Axillary Mass Turned Out to be A Phyllodes Tumour in An Ectopic Breast Tissue— A Rare Case Report

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CASE REPORT

Axillary Mass Turned Out to be A Phyllodes Tumour in An Ectopic Breast Tissue– A Rare Case Report

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Abstract:

Background: Phyllodes tumours are rare fibroepithelial lesions that account for less than 1% of all breast neoplasm. However, phyllodes tumours arising from ectopic breast tissue are even rarer, with less than 15 cases ever reported involving the axilla, vulva and groin.

Case Presentation: A 27-year-old lady presented to the surgical clinic with left axillary swelling, measuring 5cm x 6cm. Ultrasound of the axilla revealed heterogenous mass displacing the left axillary artery and vein medially. Excision was performed, and histopathological examination confirmed the diagnosis of a benign phyllodes tumour.

Conclusion: Phyllodes tumour in ectopic breast tissue over the axilla is a rare occurrence, and our case is the fourth case ever reported. Despite its rarity, diagnosis and treatment modalities are similar to phyllodes tumour of the breast. Regular follow-up is recommended owing to the risk of local recurrence.

Keywords: Phyllodes, Tumour, Ectopic, Axilla, Breast, Mammary.

1. INTRODUCTION

Phyllodes Tumours (PT) are rare fibroepithelial lesions, which account for less than 1% of all breast malignancies [1, 2]. PT usually occurs in women aged between 35-55 years old and rarely in adolescence or the elderly. The exact etiology of PT is unknown [3]. World Health Organization (WHO) has classified PT into three categories; benign, borderline or malignant, based on tumor margins, stromal overgrowth, stromal cellularity, stromal atypia, and mitotic activity per 10 high power field (Table 1) [3]. Malignant PT accounts for 25% of all excised PT [1].

Meanwhile, Ectopic Breast Tissue (EBT), also known as accessory breast or supernumerary breast, is defined as the presence of breast tissue in an area other than two pectoral regions. It occurs in about 2% to 6% of the female population [4]. EBT is more common among Asians than Caucasians.

During the 6th week of gestation, the ectodermal thickening or milk line was developed and extended from the axilla to the groin. Failure or incomplete regression will result in EBT development along this line [5]. It explained why EBT is usually seen along the milk line, with the axilla most commonly encountered. However, EBT may also be found outside the milk line, such as the lumbar region, vulva, buttock, foot and face. It may be attributed to migratory arrest of breast primordium during the development of the chest wall. Another possible explanation is that EBT may arise from the modified apocrine sweat gland [5].

In extremely rare cases, Phyllodes tumour may develop in ectopic breast tissue (EBT) located in the axilla, labia or groin. Herein we report a case of Phyllodes tumour of ectopic breast tissue over the axilla.

2. CASE PRESENTATION

A 27-year-old woman with no prior medical illness was presented to the surgical outpatient clinic with left armpit
swelling for 3 years, gradually increased to the size of a table tennis ball in the past 1 year. Otherwise, she had no pain or numbness. No constitutional symptoms were reported. Physical examination revealed a mobile, smooth, and firm left axillary swelling measuring 5cm x 6cm. No overlying skin changes were observed. Ultrasound (USG) of the breast and axilla revealed a large heterogeneous hypoechoic mass at the left axillary tail region measuring 4.8cm x 6.0cm x 5.9cm displacing the left axillary artery and vein medially (Fig. 1). The patient was initially planned for USG guided biopsy; however, the procedure was deferred due to a partially compressible, slightly bluish mass with prominent vessels overlying the skin and multiple intralosomal vascularity suspicious of soft tissue haemangioma.

Contrast-enhanced computer tomography (CECT) of the thorax, abdomen and pelvis was subsequently performed in view of clinical suspicion of malignancy. A large, well-defined, heterogeneously enhancing lobulated mass was seen in the left axillary region, measuring 4.3cm x 5.9cm x 7.4cm with minimal small vessels seen overlying the mass (Fig. 2). No calcification or cystic component was noted. A clear fat plane was identified with the left pectoralis muscles medially, left teres major muscle posterolaterally, and axillary artery and vein superiorly, with no intrathoracic extension.

Subsequently, she underwent a left axillary mass excision biopsy Figs. (3 and 4). Histological examination showed a well-circumscribed breast lesion with a pushing border, which consists of proliferative breast duct and stroma. The epithelial component is arranged in dilated, elongated, slit-like, as well as leaf-like patterns. The surrounding fibromyxoid stroma shows mild increased stromal cellularity. The stroma cells exhibit no to mild nuclear atypia with mitoses range from 0 to 1 per 10 high power field. No marked stromal atypia, bizarre stromal cells or stromal overgrowth were seen (Table 1). It was confirmed as a fibroepithelial breast lesion in favour of a benign phyllodes tumour. Further immunohistochemical markers were not performed due to resource constraints.

Self-breast examination advice and education were given to the patient during follow-up, and no recurrence was noted Fig. (5).

Table 1. WHO classification of phyllodes tumour and comparison with patient.

|                                | Patient | Benign | Borderline | Malignant |
|--------------------------------|---------|--------|------------|-----------|
| Stromal cellularity and atypia  | Minimal | Minimal| Moderate   | Severe    |
| Tumour margin                   | Well circumscribed with pushing border | Pushing | Pushing/Infiltrating | Infiltrating |
| Stromal overgrowth              | Absent  | Absent | Present    | Present   |
| Mitoses per 10 high power field (hpf) | 0 to 1  | <5    | <10        | >10       |
Fig. (4). The removed tumour from the left axilla.

Fig. (5). The wound over left axilla 1 month after operation.

3. DISCUSSION

Phyllodes tumour (PT) arising from the ectopic breast tissue (EBT) is extremely rare. The first case ever reported was by Saleh and Klein in 1990. They reported a case of a 45-year-old female with cystosarcoma phyllodes arising synchronously in bilateral axillary EBT and right breast [6]. The second case was reported by Oshida et al. in 2003 of a 31-year-old female with an axillary tumor measuring 1.7cm x 1.6cm [7]. Znagui et al., in 2017, reported the third case of a 22-year-old female with axillary mass measuring 6.7cm x 4.9 cm from the ultrasound assessment [4]. From our literature review, our case was the only fourth case ever reported of phyllodes tumor arising from EBT in the axilla.

Ectopic PT is diagnosed in a similar manner as PT of the breast by using triple assessment; clinical examination, imaging either by ultrasound or mammogram, and tissue biopsy. However, confirmation is only done by histological examination from the tissue biopsy as ectopic PT over the axilla may be confused with lipoma, lymphoma or lymphadenopathy. Guilot et al., in their study, revealed that fine needle aspirate cytology (FNAC) provides diagnostic information in only 9% of the 97 patients who underwent FNAC. Core biopsy only showed PT in 24 out of 54 patients who underwent core biopsy [2]. The low diagnostic yield may be attributed to the heterogeneity of PT in which benign, borderline and malignant areas may co-exist in the same tumor [2]. Excision, where possible, should be the preferable method for tissue biopsy.

Management of PT remains controversial. However, it is widely accepted that excision with at least 1cm margin is the gold standard. In the case of unclear margin, management is tailored according to the category. In the case of benign PT, watchful observation may be adopted as a positive margin did not significantly correlate with local recurrence [2, 3, 8]. However, in borderline and malignant PT, re-excision or mastectomy is recommended to achieve adequate margin owing to a higher recurrence rate [2, 3, 8].

Adjuvant radiotherapy in the management of PT has been given serious consideration, especially in malignant PT. A prospective study conducted by Barth et al. concluded that margin-negative resection with adjuvant radiotherapy reduces local recurrence rate in borderline and malignant PT [9]. A meta-analysis study by Chao et al. also supported the use of radiotherapy in PT disease control. However, the role of chemotherapy remains uncertain due to limited evidence [10].

CONCLUSION

Phyllodes tumour of ectopic breast tissue in the axilla is a rare disease. Despite its rarity, diagnostic modality and treatment are the same as PT of the breast. Regular follow-up with regular physical examination, especially in the previous operative site, is advised due to the risk of local recurrence. An ultrasound or mammogram should be arranged if any suspicious new lump is detected during follow-up.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Not applicable.

HUMAN AND ANIMAL RIGHTS

Not applicable.
CONSENT FOR PUBLICATION

Informed consent has been obtained from the patient.

STANDARDS OF REPORTING

CARE guidelines have been followed in this case report.

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CONFLICT OF INTEREST

The authors declare no conflict of interest, financial or otherwise.

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Declared none.

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