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**CASE REPORT**

## Strip-teased; beauty is the beast. A paranormal phyllodes tumour

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### Abstract:

**Cystosarcoma phyllodes**, coined as such by Johannes Müller, is an infrequent tumour, however its impressive nature worth attention. Symptoms include rapidly growing tumour, which can grow in weeks, until the patient seeks doctors attention. Firm, well, circumscribed mass which may have a fungating growth and mobile on the chest wall. Despite its nature being known, several perspectives of diagnostic and therapeutic behaviors are still in jeopardy of exploration. We report a case of a rapidly growing, huge phyllodes with picturization of 3 nipples, one original and two burst daughter phyllodes over the skin. This case presented in surgical out patient department, was admitted, investigated and had tru cut biopsy suggestive of features of phyllodes tumour. Patient was found anemic therefore preoperative transfusion given patient was optimised and operated, patient has a smooth recovery postoperatively.

**Keywords:** phyllodes tumour, cystosarcoma phyllodes, mammography, mastectomy

### Introduction:

Breast phyllodes tumour has a percentage of around 0.3-0.9% among the breast tumours, commonly presenting unilaterally, except in 3% cases which are bilateral.<sup>1</sup> It usually occurs in 3rd to 5th decades of life.<sup>2</sup> Tumour average size ranges 4 – 5 cms, however greater than 10 cms have been observed,<sup>3</sup> which are around 20% of the phyllodes, and standing out to be called as giant.<sup>4</sup> In cross section, it is the mirror image of cabbage, hence the name aroused.<sup>5</sup> It consists of epithelial elements, which have histopathological features of mesenchymal and malignant parts and which guides the clinical course of the disease.<sup>6</sup> Histopathologically it can be classified as benign, borderline and malignant tumours.<sup>7</sup> Local invasion and aggressive growth can be the characteristic of benign tumours without metastasizing,<sup>8</sup> unlike the malignant and borderline tumours, which metastasize in 25 – 40% of cases.<sup>9</sup> Even ultrasound and mammography do not provide any definitive pathognomic signs to distinguish phyllodes from other proliferative

lesions.<sup>10</sup> The first line of management of phyllodes tumour is conservative surgical excision with 1 – 2 cms tumour free margin in benign and borderline lesions, while considering malignant and benign giant phyllodes, simple or modified radical mastectomy is the solution.<sup>11</sup>

### Description of the case:

A 30-year-old-lady, landed in surgical out patient department, complaining increasing size of left breast with pain and discomfort which has been an agony for 1 week. She has the left breast swelling for around 3 months, but has an aggressive increase in size for 1 week, during which it had two mini phyllodes buds just adjacent to the nipple, showing its burst component. She had a trucut biopsy meanwhile, which showed features of phyllodes. Her blood profile showed Hemoglobin of 10mg/dl, while other parameters were within normal limits.

She was planned for surgery after optimization, arrangement of 3 pints of blood, written and in-

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Figure 1: showing huge cystosarcoma phyllodes



Figure 2: showing the thuge tumour with two mini phyllode buds



Figure 3: another view of same tumour



Figure 4: post operative photographs after removal of tumour



Figure 5: another view of same patient post-operatively

formed consent for simple mastectomy was taken. Pre-operatively, transfusion was given along with the prophylactic antibiotic cover. Hemostasis secured and two Redivac drains placed. Even though the tumour was large, the skin flaps were friendly enough to kiss each other, and hence successful in obtaining a tension free suture line. Pressure dressing done. There was an uneventful recovery. Patient was discharged home on second day with one redivac drain, which was removed on 5th day.

#### Discussion:

Phyllodes tumour of the breast is a rare tumour accounting for less than 1%, but also the renowned one, of all breast tumours. The principles of diagnosis depends upon the triple assessment.<sup>12</sup> Recurrence rate of 10 – 40% has been observed.<sup>13</sup> Provisionally, a diagnosis confirmed by core needle biopsy, usually showing increased stromal cellularity and mitotic activity helps in differentiating from fibro-adenoma, which is not possible by breast imaging. How-

ever if sonography shows a mass with fluid filled elongated spaces or clefts indicating necrosis and degeneration, diagnosis of phyllodes is a high possibility.<sup>14</sup>

Size varies greatly among the cysto-sarcomas which is also true for their consistency and cystic changes, as some appears bosselated having lobulations or can have smooth outline. Cystic consistency is one of the more frequent characteristic of benign nature.<sup>15</sup> These lesions can range from 1 cms to 45 cms in diameter.<sup>16</sup>

On histological basis, World Health Organization has categorized these tumours as benign, borderline, and malignant types.<sup>17</sup> Significant prognostic factors are stromal cellularity, mitotic activity, atypical mitoses, stromal overgrowth, stromal cellular atypia and tumour contour.<sup>18</sup>

Phyllodes and fibro-adenoma have a bit similar genetic sequence, that is, MED12 mutations found to be identical, 62% in phyllodes and 59% in fibroadenomas.<sup>19</sup> EZH2 and ALDH1 expression in the stroma of phyllodes tumour guides in differentiating benign from borderline and malignant tumours on histological basis.<sup>20</sup> Loss of expression of PK16INK4a, was found to be responsible for malignant changes, while activation in and over expression of epidermal growth factor has an effect on progression of grade.<sup>21</sup> It is a well-limited tumour clinically, presenting as a mobile, firm to hard, single painless mass.<sup>22</sup>

The tumour morphologically has an alleged capsule and its morphological changes are appreciated on Magnetic Resonance Imaging (MRI).<sup>23</sup>

Imaging has an important role in the management and diagnosis of phyllodes tumour.<sup>24</sup> PPV (Positive Predictive Value) of mammographic features is a useful tool in distinguishing benign and malignant lesions, as described in mammography BIRADS lexicon.<sup>25</sup>

Phyllodes tumour presenting in young age group behaves differently from that in older ages, a rapidly growing attaining a large size in a short period, and the reason behind is related to the hormonal stimulus at puberty.<sup>26</sup>

Operative treatment is essential<sup>6,9</sup> and simple mastectomy without axillary dissection is the recommended treatment of choice for giant phyllodes. Standard treatment option is complete surgical removal with a free margin of 2 – 3 cms.<sup>27</sup> Its better to refrain from sacrificing breast in young females for this disease. These are progressive lesions and cannot be followed conservatively, wide excision with adequate margins is preventive and curative as well.<sup>28</sup> The presence of tumour cells on the resection margin is a strong prognostic factor for the recurrence of the disease.<sup>29</sup> Phyllodes tumour has a local recurrence rate of 10 – 40 %, <sup>30</sup> and generally occurs within 2 years of the initial surgery,<sup>31</sup> which is known to arise due to inadequate excision,<sup>32</sup> 15-30% are those belonging to malignant and borderline variety, and metastasis in almost 25-40% cases.<sup>22</sup>

Sentinel lymph node biopsy is not routinely performed. Axillary lymphadenectomy is not usually advisable as the phyllodes metastasizes in only 10% cases.<sup>33</sup> Effectiveness of radiotherapy and chemotherapy is controversial. 6 monthly follow-up along with ultrasound of breast and axilla, for up to 2 years is recommended after surgery.<sup>34-36</sup>

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Dr. Muhammad Danish Muneeb, Patient selection, surgical intervention, collected data, references, and paper writing.

Dr. Mirza Aga Naushad Baig, Patient selection, surgical intervention, critical review of the article.

#### References:

1. EnverIlhan, et al. a rare case: bilateral phyllodes tumor of breast. *The journal of breast health* 2010;6(4)
2. Mishra SP, Tiwary SK, Mishra M, Khanna AK (2013) Phyllodes tumor of breast: A review article. *ISRN surgery*.
3. Murthy SS, Raju K, Nair HG (2016) Phyllodes tumor in a lactating breast. *Clin med insights Pathol* 9:13-17.
4. Tan PH, Jayabaskar T, Chuah KL, Lee HY, Tan Y, Hilmy M, et al. Phyllodes tumors of the breast: The role of pathologic parameters. 2005;123:529-40. *Am J ClinPathol*.
5. Parker SJ, Harries SA. Phyllodes tumours. *Postgrad Med J* 2001;77:428-35.
6. Pawlicki J, Król R, Kajor M, Ziaja J. Przypadek złośliwego guza aliściastegozkonwersją do włóknakiomięsaka. *Pol MerkLek* 2007;22:215.
7. Liang MI, Ramaswamy B, Patterson C, Mckelvy M, Gordillo G, Nuovo G, Carson W. Giant breast tumors: Surgical management of phyllodes tumors, potential for reconstructive surgery and a review of literature. *World J SurgOncol* 2008; 6:117.
8. Farria DM, Gorczyca DP, Barsky SH, Sinha S, Bassett LW. Benign phyllodes tumor of breast: MR imaging features. *AJR* 1996;167:187-9.
9. Channey AW, Pollack A, McNeese MD, et al. Primary treatment of cystosarcoma phyllodes of the breast. *Cancer* 2000;89:1502-11.
10. Mangi AA, Smith BL, Gadd MS, Tanabe KK, Ott MJ, Souba WW. Surgical management of phyllodes tumors. *Arch Surg* 1999; 134:487-93.
11. Reinfuss M, Mitus J, Duda K, Stelmach A, Rys J, Smolak. The treatment and prognosis of patients with phyllodes tumor of the breast: an analysis of 170 cases. *Cancer* 1996; 77:910-6.
12. Umpley HC, Guyer PB, Moore I, et al. An evaluation of the preoperative diagnosis and management of cystosarcoma phyllodes. *Ann R coll Surg. Engl* 1989;71:285-8.
13. Taira N, Takabatake .D, Aogi K, Ohsumi S, Takashima S, Nishimura R et al; Phyllodestumour of the breast: stromal overgrowth and histological classification are useful prognosis-predictive factors for local recurrence in patients with a positive surgical margin. *Jpn J ClinOncol*, 2007;37(10):730-736.
14. Yilmaz E, Sal S, Lebe B. Differentiation of phyllodes tumours versus fibroadenomas: mammographic and sonographic features. *Acta Radiol* 2002;43:34-39.
15. McDivitt R.W., Urban J. A. and Farroq J.H.: Cystosarcoma Phyllodes. *Hopkins Med J*, 120:33,1967.
16. Lee B. J. and Pack G. T.: Giant Intracanalicular Fibro-Adenomyxoma of the Breast. The So-Called Cystosarcoma Phyllodes Mammae of Johannes Müller. *Amer. J. Cancer*, 15:2583, 1931.
17. World Health Organization. *Histological Typing of Breast Tumours* second ed. Geneva, Switzerland: World Health Organization; 1981:19.
18. Cohn-Cedermark G, Rutqvist LE, Rosendahl I, Silfverswärd C (1991) Prognostic factors in cystosarcoma phyllodes. A clinicopathologic study of 77 patients. *Cancer* 68;2017-2022.
19. Lim WK, Ong CK, Tan J, Thike AA, Ng CCy, et al (2014) Exome sequencing identifies highly recurrent MED12 somatic mutations in breast fibroadenoma. *Nature Genetics* 46:877-880.
20. Zhang Y, Liss AL, Chung E, Pierce LJ, Kleer CG (2008) Stromal cells in phyllodes tumors of the breast are enriched for EZH2 and stem cell marker expression. *Breast Cancer Res Treat* 158: 21-28.
21. Ahmed Z, Koshariya, Shukla S, Vatti V, Diwan A. A rare case of

- recurrent malignant phyllodes tumour of the breast in young nulliparous women. *Clin Cancer Invertig J* 2014;3:173-5.
22. Liang MI, Ramaswamy B, Patterson C, McKelvey M, Gordillo G, Nuovo G, Carson W. Giant breast tumors: Surgical management of phyllodes tumors, potential for reconstructive surgery and a review of literature. *World J SurgOncol* 2008; 6:117.
  23. Pytel J, Dedecius M, Naze M, Stróżyk G, Brzeziński J. Złośliwy guzłściastygruczołupiersiowego u kobiety w ciąży. *PrzMenopauz* 2009;6:33q-3.
  24. Haider S, Tasleem M (2015) Borderline Phyllodes Tumour. *J Cancer Allied Spec* 1(2).
  25. Liberman L, Abramson AF, Squires FB, Glassman J, Morris E, et al (1998). The breast imaging reporting and data system: Positive predictive value of mammographic features and final assessment categories. *Am J roentgenol* 171:35-40.
  26. Wulsin J.H.: Large Breast Tumors in Adolescent Females. *Ann. Surg.*, 152:141,1960.
  27. Petrek JA., Harris JR, Hellman S, Henderson IC, Kinne DW, editors. *Cystosarcoma phyllodes in Breast diseases*. 2nd ed. Philadelphia:JB Lippincott;1991.p.791-7
  28. S J Parker and S A Harries. Phyllodes tumours: Reviews. *Postgrad Med J* 2001;77:428-435.
  29. Jang JH, Choi MY, Lee SK, Kim S, Kim J, et al.(2012). Clinicopathologic risk factors for the local recurrence of phyllodes tumours of the breast. *Ann surgoncol* 19:2612-2617.
  30. Taira N, Takabatake D, Aogi K, Ohsumi S, Takashima S, Nishimura R et al; Phllodestumour of the breast: stromal overgrowth and histological classification are useful prognosis-predictive factors for local recurrence in patients with a positive surgical margin. *Jpn J ClinOnco.*, 2007;37(10):730-736.
  31. Salvadori B, Cusumano F, Del Bo R, Delledonne V, Grassi M, Rovini D, et al. Surgical treatment of phyllodes tumors of the breast. *Cancer* 1989;63(12):2532-6.
  32. Chua CL, Thomas A, Ng BK. Cystosarcoma phyllodes: a review of surgical options. *Surgery* 1989;105:141-7.
  33. NooraAlmoosa M, Board S (2015) Phyllodes Tumor: One Experience Institute. *BMB* 37(1).
  34. Mengsu Xiao, Qingli Zhu, et al. Local Recurrent Phyllodes Tumours of the Breast: Clinical and Sonographic Features. *J Ultrasound Med* 2015;34:1631-1638.
  35. CholatiWiratkapun, PawatPiyapan, et al. Fibroadenoma versus phyllodes tumour; distinguishing factors in patients diagnosed with fibroepithelial lesions after a core needle biopsy. *DiagnInteryRadiol* 2014;20:27-33.
  36. E McCarthy, J Kavanagh, et al. Phyllodes tumours of the breast: radiological presentation, management and follow up(Abstract). *BJR* 2014;10:1259.