Annals of International Medical and Dental Research
E-ISSN: 2395-2822 | P-ISSN: 2395-2814
Vol-9, Issue-5 | September- October 2023
DOI: 10.53339/aimdr.2023.9.5.1
Page no- 01-05 | Section- Research Article (Surgery)

Study of Patients with Phyllodes Tumor

Kapil Rampal[1], Harkanwalpreet Kaur[2], Parampreet Singh Sandhu[3], Nitesh Snehi[4], Ankush Kumar[5], Meghna Sharma[6*], Sudhir Khichy[7]

[1]Assistant Professor, Department of Surgery, GGSMCH, Faridkot, Punjab, India
Email: balkarankapil@gmail.com
Orcid ID: 0000-0003-3533-8805
[2]Senior Resident, Department of Surgery, GGSMCH, Faridkot, Punjab, India
Email: harkanwalpreet19hk@gmail.com
Orcid ID: 0000-0003-3952-1025
[3]Senior Resident, Department of Surgery, GGSMCH, Faridkot, Punjab, India
Email: param18192@gmail.com
Orcid ID: 0000-0002-0035-2845
[4]Resident, Department of Surgery, GGSMCH, Faridkot, Punjab, India
Email: nitesh.snehi1@gmail.com
Orcid ID: 0009-0002-8421-2897
[5]Resident, GGSMCH, Faridkot, Punjab, India
Email: kashyap639@gmail.com
Orcid ID: 0009-0006-2371-6935
[*6]Resident, GMC, Amritsar, Punjab, India
Email: smeghna2012@gmail.com
Orcid ID: 0000-0002-8134-6008
[7]Professor, Department of Surgery, GGSMCH, Faridkot, Punjab, India
Email: skhichy@rediffmail.com
Orcid ID: 0009-0004-5513-6711

*Corresponding author

Received: 02 March
Revised: 29 April 2023
Accepted: 13 May 2023
Published: 31 August 2023

Abstract

Background: Phyllodes tumours (PT) are uncommon fibroepithelial lesions contributing to less than 1% of all breast tumours. **Material & Methods:** Thirty six patients were included in this retrospective observational study. Data were collected from our Surgical unit, with ethical compliance, in a tertiary care institute of North India over a period of 6 years (Jan 2016- Jan 2022). **Results:** The mean age of patients with Phyllodes tumour was 30±12 years. 77.8% patients were in pre-menopausal group and 58.3% patients were married. Mean age at first child birth was 23 years. 61.1% patient had disease in the right breast. 11.1% patients had tumour size less than 05 cm, 50% patients had tumour size between 05 to 10 cm while 38.9% patients had size more than 10 cm. 13.9% patients underwent lumpectomy, 30.6% patients had mastectomy and 55.6% cases had wide local excision. 83.3% cases had benign pathology and a recurrence rate of 11.1%. The recurrence in lumpectomy group was observed to be 40% while recurrence in wide local excision (WLE) group was 15%. No recurrence was observed in the mastectomy group. **Conclusion:** The phyllodes tumour is a rare cause of breast lump. The key to successful management is early diagnosis. Core biopsy should be preferred over FNAC for diagnosis. Treatment options include wide local excision and mastectomy.

Keywords:- Phyllodes tumour, Cystosarcoma Phyllodes, Wide Local Excision, FNAC, Core Tissue Biopsy.

INTRODUCTION

Phyllodes tumours (PT) are uncommon fibroepithelial lesions contributing to less than 1% of all breast tumours. Johannes Müller in 1838, described phyllodes tumour and also used the term cystosarcoma phyllodes; for the first time. This term was subsequently proved to be a misnomer as the tumours are rarely cystic and the majority are benign in clinical course.[1,2]

Phyllodes tumors are most common in women in fourth decade of life, though women of any age are susceptible. Women with inherited

Copyright: ©The author(s), published in Annals of International Medical and Dental Research, Vol-9, Issue-5. This is an open access article under the Attribution-Non Commercial 2.0 Generic (CC BY-NC 2.0) license. (https://creativecommons.org/licenses/by-nc/2.0/)

genetic disorders like Li-Fraumeni syndrome are at an increased risk for PTs.[3]

Phyllodes tumors are often divided into 3 groups, depending upon the microscopic findings. These are:

Benign tumors account for more than fifty percent of all phyllodes tumors.

These tumors are insidious in onset, slow progressing and unlikely to spread.

Borderline tumors have features in between benign and malignant tumors.

Malignant tumours account for upto 25% phyllodes tumors. These tend to be rapidly progressive and likely to spread locally or metastasize.[3,4]

Diagnosis of phyllodes tumors

Phyllodes tumors patients routinely present with painless,progressive breast lumps that are firm, hard or even of variegated consistencies. They are likely to progress rapidly, stretching the skin and may have trophic ulcers. [Figure 1]

These may first be found on imaging like sonogram or Xray mammogram, that do not easily differentiate them from a more benevolent fibroadenomas. The fine needle aspiration cytology (FNAC) has low sensitivity and specificity for diagnosing PT.[5] The core needle biopsy, has higher accuracy in clinching the diagnosis.[Figure 2] Rarely excision biopsy may be required to achieve a diagnosis. This may have to be followed up by a definite surgical procedure.[5,6,7] Wide local excision (WLE) is standard of care for all the histological subtypes of PT.[8,9]

In this study, we aimed to study the clinical profile of patients and factors associated with recurrences in cases of PT.

MATERIAL AND METHODS

Thirty-six patients were included in this retrospective observational study. Data were collected from our Surgical unit, with ethical compliance, in a tertiary care institute of North India over a period of 6 years (Jan 2016- Jan 2022). Only patients that did not report for follow up were excluded from study. We analysed patient characteristics like age, family and menstrual history, symptoms, investigations, surgery and follow-up.

RESULTS

The mean age of patients with Phyllodes tumour was 30±12 years. 77.8% patients were in pre-menopausal group and 58.3% patients were married. Mean age at first child birth was 23 years. 61.1% patient had disease in the right breast. 11.1% patients had tumour size less than 05 cm, 50% patients had tumour size between 05 to 10 cm while 38.9% patients had size more than 10 cm. 13.9% patients underwent lumpectomy, 30.6% patients had mastectomy and 55.6% cases had wide local excision. 83.3% cases had benign pathology and a recurrence rate of 11.1%. the recurrence in lumpectomy group was observed to be 40% while recurrence in wide local excision (WLE) group was 15%. No recurrence was observed in the mastectomy group.

Copyright: ©The author(s), published in Annals of International Medical and Dental Research, Vol-9, Issue-5. This is an open access article under the Attribution-Non Commercial 2.0 Generic (CC BY-NC 2.0) license. (https://creativecommons.org/licenses/by-nc/2.0/)

Annals of International Medical and Dental Research
E-ISSN: 2395-2822 | P-ISSN: 2395-2814
Vol-9, Issue-5 | September- October 2023
DOI: 10.53339/aimdr.2023.9.5.1
Page no- 01-05 | Section- Research Article (Surgery)

Table 1:

<table>
<tr><th colspan="2">Category</th><th>Value</th><th>Percentage (Total)</th></tr>
<tr><td colspan="2">Mean age in years</td><td>30±12</td><td></td></tr>
<tr><td colspan="2">BMI</td><td></td><td></td></tr>
<tr><td colspan="2">< 30 kg/m2</td><td>12</td><td>33.3</td></tr>
<tr><td colspan="2">> 30 kg/m2</td><td>24</td><td>66.7</td></tr>
<tr><td colspan="2">Marital status</td><td></td><td></td></tr>
<tr><td colspan="2">Married</td><td>21</td><td>58.3</td></tr>
<tr><td colspan="2">unmarried</td><td>15</td><td>41.7</td></tr>
<tr><td colspan="2">Mean age at menarche in years</td><td>12.6</td><td></td></tr>
<tr><td colspan="2">Mean age at 1st child birth in years</td><td>23</td><td></td></tr>
<tr><td colspan="2">Lactation more than 6 months</td><td>21</td><td>58.3</td></tr>
<tr><td colspan="2">Similar condition in 1st degree relative</td><td>4</td><td>11.1</td></tr>
<tr><td colspan="4">Menstrual status</td></tr>
<tr><td colspan="2">Pre menopausal</td><td>28</td><td>77.8</td></tr>
<tr><td colspan="2">Post menopausal</td><td>8</td><td>22.2</td></tr>
<tr><td colspan="2">Side</td><td></td><td></td></tr>
<tr><td colspan="2">Right</td><td>22</td><td>61.1</td></tr>
<tr><td colspan="2">Left</td><td>14</td><td>38.9</td></tr>
<tr><td colspan="2">Size</td><td></td><td></td></tr>
<tr><td colspan="2">Less than 05 cm</td><td>4</td><td>11.1</td></tr>
<tr><td colspan="2">5-10 cm</td><td>18</td><td>50.0</td></tr>
<tr><td colspan="2">More than 10 cm</td><td>14</td><td>38.9</td></tr>
<tr><td colspan="2">Fine needle aspiration cytology(FNAC) diagnostic in</td><td>22</td><td>66.1</td></tr>
<tr><td colspan="2">Core biopsy diagnostic in (n=24)</td><td>23</td><td>95.8</td></tr>
<tr><td colspan="4">Surgery</td></tr>
<tr><td colspan="2">Lumpectomy</td><td>5</td><td>13.9</td></tr>
<tr><td colspan="2">Mastectomy</td><td>11</td><td>30.6</td></tr>
<tr><td colspan="2">Wide local excision</td><td>20</td><td>55.6</td></tr>
<tr><td colspan="4">Histopathology</td></tr>
<tr><td colspan="2">Benign</td><td>30</td><td>83.3</td></tr>
<tr><td colspan="2">Malignant</td><td>6</td><td>16.7</td></tr>
<tr><td rowspan="2">Recurrence in 01 year</td><td>Benign group</td><td>4</td><td>11.1</td></tr>
<tr><td>Malignant group</td><td>1</td><td>2.7</td></tr>
<tr><td rowspan="3">Recurrence in 01 year</td><td>Lumpectomy group [n=5]</td><td>2</td><td>40</td></tr>
<tr><td>WLE group[n=20]</td><td>3</td><td>15</td></tr>
<tr><td>Mastectomy group[n=11]</td><td>Nil</td><td>Nil</td></tr>
<tr><td rowspan="3">Recurrence in 01 year</td><td>Size less than 05 cm</td><td>Nil</td><td></td></tr>
<tr><td>Size less than 10 cm</td><td>2</td><td>40</td></tr>
<tr><td>Size more than 10 cm</td><td>3</td><td>15</td></tr>
</table>

Copyright: ©The author(s), published in Annals of International Medical and Dental Research, Vol-9, Issue-5. This is an open access article under the Attribution-Non Commercial 2.0 Generic (CC BY-NC 2.0) license. (https://creativecommons.org/licenses/by-nc/2.0/)

Annals of International Medical and Dental Research
E-ISSN: 2395-2822 | P-ISSN: 2395-2814
Vol-9, Issue-5 | September- October 2023
DOI: 10.53339/aimdr.2023.9.5.1
Page no- 01-05 | Section- Research Article (Surgery)

DISCUSSION

Phyllodes tumour has been a clinical enigma.[10,11] In this retrospective observational study we have studied clinical features of patients with Phyllodes tumour and observed factors associated with recurrence in post-surgical excision patients.

Satyajit Verma et al reported the mean size of the lump at 9.5±5.5 cm (range was 4.0-23 cm).

They presented that histopathological report was benign, borderline, and malignant PT in 62.4%, 20.8%, and 16.8% of the cases, respectively. They performed simple lumpectomy, wide local excision and simple mastectomy in 25%, 27.4% and 27.4% of primary (non-recurrent) cases of PT, respectively. They did Modified radical mastectomy and simple

mastectomy with LD flap reconstruction in 7.2% and 2.4% in primary cases. They reported overall recurrence in 29.2% of the cases. We observed benign pathology in 83.3% cases. We did not have a borderline malignant pathology in our study. We managed our recurrence cases with simple mastectomy and recurrence rates in 01 year were 13.9% in toto.[8]

Ramakant P et al reported mean age of patients to be 36.92, 44.04 and 40.46 years respectively for benign, borderline and malignant Phyllodes tumour and mean tumor size being 8.15 cm, 14.7 cm and 12.9 cm respectively. Pre-operative cytology was suggestive of PT in 24% patients with benign PT and 63% in malignant PT. Core tissue biopsy was suggestive of PT in 85.4% patients with Benign PT and 100% in Malignant PT. Recurrence was seen in 34.7% cases of which 32.7% were post lumpectomy. The general trend of their observation matches our observations and differences observed may be due to dissimilar populations at risk.[9]

Abdalla et reported a median age of the patients 42 years with a range from 16 to 70 years. The tumor size in their study ranged from 2.5 to 24 cm, with a median of 11 cm. They reported 39.2% benign tumors, 34.2% borderline, and 26.6% malignant tumors. Following local excision, the local recurrence rates were 14.3%, 50%, and 75% in patients with benign, borderline, and malignant tumors; respectively, while after wide local excision the local recurrence rates were 0%, 36.3% and 40%; respectively. 0%, 8.3%, and 8.3% of patients with benign, borderline and malignant tumors; respectively, had local recurrence after mastectomy. They recorded distant metastases (DM) in 12.6% cases. Distant metastases developed in 3.2%, 11.1%, and in 28.6% of patients with benign, borderline and malignant tumors; respectively. The 5-year survival with no evidence of disease was 90% for the patients with benign tumors compared to 69% for borderline and 61% for malignant PTs.[12]

We have observed early onset with higher occurrence in premenopausal females, higher involvement of right side, higher recurrence rates in lumpectomy cases and a higher efficacy of core biopsy over FNAC in establishing a diagnosis.

CONCLUSIONS

The phyllodes tumour is a less common cause of breast lump. The key to successful management is early diagnosis and differentiation from more common benign lesions like the fibroadenoma. core biopsy

Copyright: ©The author(s), published in Annals of International Medical and Dental Research, Vol-9, Issue-5. This is an open access article under the Attribution-Non Commercial 2.0 Generic (CC BY-NC 2.0) license. (https://creativecommons.org/licenses/by-nc/2.0/)

Annals of International Medical and Dental Research
E-ISSN: 2395-2822 | P-ISSN: 2395-2814
Vol-9, Issue-5 | September- October 2023
DOI: 10.53339/aimdr.2023.9.5.1
Page no- 01-05 | Section- Research Article (Surgery)

should be preferred over FNAC for diagnosis. Treatment options include wide local excision and mastectomy.

REFERENCES

1. Parker SJ, Harries SA. Phyllodes tumours. Postgrad Med J. 2001;77(909):428-35. doi: 10.1136/pmj.77.909.428.
2. Kim JY, Yu JH, Nam SJ, Kim SW, Lee SK, Park WY, et al. Genetic and Clinical Characteristics of Phyllodes Tumors of the Breast. Transl Oncol. 2018;11(1):18-23. doi: 10.1016/j.tranon.2017.10.002.
3. Tsang JY, Shao Y, Poon IK, Ni YB, Kwan JS, Chow C, et al. Analysis of recurrent molecular alterations in phyllodes tumour of breast: insights into prognosis and pathogenesis. Pathology. 2022;54(6):678-685. doi: 10.1016/j.pathol.2022.03.008.
4. Foxcroft LM, Evans EB, Porter AJ. Difficulties in the pre-operative diagnosis of phyllodes tumours of the breast: a study of 84 cases. Breast. 2007;16(1):27-37. doi: 10.1016/j.breast.2006.05.004.
5. Tan PH, Jayabaskar T, Chuah KL, Lee HY, Tan Y, Hilmy M, et al. Phyllodes tumors of the breast: the role of pathologic parameters. Am J Clin Pathol. 2005;123(4):529-40. doi: 10.1309/U6DV-BFM8-1MLJ-C1FN.
6. Komenaka IK, El -Tamer M, Pile-Spellman E, Hibshoosh H. Core needle biopsy as a diagnostic tool to differentiate phyllodes tumor from fibroadenoma. Arch Surg. 2003;138:987-90.
7. Chao TC, Lo YF, Chen SC, Chen MF. Sonographic features of phyllodes tumors of the breast. Ultrasound Obstet Gynecol. 2002;20:64-71.
8. Verma S, Singh RK, Rai A, Pandey CP, Singh M, Mohan N. Extent of surgery in the management of phyllodes tumor of the breast: a retrospective multicenter study from India. J Cancer Res Ther. 2010;6(4):511-5. doi: 10.4103/0973-1482.77085.
9. Ramakant P, Chakravarthy S, Cherian JA, Abraham DT, Paul MJ. Challenges in management of phyllodes tumors of the breast: a retrospective analysis of 150 patients. Indian J Cancer. 2013;50(4):345-8. doi: 10.4103/0019-509X.123625.
10. Bandyopadhyay R, Nag D, Mondal SK, Mukhopadhyay S, Roy S, Sinha SK. Distinction of phyllodes tumor from fibroadenoma: Cytologists' perspective. J Cytol. 2010;27(2):59-62. doi: 10.4103/0970-9371.70739.
11. Barth RJ Jr, Wells WA, Mitchell SE, Cole BF. A prospective, multi-institutional study of adjuvant radiotherapy after resection of malignant phyllodes tumors. Ann Surg Oncol. 2009;16(8):2288-94. doi: 10.1245/s10434-009-0489-2.
12. Abdalla HM, Sakr MA. Predictive factors of local recurrence and survival following primary surgical treatment of phyllodes tumors of the breast. J Egypt Natl Canc Inst. 2006;18(2):125-33.

Source of Support: Nil, Conflict of Interest: None declare

Copyright: ©The author(s), published in Annals of International Medical and Dental Research, Vol-9, Issue-5. This is an open access article under the Attribution-Non Commercial 2.0 Generic (CC BY-NC 2.0) license. (https://creativecommons.org/licenses/by-nc/2.0/)