



## EXTENT OF SURGICAL RESECTION IN MANAGEMENT OF CYSTOSARCOMA PHYLLODES: A RETROSPECTIVE CASE STUDY OF 48 PATIENTS.

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Conflicts of Interest: Nil

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### Abstract:

**Introduction:** Phyllodes tumors accounts for less than 1% of breast neoplasm. Displaying a broad range of clinical and pathological behavior, phyllodes tumors should be regarded as a spectrum of fibroepithelial neoplasms rather than a single entity. At one extreme, malignant phyllodes tumors, if inadequately treated, have a propensity for rapid growth and metastatic spread. In contrast, benign phyllodes tumors are often indistinguishable from fibroadenomas can be cured by local surgery. It was associated with high recurrence rate.

**AIM of the study:** To study the patient /tumour characteristics affecting the clinical outcomes and recurrence of phyllodes tumor.

**Materials and Methods:** Data was collected from the In Patient Department and Out Patient Department clinical records of 48 patients of phyllodes tumor who underwent Wide Local Excision/Mastectomy in Department of general surgery, VMMC & Safdarjung hospital between June 2016 to June 2018 and then followed up till June, 2019.

**Results:-** a total of 48 patients were operated with mean age of 39 years and mean size of 48mm. Histopathology assessment showed 19 (39.5%) were benign, 25 (52.08%) were borderline, 4 (8.33%) were malignant. Margin status was negative for 42 (87.5%) and positive for 6 (12.5%). In the follow up, there were a total of 5 recurrences which were seen in margin positive (4/5) and malignant histopathology (3/5) patients.

**Conclusion:** phyllodes tumor require wide local excision with adequate margin which is key factor for prevention of recurrence of the same.

**Keywords:** phyllodes tumor, simple mastectomy, wide local excision (WLE).

### Introduction

Phyllodes tumor is a rare neoplasm of female breast accounts for 0.4% of breast tumors<sup>1</sup>. They have posed many problems for surgeons in terms of their nomenclature, variability in presentation, and diagnosis of phyllodes (more frequently mimics fibroadenoma) and repeated recurrence. On the basis of the Azzopardi and Salvadori<sup>1</sup> phyllodes tumors can be classified into benign, borderline, malignant according to their HPE characteristics (table 1). Evaluation of the number of mitoses and presence or

absence of the invasive foci at the tumor margins may help to identify a malignant tumor. Ideal management of phyllodes is wide local excision with 1 cm margin (figure 1,2), may need mastectomy in cases of large tumors involving entire breast (figure 3,4,5,6). This retrospective study evaluates the HPE findings and patient characteristics and treatment modalities given to 48 patients of phyllodes tumor to assess the clinical outcomes and risk of recurrence in our institution.

**Table 1: criteria used to classify histological type as proposed by Azzopardi and Salvadori**

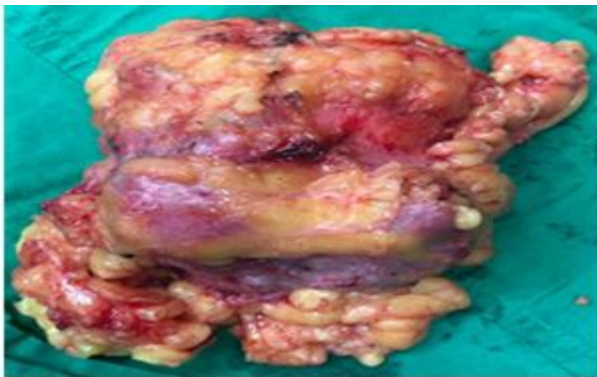
Criteria	Histological types		
	Benign	Borderline	Malignant
Tumor margins	Pushing	<>	Infiltrating
Stroma cellularity	Low	Moderate	High
Mitotic rate(per 10 hpf)	<5	5-10	>10
Pleomorphism	Mild	Moderate	Severe

**METHODS:**

Data was collected retrospectively from the inpatient and outpatient clinical records of 48 phyllodes tumor patients who underwent wide local excision /mastectomy in Department of general surgery, VMMC & Safdarjung hospital during June 2016 to June 2018 and then were followed up for 1 year (i.e. upto June 2019). None of them received radiotherapy. Among the patients we operated, two of them were operated outside for fibroadenoma and came to us with recurrence. Patients were followed up for the period of two years and their HPE characteristics, clinical outcomes and recurrence was documented and assessed for the accurate prediction of risk factors for recurrence.



**Figure 1: post wide local excision of phyllodes tumor.**



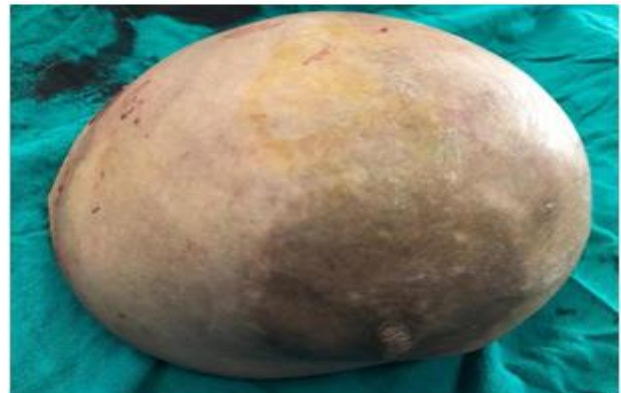
**Figure 2: wide local excision specimen.**



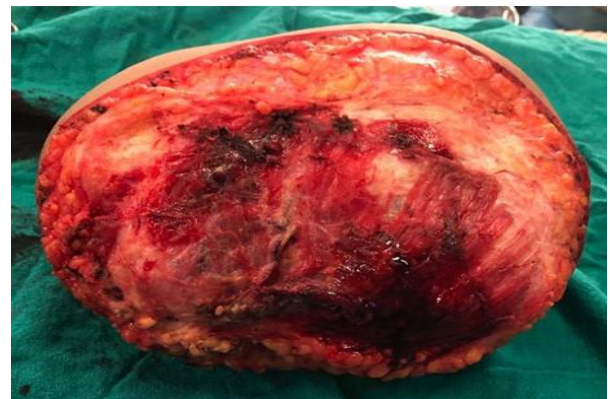
**Figure 3: right breast with bosselated structure with dilated veins typical of phylloides tumor.**



**Figure 4: post simple mastectomy view of anterior chest wall.**



**Figure 5: post mastectomy resected specimen anterior view.**



**Figure 6: post mastectomy resected margin posterior view.**

**RESULTS;**

A total of 48 patients diagnosed with phyllodes tumor were treated at safdarjung hospital from June 2016 to June 2018 and then were followed up for 1 year till June 2019. The mean age was 39 yrs and with the mean tumor size of 48mm (30mm-100mm). Among the 48 patients 46 patients underwent wide local excision and rest of the 2 patients underwent mastectomy because of large tumor mass.

After surgery histopathology assessment showed 19 (39.5%) were benign, 25(52.08%) were borderline, 4(8.33%) were malignant. Regarding margin status 42(87.5%) of them had negative margin and 6 (12.5%) of them had positive margin ( table 2)

Patients were followed up for a period of 1 year and which shows 5(10.41%) of recurrence .These case were retrospectively analyzed for risk of recurrence which shows that malignant histological type(3/5) and margin positive(4/5) case are associated with local recurrence irrespective of the tumor size and treatment received. However statistically significance association was not obtained due to smaller sample size.( table 3)

**TABLE 2: Margin status, Histopathological characteristics of the specimen and the treatment method.**

TUMOR CHARACTERISTICS	FREQUENCY	PERCENTAGE
MARGIN		
NEGATIVE	42	87.5%
POSITIVE	6	12.5%
HISTOLOGICAL TYPE		
BENIGN	19	39.5%
BORDERLINE	25	52.08%
MALIGNANT	4	8.33%
MODE OF TRAETMENT GIVEN		
WLE	46	95.88%
MASTECTOMY	2	4.16%

**TABLE 3: Retrospective analysis of recurrent cases examined over 2 year’s period.**

Tumor size	65 mm (average)
Histological type	Malignant -3(60%) Borderline-1(20%) Benign -1 (20%)
Margin status	Positve-4(80%) Negative -1(20%)
Treatment received	WLE-5

**DISCUSSION;**

Phyllodes tumor occurs in the wide age range .The median age of presentation was 45 Years, approximately 20 years later than fibroadenoma.<sup>2</sup>In our study mean age of presentation was 39 yrs and the mean tumor size was 48mm.After clinical history, all patients underwent core needle biopsy to confirm phyllodes tumor.

Until late 1970s,mastectomy was the standard surgical treatment for all phyllodes irrespective of tumor size and histological grade .But radical surgery

offered no advantage and today more conservative surgical approaches adopted.<sup>3</sup> In our study 46 pateints underwent wide local excision with 1cm margin and 2 of them underwent mastectomy because of large tumor size. The role of radiotherapy after surgery is unclear<sup>4</sup>, none of our patients received radiotherapy.

Post operative HPE analysis reveals that among the 48 tumors reviewed, 19 (39.5%) were benign 25(52.08%) were borderline, and 4(8.33%) were malignant. The incidence of malignant or borderline malignant tumors reported in other study ranged from 8.5% to 62.7%.<sup>5-6</sup>This variation in the relative incidence is due to lack of standard interpretation. The present study demonstrated a clinically significance association between the local recurrence and histological type and this is similar to previously published studies<sup>7</sup>.However statistically significant association not obtained due to smaller sample size.

On evaluation of final histological margin were free of microscopic disease 42(87.5%) of 46 pateints. And 6 (12.5%) patients were margin positive, after 1 year of follow-up five of them developed recurrence. De Roose et al observed that local recurrence was significantly associated with involved margins but not with tumour size,histological grade.<sup>8</sup>

**Conclusion;**

The present study proves that recurrence of phyllodes tumor mainly influenced by histological type and margin status of resected tumor. Hence careful identification of high risk patients and wide local excision with adequate margin is key factor for prevention of recurrence of phyllodes tumor.

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