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Case Report

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Phyllodes tumor of the breast: a case report

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ABSTRACT

Phyllodes tumor is a rare and locally aggressive fibroepithelial tumor of the breast. Patients generally present with a firm, unilateral, rapidly growing and painless breast mass. Phyllodes tumors are often misdiagnosed as radiological and histopathological examinations have an inadequate diagnostic accuracy. In this article, we present the findings of a patient presenting to our clinic with palpable masses in both breasts revealed to be phyllodes tumor.

Keywords: Phyllodes tumor, breast, neoplasm, fibroepithelial

INTRODUCTION

Phyllodes tumor (PT) is a rare and locally aggressive fibroepithelial tumor of the breast that constitutes less than 1% of all breast neoplasms. They typically occur in females between the ages of 35-55 and show a peak incidence at age 45, which is 15-20 years more than the usual age for fibroadenoma.[1] Patients generally present with a firm, rapidly growing and painless breast mass varying between 3-5 cm.[2] Most PTs are unilateral solitary lesions; however, bilateral cases may rarely occur.[3] PTs exhibit a wide range of biological behaviors and are histopathologically classified as benign, borderline and malignant according to WHO criteria.[4] Radiological signs of PTs are similar to fibroadenomas, frequently leading to the misdiagnosis of these lesions. Although "triple assessment", which is comprised of physical, radiological and histopathological examination, is the standard approach to palpable breast lesions, its diagnostic accuracy is inadequate for PTs.[5] Therefore, wide surgical excision is the preferred method of approach for both diagnosis and treatment. However, as pre-operative diagnosis is difficult, initial surgery frequently lacks the adequate margins for complete excision, requiring a secondary operation.[6] This diagnostic challenge may especially be true for bilateral PTs due to their low rate of incidence. For this reason, PTs should consistently be considered in the differential diagnosis of bilateral palpable breast masses, especially in the appropriate clinical setting. In this article, we present a patient presenting to our clinic with palpable masses in both breasts revealed to be phyllodes tumor.

CASE

A 36-year-old female patient presents complaining of breast masses that had previously been present, but recently exhibited rapid growth. Physical examination showed a firm palpable mass in the upper-middle region of the left breast and upper-inner quadrant of the right breast. Other signs such as discoloration, ulceration, nipple retraction and palpable lymph nodes were not present. Ultrasound imaging of both breasts revealed solid appearing lobulated masses containing multiple cystic spaces and slight posterior acoustic enhancement, as shown in Figure 1 and 2. The masses in the left and right breasts measured 2.8x1.35 cm and 2.1x1 cm, respectively. Doppler ultrasound examination demonstrated visible internal vascularity, as demonstrated in Figure 3. Both lesions were classified as BI-RADS 4A and core biopsy was performed. Histopathological evaluation of the specimen revealed a diagnosis of phyllodes tumor. A wide surgical excision was subsequently performed and the diagnosis was confirmed.

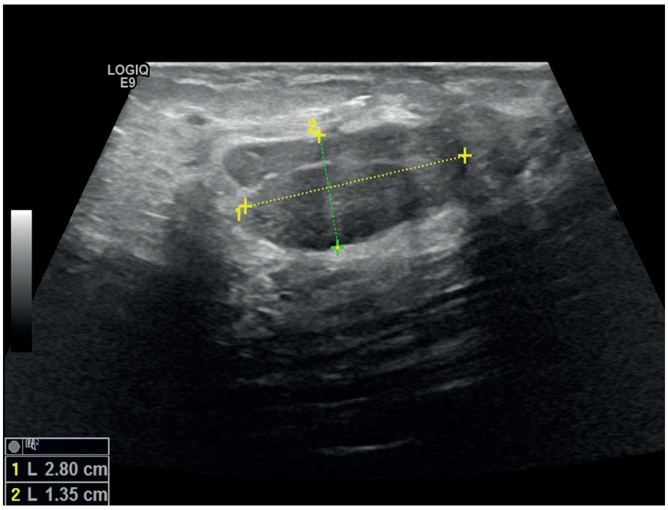

Figure 1. Gray-scale ultrasound of the left breast reveals a solid appearing lobulated mass measuring 2.8x1.35 cm with round cystic spaces and slight posterior acoustic enhancement, suggestive of a fibroepithelial lesion

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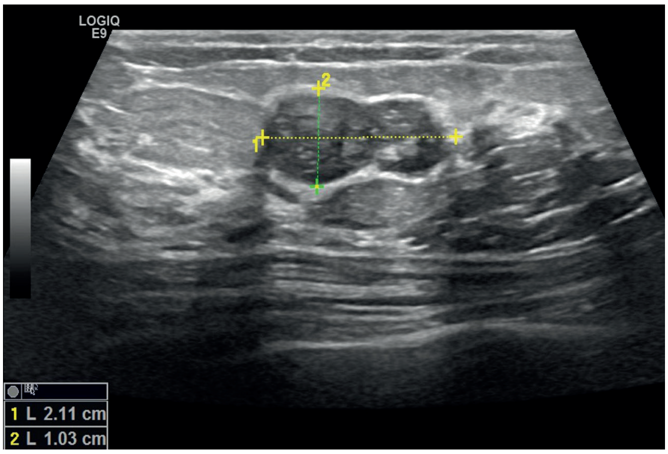

Figure 2. Gray-scale ultrasound of the right breast reveals a solid appearing lobulated mass measuring 2.1x1 cm with round cystic spaces and slight posterior acoustic enhancement, suggestive of a fibroepithelial lesion

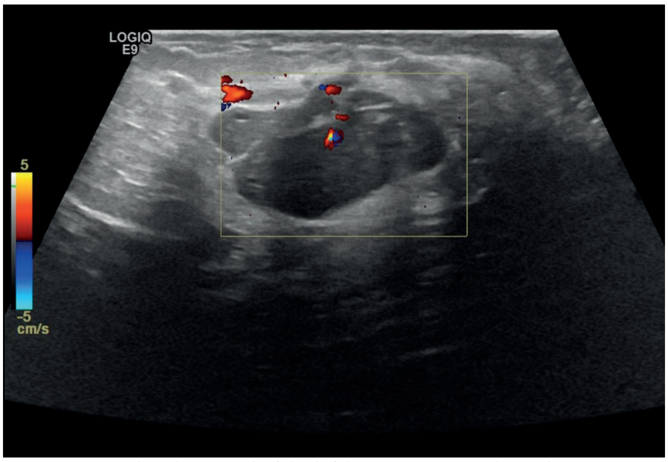

Figure 3. Doppler ultrasound of the left breast mass reveals moderate internal vascularity, increasing suspicion for phyllodes tumor

DISCUSSION

Phyllodes tumors are rare fibroepithelial tumors that generally occur in females between ages 35-55. They frequently present as rapidly growing palpable masses in the upper outer quadrant of the breast. Although the size of PTs may vary, the typical size at presentation is 3-5 cm. Additional findings such as retraction of the skin or nipple and bloody discharge may occur as the tumor expands into the areolar regions. PTs are mostly unilateral, and may rarely present in both breasts. In a study consisting of 293 cases, Barrio and colleagues reported that 3.4% of patients had bilateral PTs.[3] The cohort study of Lin and colleagues reviewed 611 patients in their institution with histopathologically proven PT and reported synchronous bilateral lesions in only 1 patient.[7] In the present case, the patient's age was 36. The patient presented with rapidly growing palpable masses in the upper-middle region of the left breast and upper-inner quadrant of the right breast measuring 2.8x1.35 cm and 2.1x1 cm on ultrasound, respectively. Our case displayed PTs in both breasts. No additional findings were present.

Ultrasound and mammography findings are usually non-specific, and resemble those of fibroadenomas. On mammography, PTs are seen as round or oval lesions with smooth, well-circumscribed margins. A radiolucent halo or calcification(s) may sometimes be present. On ultrasound, PTs typically appear as large, well-defined, solid heterogeneous masses. Round or patchy fluid filled cystic spaces within the lesion with posterior acoustic enhancement is suggestive of PT. Doppler ultrasound frequently shows visible internal vascularity. In the present case, ultrasound of the left and right breasts revealed a solid lobulated oval mass measuring 2.8x1.35 cm and 2.1x1 cm, respectively. Both masses contained round cystic spaces and demonstrated slight posterior acoustic enhancement. Internal vascularity was present on doppler ultrasound examination. These findings were consistent with phyllodes tumor.

CONCLUSION

Phyllodes tumors are rare, typically unilateral neoplasms of the breast that pose a significant diagnostic challenge due to their overlapping histological and radiological findings. Accurate diagnosis is essential, as the recommended treatment is surgical excision with wide margins to reduce the rate of occurrence. Although PTs are typically unilateral solitary lesions, clinicians should be mindful that bilateral lesions may occur. For this reason, in the presence of the relevant clinical and radiological signs, they should consistently be considered in the differential diagnosis of bilateral palpable breast masses, particularly those resembling fibroadenomas.

ETHICAL DECLARATIONS

Informed Consent

Written informed consent was obtained from the patient included in this report. Signed consent forms are retained by the authors and are available upon request.

Peer Review Process

This report underwent external peer review.

Conflict of Interest

The authors declare no conflicts of interest.

Financial Disclosure

This case report did not receive any financial support.

Author Contributions

All authors made substantial contributions to the clinical documentation, interpretation, and manuscript preparation. All authors approved the final version of the manuscript.

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