined, may be focally permeative	Permeative
Stromal cellularity	Variable, scanty to uncommonly cellular, usually uniform	Cellular, usually mild, may be non-uniform or diffuse	Cellular, usually moderate, may be non-uniform or diffuse	Cellular, usually marked and diffuse
Stromal atypia	None	Mild or none	Mild or moderate	Marked
Mitotic activity	Usually none, rarely low	Usually few (< 5 per 10 HPF)	Usually frequent (5-9 per 10 HPF)	Usually abundant (≥ 10 per 10 HPF)
Stromal overgrowth	Absent	Absent	Absent, or very focal	Often present
Malignant heterologous elements	Absent	Absent	Absent	May be present
Distribution relative to all breast tumours	Common	Uncommon	Rare	Rare
Relative proportion of all phyllodes tumours	—	60-75%	15-20%	10-20%

HPF, high-power fields.

\* While these features are often observed in combination, they may not always be present simultaneously. Presence of a malignant heterologous element qualifies designation as a malignant phyllodes tumour, without requirement for other histological criteria.

[ Table 1 ]

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