

CLINICAL PATTERN AND MANAGEMENT OUTCOME OF PHYLLODES TUMOR OF BREAST

SHAHIDA KHATOON, MUHAMMAD ARIF, AFZAL JUNEJO, AKMAL JAMAL, PARKASH AHUJA

ABSTRACT

Objective To determine the clinical and histopathological pattern, surgical protocol and need of adjuvant therapy for phyllodes tumour of breast.

Study design Case series.

Place & Duration of study Surgical department of Liaquat University Hospital Jamshoro, from November 2000 to October 2006.

Patients and Methods All female patients with phyllodes tumor of breast diagnosed after triple assessment were included. Non probable purposive sampling technique was used. Female having carcinoma breast were excluded. After taking consent data related to age, parity, site, size of tumor, treatment options, histopathology and metastatics work up done (in case of malignant disease). Patients were advised follow up for minimum period of two years. Data was collected on proforma and analysed by SPSS version 10.

Results A total of 35 patients with phyllodes tumor were studied. Out of these 23(67.5%) were benign, 5(14.3%) were borderline and 7(20%) were malignant. Mean age was 24 years. All patients were assessed by triple assessment. Nine(25.7%) patients had lumpectomy and 26(74.3%) underwent mastectomy. Patients with proven malignancy and borderline disease on histopathology were submitted for adjuvant chemoradiotherapy. Patients were followed for minimum period of two years. There was one recurrence after lumpectomy among benign disease (16.66%) while there was no recurrence after mastectomy with or without chemoradiotherapy.

Conclusions Phyllodes tumor must be vigorously treated with wide local excision or mastectomy followed by adjuvant chemoradiotherapy in malignant or borderline tumor to minimize recurrence.

Key words Phyllodes Tumor, Breast Lump, Surgery.

INTRODUCTION:

Phyllodes tumor are biphasic breast tumors occurring usually in adult females and are composed of benign epithelial component and a cellular spindle cell stroma forming leaf like structure.¹ Phyllodes tumor presents

as large some times massive tumor with an unevenly bosselated surface and is mobile over the chest wall.² Depending upon the histological features these tumors may be benign (less than 4 mitosis PHF), borderline (5 – 9 mitosis PHF) and malignant more than 10 mitosis PHF).² Other factors related to malignancy are tumor necrosis, pleomorphism, stromal hypercellularity, stromal atypism, stromal over growth as well as pushing versus infiltrative margins^{3,4}. These factors are also correlated with high risk of recurrence and metastasis.⁴

Correspondence
Dr. Shahida Khatoon
Department of Surgery
Liaquat University of Medical & Health Sciences
Jamshoro

Metastasis is rare and mainly haematogenous to lungs and bones. Lymphatic involvement is infrequent.^{5,6} 20% of both benign and malignant tumors may recur.⁶ Diagnosis is based on clinical examination, mammography/sonography and FNAC but final diagnosis is based on histological findings. Ki 67 and P53 histochemical staining may be used as markers for evaluation of malignant type.⁷ Benign tumors are treated by lumpectomy while recurrent tumors, malignant tumors and massive tumor require mastectomy without axillary dissection.^{1,2,5} Post operative irradiation to the chest wall in patients with malignant type is recommended to decrease recurrence and improve disease free survival.^{5,6} This study was designed to determine the clinical and histopathological pattern and to evaluate the current surgical management and adjuvant treatment for phyllodes tumor of breast at Liaquat University Hospital.

PATIENTS AND METHODS:

This study was conducted at Surgical department of Liaquat University Hospital from November 2000 to October 2006. This was a case series and patients were enrolled with non probable purposive sampling. All female patients with phyllodes tumor diagnosed after triple assessment (clinically/radiologically/FNAC or tissue biopsy). Females having carcinoma breast diagnosed were excluded. Age, parity, site, size of tumor, treatment option and histopathology were recorded in each case.

All patients were investigated and then underwent operative treatment (lumpectomy/simple mastectomy). Patients with malignant disease were investigated for metastatic work up. All patients were advised follow up for two years (every 3rd month in first year and every 6th month in second year). Data was collected on proforma and analysis done by using SPSS Version 10.

RESULTS :

We studied a total 35 females. Amongst them 4(11.4%) patients operated elsewhere, presented with recurrent tumor. Mean age was 24 year (range 16 – 38 years). Nineteen(52.2%) patients were nulliparous while 16 (45.8%) multiparous. In 18 cases it occurred on right side and in 17 on left . Size of the tumor ranged from 8 – 15 cms. Twenty seven patients had tumor in upper outer quadrant while 8 (22.8%) patients had tumor at central and other sides. In 3(8.5%) cases ulcerated skin was present. Ultrasound of affected breast suggested benign breast disease in all patients. FNAC results are shown in table no. I.

Out of total 35 patients, 9 (25.7%) with primary tumor under went lumpectomy (5 with inconclusive FNAC and 4 with benign phyllodes. Remaining 26 patients (74.3%) under went simple mastectomy. These 26 patients include 4 with recurrent tumor, 5 with malignant FNAC and 21 with benign tumor but huge size of lump (occupying > 75% of breast). Histopathology of 35 patients showed benign lesion in 23 (65.7%), malignant in 7 (20%) and borderline in 5 (14.3%) table II. One out of 2 patients with malignant report after lumpectomy had subsequent mastectomy and one refused for mastectomy. All patients with borderline and malignant histopathology were referred to Nuclear Institute of Medical Radiotherapy. Follow up is given in table III.

Type of Surgery	Benign	Borderline	Malignant
Lumpectomy – 9	6	1	2 (Malignant
Mastectomy – 26	17	4	5 (Includes one recurrent tumor)
Total = 35	23 (65.7%)	5 (14.3%)	7 (20%)

No. of Patients	Lost to follow up	Complete follow up	Recurrence
7 Patients with malignant disease	2	5	None
7 patients with benign or borderline tumor having lumpectomy	1	6	1 benign
21 patients with benign or borderline tumor having mastectomy	5	16	None

Recurrence rate after lumpectomy 1 in 6 patients (16.66%).

DISCUSSION:

Phyllodes tumor is the most common non epithelial cancer of the breast and constitutes 1% of all mammary tumors and 2.5% of the mammary fibroepithelial lesions.^{6,8} During our study we observed that phyllodes tumor was common in younger age group (mean age 24 years) while in other studies it was 35 – 38 year.^{9,10} Regarding clinical pattern of the phyllodes tumor we observed that unmarried females were predominantly affected (54.2%). Sabban also observed that nulliparous women were more commonly affected with higher occurrence on right side (87.5%)¹¹. While Chen WH observed that the tumour occurred with equal propensity in both breasts. Our study also shows that the right breast (51.4%) and left breast (48.6%) are almost equally affected. 74.3% of our patients underwent simple mastectomy due to malignancy (F NAC +ve), recurrent tumor and huge size of benign tumor. Histopathologically we found that benign tumors were more common. The ratio of benign/borderline

	Benign	Malignant	Inconclusive
Primary – 31	22	4	5
Recurrent – 4	3	1	-

and malignant tumor of our patients is comparable with some other studies^{9,12}. We observed local recurrence rate of 16.66% of benign tumors after breast conserving surgery while no recurrence was observed in patients undergoing mastectomy. These results are almost at par with other results available in literature.¹³ It was also observed that patients with malignant tumor receiving adjuvant treatment (chemoradiotherapy) had no recurrence in two years follow up. So it is evident that wide local excision with adequate margins or mastectomy, is appropriate surgical treatment and adjuvant treatment (chemo-radiotherapy) for malignant tumor decreases recurrence rate and improves disease free survival as has been reported by others.¹⁴

CONCLUSIONS:

Phyllodes tumor is the rare tumor of the breast and affects very young age groups and in spite of common benign variety, majority of patients were submitted to mastectomy because of huge size and its malignant variety. Hence it is very important to do proper evaluation and to create awareness in the females to have early consultation for breast lump. Treatment of the phyllodes tumors is surgical and malignant tumor adjuvant therapy (chemoradiotherapy) must be advised to minimize recurrence.

REFERENCES:

- 1 Chen WH, Cheng SP, Tzen CY, Yang TL, Jeng KS, Liu CL, et al. Surgical treatment of phylloides tumour of the breast: retrospective review of 172 cases. *J Surg Oncol* 2005;91:185-94.
- 2 Shabbir J, O'Sullivan JB, Mahmood S, Byrnes G. Phyllodes tumour of breast. *J Coll Physicians Surg Pak* 2003;13:170-1.
- 3 Hofmann TB, Schoppmann SP, Rudas M, Birner P, Wiener H, Dubsy P et al. A case of phyllodes tumour with focal transition into low-grade lymphangiosarcoma. *Breast Care* 2006;1:391-4.
- 4 Eroglu E, Irkkan C, Ozxoy M, Eroglu F. Phyllodes tumour of the breast: case series of 40 patients. *Eur J Gynaecol Oncol* 2004;25:123-5.
- 5 Stranzl H, Peintinger F, Hackl A. Phyllodes tumour: an unexpected tumour of the breast. A report on six patients. *Strahlenther Onkol* 2004;180:148-51.
- 6 Guerrero MA, Ballard BR, Grau AM. Malignant phyllodes tumour of the breast: review of the literature and case report of stromal overgrowth. *Surg Oncol* 2003;12:27-37.
- 7 Tomita T, Ren Y, Davis M, Tawfik O. Phyllodes tumour of borderline malignancy: seven year follow up with immunohistochemical study. *Pathol Int* 2005;55:585-9.
- 8 Pandit AA, Vora IM, Shenay SG, Gurjar AM. Bilateral cystosarcoma phyllodes with osteogenic sarcomatous stroma (a case report with review of literature). *J Postgrad Med* 1985;31:215-6.
- 9 Kok Ky, Telesinge PU, Yapp SK. Treatment and outcome of cystosarcoma phyllodes in Brunei: a 13-years experience. *J R Coll Surg Edin* 2001;46:198-201.
- 10 Johi SC, Sharma DN, Bahadur AK, Maurya R, Kumar S, Khurana N. Cystosarcoma phyllodes: our Institutional experience. *Australas Radiol* 2003; 47:434-7.
- 11 Sabban F, Collinet P, Lucot JP, Boman F, Leory JL, Vinatier D. Phyllodes tumour of the breast: analysis of patients. *J Gynecol Obstet Biop Reprod* 2005;34: 252-6.
- 12 Tan PH, Jayabaskar T, Chauh KL, Lee HY, Tan Y, Hilmy M et al. Phyllodes tumours of the breast: the role of pathologic parameters. *Am J Clin Pathol*. 2005; 123:529-40.
- 13 Lenhard MS, Kahlert S, Himsl I, Ditsch N, Untch M, Bauerfeind I. Phyllodes tumour of the breast: clinical follow up of 33 cases of this rare disease, *Eur. J Obstet Gynaecol* 2007;10: 1016.
- 14 Pandey M, Mathew A, Katoor J, Abraham EK, Mathew BS, Rajan B et al. Malignant phyllodes tumour. *Breast J* 2001;7:411-6.