Introduction

Tumor phyllodes is what we call an enigma in breast and endocrine surgery. The name itself, cystosarcoma phyllodes, is sort of a misnomer, with phyllodes being neither cystic in nature and only 20% of it is malignant. It can present in a wide variety of clinical presentation from benign looking to progression that mimics malignant tumors. It is hard to differentiate between phyllodes and fibroadenoma based on physical examination and yet radiographically it is even more challenging to discriminate between the two. Histologically: it can be benign, it can be malignant with potential and it can be malignant. Here, we would like to share 3 cases of malignant phyllodes tumors with different persons.

Case reports

Malignant phyllodes

Lady FK, a 44 years old para 4 lady with no significant risk factor for breast malignancies, presented to us with a 1 year history of painless left breast lump (since 2018). The lump progressively increases in size over that period before patient came to us with infected fluctuating breast lump in late 2019. Initial investigations revealed wedge biopsy result of malignant mesenchymal tumor with computed tomography (CT) showing stage IIIC breast cancer with left axillary lymph nodes involvement. Patient then underwent toilet mastectomy in December 2019 where a left fungating mass 20x20cm weighing about 2.4kg was resected. The histopathological examination (HPE) confirmed the diagnosis of left breast malignant phyllodes tumor, with deep margin involved. Patient was subsequently referred to oncology team and was started on 6 cycles of Adriamycin regime.

Infected phyllodes

Lady NHNS, a 28 years old, para 1 lady with no risk of breast cancer, presented with painless left breast swelling for 3 months duration. The swelling suddenly increased in size over 1 month and become painful with skin changes and pus discharge. Clinically there was a 25 x 30cm lump occupying the central and lateral aspect of the left breast with surrounding erythema and peau de orange. Aspiration of the lump revealed pus containing staphylococcus aureus and trucut biopsy that showed phyllodes tumor histologically. Patient underwent left mastectomy in April 2020, resecting 4.5kg tumor occupying the whole left breast with ulceration and pus discharge over the lower outer quadrant. There were no pectoralis fascia and muscle infiltration with some reactive axillary lymph nodes. The HPE confirmed the diagnosis of borderline phyllodes tumor with clear margins and 0/13 lymph nodes affected. Patient was subsequently referred to oncology team and was subjected for 15 fractions of radiotherapy.

Malignant phyllodes with fibroadenoma

Lady MAMA, 46 years old, para 4 lady noticed painless left breast lump since the first pregnancy, 14 years ago. Slowly increasing in size, worked up at state hospital before defaulted from follow up. Presented to us with 3 weeks history of bloody discharge from the breast lump in July 2020, associated rapid increase in size with pain. Initial wedge biopsy showed HPE consistent with fibroadenoma with usual ductal hyperplasia and CT imaging showing left axillary lymphadenopathy. Patient then underwent left mastectomy removing pedunculated tumor occupying the whole left breast, not involving the pectoralis muscle, weighing about 1.5kg. The resultant HPE came back as malignant phyllodes (PT4MxN0) in the background of fibroadenoma. Patient was then referred to oncology team for adjuvant radiotherapy

Discussion

Being a rare entity, tumor phyllodes posed a significant challenge in term of obtaining the diagnosis especially in differentiating it with fibroadenoma and malignant breast diseases. Based on recommendation, triple assessment by clinical, radiological and histological examination should play a pivotal role in arriving to the diagnosis, just like other breast lesions, especially in lesions that are rapidly progressing in size. World Health Organization criteria divides phyllodes tumor into benign, borderline and malignant categories based on the degree of stromal cellular atypia, mitotic activity per 10 high power fields, degree of stromal overgrowth, tumor necrosis and marginal appearance (table A). The primary management of malignant phyllodes includes mastectomy (breast conserving surgery) with a role of adjuvant radiotherapy still in active discussion based on findings by Chaney et al, amongst others. The role of adjuvant radiotherapy in malignant phyllodes tumor still remains controversial, especially in the absence of well-defined criteria. Determinants like the tumor histotype and the resection margins, as demonstrated by our 3 case reports. Chemotherapy on the other hand has been discussed in other studies but with no survival advantages.

Conclusion

The approach and primary management of tumor phyllodes should follow current accepted recommendation in term of the triple assessment, the classification and surgical intervention options. Further studies looking into long-term outcome of adjuvant radiotherapy and chemotherapy would be beneficial in determining the overall course of treatment in patient with tumor phyllodes

Fig. 1: preoperative image of Lady FK malignant mesenchymal tumor

Fig. 2: preoperative image (a) of Lady NHNS borderline phyllodes tumor & intraoperative image (b).

Fig. 3: intraoperative image of Lady MAMA malignant phyllodes tumor.

Table A: WHO criteria

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<thead>
<tr>
<th>Criteria</th>
<th>Benign</th>
<th>Borderline</th>
<th>Malignant</th>
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<tr>
<td>Stromal and atypia</td>
<td>Minimal</td>
<td>Moderate</td>
<td>Marked</td>
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<tr>
<td>Stromal overgrowth</td>
<td>Minimal</td>
<td>Moderate</td>
<td>Marked</td>
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<td>Mitoses/10 high power fields</td>
<td>0-4</td>
<td>5-9</td>
<td>&gt;10</td>
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<td>Tumor margins</td>
<td>Well circumscribed with pushing tumor margins</td>
<td>Zone of microscopic invasion around tumor margins</td>
<td>Infiltrate tumor margins</td>
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References: