

## Case Report

# Bilateral phyllodes tumor of the breast in a young nulliparous woman

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### ABSTRACT

Cystosarcoma phyllodes is a rare breast tumor with incidence of 1% of all the mammary tumors. Bilateral occurrence is very rare. Median age of presentation is 40-50 years. We present a case of 24 years old nulliparous female with phyllodes tumour developing in both the breasts one after another with a gap of five years. Patient underwent simple mastectomy on both sides. Histopathology report confirmed benign variety of cystosarcoma phyllodes on both sides.

**Keywords:** Cystosarcoma phyllodes, Bilateral, Benign, Nulliparous

### INTRODUCTION

Cystosarcoma phyllodes is a rare breast tumor with occurrence of less than 1% of all mammary tumors. Chelius in 1827 first described this tumor, whereas Muller in 1838 coined the term cystosarcoma phyllodes.<sup>1</sup> Median age of presentation is 40-50 years. Occurrence of cystosarcoma phyllodes in both breast is very rare.<sup>2</sup> Cystosarcoma phyllodes is classified into benign, borderline and malignant categories depending upon degree of stromal hypercellularity, cytological atypia, mitotic activity and stromal overgrowth. Histologically they are fibroepithelial tumors likely originating from terminal ducto-lobular unit and considered as stromal derived. Diagnosis is based on clinical examination, mammography/sonography and FNAC but final diagnosis is based on histological findings. Complete surgical resection offers high rate of local control and disease free survival. We report a rare case of bilateral cystosarcoma phyllodes in a young nulliparous female.

### CASE REPORT

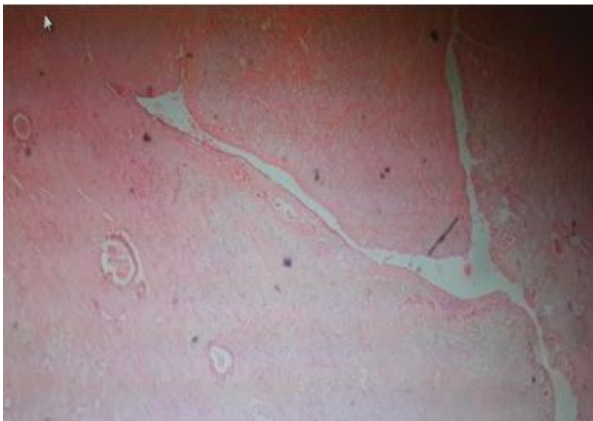
A 24 years old nulliparous female presented with painless lump in left breast since last 5 months. The lump rapidly increased in size during last 2 months. There was no

nipple discharge. There was history of simple mastectomy on right side for the similar disease 5 years back. There was no history of similar complaints in her family. On examination, patient general condition was good. On local examination there was a lobulated lump measuring 15 x12 cm in left breast involving all four quadrants. Overlying skin was thin and stretched with prominent veins. Nipple areola complex was normal. Lump was firm in consistency and was not fixed to skin or chest wall (Figure 1).



**Figure 1:** Left side breast lump and previous surgery transverse scar mark on right side.

There were no palpable axillary lymph nodes. Systemic examination was within normal limits. Routine haematological investigations were normal. Chest x-ray was normal. FNAC showed hyper cellular smear with increase stromal fragment and stromal cells were plumped. Mild to moderate degree of pleomorphism was seen with few nuclear atypical cells, suggestive of phyllodes tumor (Figure 2). After all the relevant investigations patient was taken up for surgery, simple mastectomy was done and wound was closed. Biopsy revealed benign cystosarcoma phyllodes with tumor free resected margins. Post op period was uneventful and patient was discharged after 5 days. After three months of follow up patient was asymptomatic.



**Figure 2: Microphotograph showing moderate hypercellularity with mild nuclear atypia/pleomorphism of the spindle cells and myxomatous stromal overgrowth. Focal mildly atypical epithelial hyperplasia with leaf like projection seen suggestive of phyllodes tumour.**

## DISCUSSION

Phyllodes tumor of breast account for 0.3-0.9% of all breast tumors, and of these, only 3% are bilateral.<sup>3</sup> Phyllodes tumor commonly occurs in 4<sup>th</sup> or 5<sup>th</sup> decades.<sup>4</sup> There is a wide range regarding the age of patients with phyllodes tumors with a mean age of around 45 years. Stebbing J.F. et al<sup>5</sup> and Rajan P.B. et al<sup>6</sup> reported tumor in young adult female similar to our case which was 24 year old young nulliparous female. Bilateral tumors are rare. McDonald J.R. et al<sup>7</sup> reported four cases with bilateral tumors in a study of 13 cases, two of which were in adolescent females. Most reported cases of bilateral phyllodes tumor have occurred in young women in association with pregnancy and lactation. Lactation has been proposed as a precipitating factor in metamorphosis of bilateral tumor, while role of female hormones remains unclear.<sup>8</sup> Our case occurred in young nulliparous woman which is extremely rare.

Triple assessment by clinical, radiological and histological examination forms the fundamental basis for the evaluation of cystosarcoma phyllodes tumour.

Cystosarcoma phyllodes of the breast are fibroepithelial neoplasms that have the potential for recurrence. Grading of phyllodes tumor is based on semi-quantitative assessment of stromal cellularity, cellular pleomorphism, mitotic activity, margin appearance, and stromal distribution. Tumors with modest stromal hypercellularity, little cellular pleomorphism, 0-4 mitoses per ten high power field, well circumscribed, pushing margins, and minimal or moderate stromal overdevelopment are classified as benign. In this case histopathology report showed fibroepithelial tumor with increased stromal cellularity and 1-2 mitoses per ten high-power field. Similar microscopic findings have also been reported by Bellocq J et al.<sup>9</sup>

Current studies have found that new genetic mutation and intratumoral genetic heterogeneity can develop within the same tumor. These mutations could be the explanation of malignant behaviour or recurrence of phyllodes tumour. For example, loss of expression of (P16INK4a) gene was found frequently in malignant phyllodes tumour. Activation mutations in and over expression of epidermal growth factor receptor gene are associated with progression in the grade.<sup>10</sup>

Tumor excision with negative margins should be done. Simple mastectomy without axillary dissection is recommended as a standard treatment. The possibility of local recurrence and metastasis is 6-10% in benign, 25-32% in borderline, and over 25% in malignant phyllodes tumor.<sup>11</sup> In malignant variety chemoradiation has been advised to prevent recurrence. Our case belonged to the benign variety.

## CONCLUSION

Phyllodes tumor is rare tumor of the breast usually occurring between the age of 40 to 50 years. Mammography/ultrasonography, FNAC, and frozen section are inadequate for diagnosis. Final diagnosis is based on histological findings. Treatment of the phyllodes tumors is surgical. Majority of patients require simple mastectomy even for benign variety because of huge size. In malignant variety chemo-radiotherapy has been advised to prevent recurrence. It is very important to create awareness in the females to have early consultation for breast lump.

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