

• 病例报告 •

Giant phyllodes tumor in both breasts: one case report and literature review

TANG Qi, ZHOU Shao-qiang

Breast phyllodes tumor (BPT), which is composed of epithelial cells and fibrous connective tissue, is a special type of tumor and yet not unified in biological behavior and histological classification, with high risk of recurrence and potential metastasis. BPT in one side has high incidence in clinic while BPT in both sides is rarely found. We treated one patient with giant BPT in both sides and reported as follows.

1 Case report

The patient, female, aged 49, was admitted due to a rapidly increased lump in the right breast in June 2010, and she complained that the lump had increased from the size of “an egg” to the size of “a basketball” in August and had then been treated as suspected inflammation with anti-inflammatory treatment before admission but failed. Physical examination on admission showed an about 35 cm×32 cm×33 cm huge lump in the right breast, firm and poorly-movable, with reddish purple and mildly warm epidermis, swollen but not ulcerated (Fig. 1). No enlargement of the ipsilateral axillary lymph nodes was observed. Mammography indicated a 31 cm×33 cm lobulated tumor in the right breast, with an unclear border, uneven density and skin thickening, which was considered to be a phyllodes tumor. Ultrasound showed that a huge lump was found in the right breast, 35 cm in diameter, oval-shaped, with unclear border, medium echo and uneven distribution, in which an anechoic cystic area could be seen, with plenty of blood flow signals in the parenchyma, indicating cystosarcoma phyllodes (Fig. 2). Since the lump was so huge that it occupied the entire breast, there was almost no residual gland. No ipsilateral axillary lymph node metastasis was found in preoperative examination, so we chose the lateral fusiform incision for “right mastectomy”. During the surgery, the lump, which was found to have a capsule, with a rich blood supply on the surface, gray red parenchymal area, was partly tough and partly tender (Fig. 3). Pathologic diagnosis showed borderline phyllodes tumor in the right breast, with some areas in accordance with low-grade (mesenchymal component overgrowth, focal necrosis, hemorrhage, mitotic index <5/10HPF) (Fig. 4).



Physical examination on admission showed an about 35 cm×32 cm×33 cm huge lump in the right breast, firm and poorly-movable, with reddish purple and mildly warm epidermis, swollen but not ulcerated.

Fig. 1 Giant phyllodes tumor of the right breast before operation

In March 2012, she was readmitted for a lump in the left breast rapidly increasing from the size of “an egg” to the size of “a volleyball” during March and complained that it was similar to the one in the right breast two years ago. Physical examination on admission showed a 30 cm×28 cm×25 cm lump in the left breast (Fig. 5), with the basically same property and texture with the right one resected two years ago. No enlargement of the ipsilateral axillary lymph nodes was found. Ultrasonic diagnosis showed that a 28.4 cm×26.4 cm×20.5 cm lump was found in the left breast, irregular shallow lobulated, with still clear border, uneven distribution, parenchymal-based mixed echo, and rich blood supply in the parenchyma. It was considered to be a phyllodes tumor (Fig. 6). Similarly, we performed left mastectomy. During the surgery, the lump was found huge, rich in blood supply and having invaded the pectoralis major, which led to a resection of part of the pectoralis major. The cut surface of the lump was gray and partly tender. Pathologic diagnosis indicated a borderline phyllodes tumor in the left breast (Fig. 7).

Both of surgical pathologies proved no tumor residue of cutting edge, all incisions healed well postoperatively, and no occurrence of complications such as incision infection and flap necrosis. No abnormality was found in the 5 months follow-up.

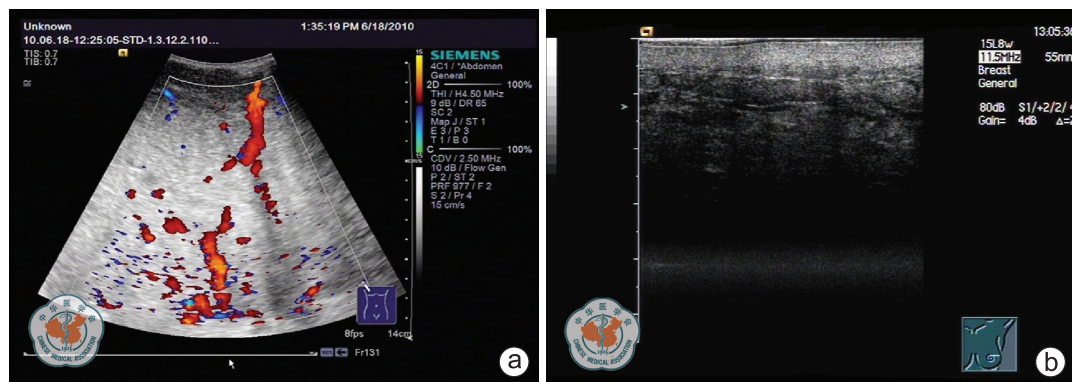
2 Discussion

BPT, a type of mesenchymal epithelial tumor, which is rarely found in clinic, accounts for about 0.3% to 1.0% of female breast cancers^[1]. The median age of onset is 30 to 50

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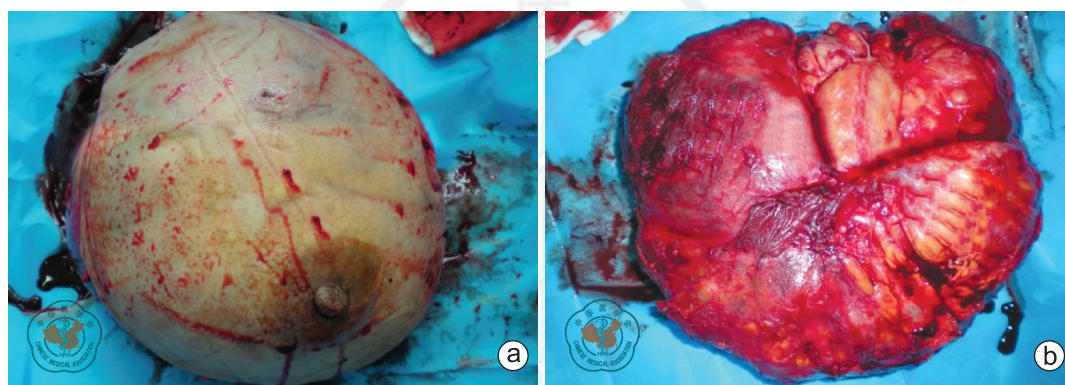
Authors' address: Department of Breast Surgery, the Third Affiliated Hospital of Kunming Medical University, Kunming 650118, China

Corresponding author: TANG Qi, Email: quantt@126.com



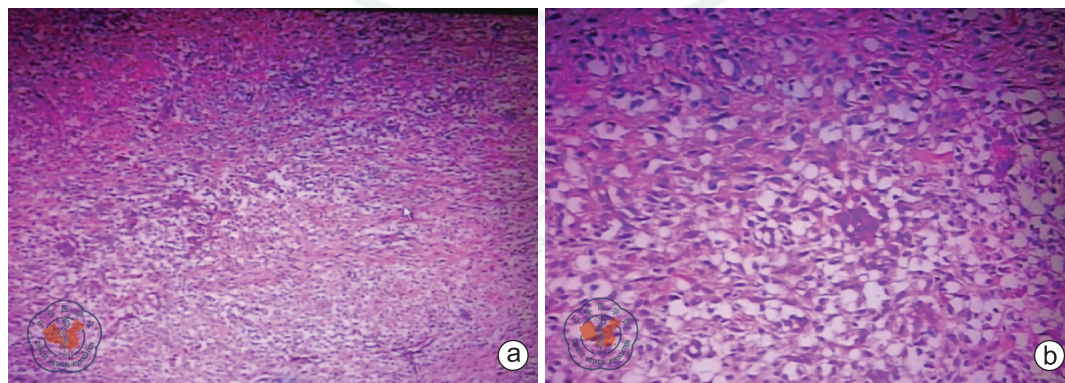
A huge lump was found in the right breast, 35 cm in diameter, oval-shaped, with unclear border, medium echo and uneven distribution, in which an anechoic cystic area could be seen, with plenty of blood flow signals in the parenchyma, indicating cystosarcoma phyllodes. a: The oblique section; b: The cross section

Fig. 2 B-ultrasonic examination before operation



a: The right lump was completely removed; b: The lump with a rich blood supply on the surface and gray red parenchymal area was partly tough and partly tender.

Fig. 3 Intraoperative resected tumor



A borderline phyllodes tumor in the right breast, with some areas in accordance with low-grade (mesenchymal component overgrowth, focal necrosis, hemorrhage, mitotic index<5/10HPF). a: HE×4; b: HE×10

Fig. 4 Pathologic view of right lump

years^[2]. With various histological manifestations, phyllodes tumor is named after its roughly lobulated or cystic cut surface. Its cause is not clear yet, though the disease may be associated with metabolic secretion disorders of estrogen.

Most clinical cases are unilateral ones, so this case with huge BPT successively occurring in both breasts within two years, is rare. The bilateral tumors showed the typical characteristics of huge phyllodes tumor, such as quick growth to occupy the entire breast, thin skin, slightly higher skin

temperature, and venous engorgement (not yet invaded the skin that causes the ulceration of surrounding tissue). BPT is very likely to be misdiagnosed and the reported misdiagnosis rate is 66.7%^[3]. The clinical signs and X-ray findings of cellular fibroadenoma and benign phyllodes tumor are very similar and difficult to distinguish; in addition, if local ulceration and enlarged axillary lymph nodes occur, the lump is often misdiagnosed as breast cancer or plasma cell mastitis. However, the typical clinical manifestations of this patient, as



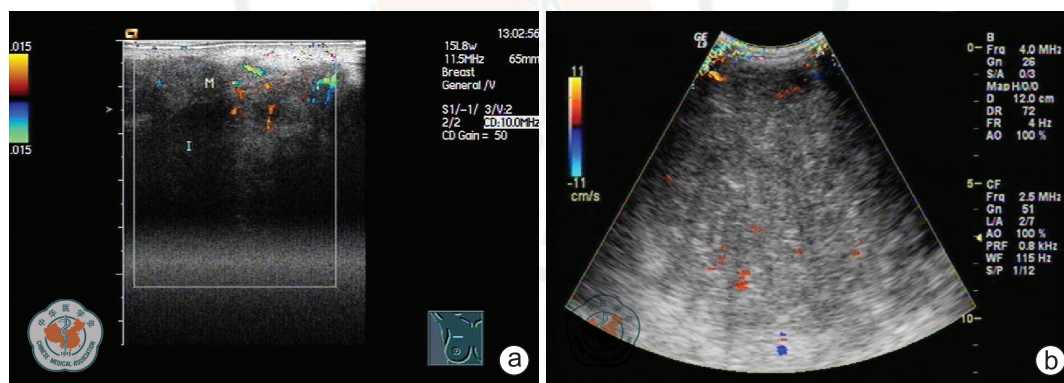
Fig. 5 Giant phyllodes tumor of the left breast before operation

well as breast ultrasound and mammography, obviously showed signs of phyllodes tumor, therefore, its preoperative diagnosis was not difficult.

The present diagnosis of BPT mainly relies on postoperative pathologic examination. The phyllodes tumor is largely parenchymal, with clear border and gray-brown, convex cut surface, which may be associated with cystic necrosis. Sometimes it is hard to be distinguished from fibroadenoma microscopically. The pathology is mainly

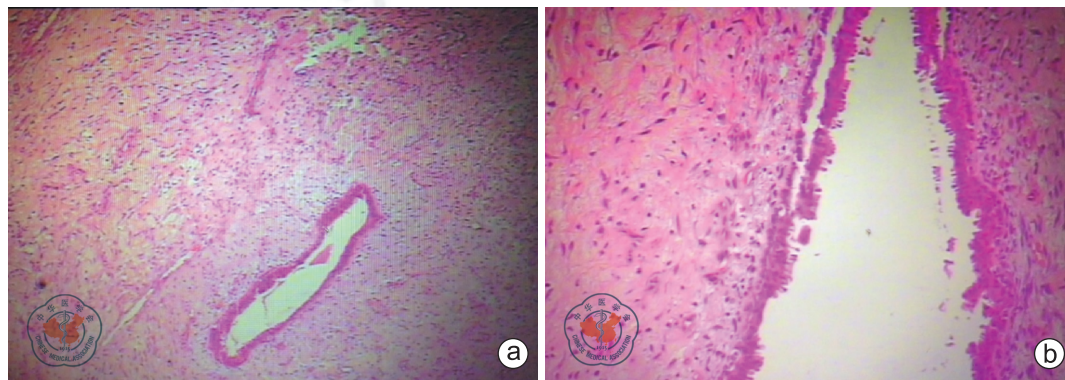
referred to factors like the tumor's mitotic frequency, degree of stromal cell proliferation, atypical cells, the tumor's infiltrating edge and the degree of tumor necrosis. Epithelial and mesenchymal components are necessary for the diagnosis of phyllodes tumor, and the mesenchymal components, which compose a tumor, determine the pathological behavior and have metastatic potential^[4]. In the past, the histopathology may be divided into benign, malignant and borderline. However, since all of these tumors have a recurrence and dedifferentiation potential, some scholars advocate the use of a two-level classification as "low level" and "high level"^[5]. The low level includes the former benign and borderline phyllodes tumors, while the high level is the malignant.

For the main treatment of BPT is surgery^[6], aimed at reducing the risk of local recurrence, it is particularly important to select the appropriate surgical approach. In this case, for huge BPT had successively occurred in both breasts, with few residual gland left, we decided to choose the single mastectomy. The following principles should be noticed: (1) The resection range should include the negative cutting edge with the width (generally thought to be more than 2 cm) determined by the histological features of the tumor and the size of the breast; (2) although the local recurrence or deteriorating condition is not the absolute indication of a single



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Fig. 6 B-ultrasonic examination before operation



a: HE×4; b: HE×10

The cut surface of the lump in the left breast was gray and partly tender.

Fig. 7 Pathologic view of left lump

mastectomy, complete resection of the tumor should be performed and the resection range should be expanded; (3) for the positive rate of axillary lymph node is only 1% to 2%, there is usually no need for axillary lymph node dissection. If there's clinical suspicion of axillary lymph node metastases, axillary lymph node biopsy should be performed, even lymph node dissection if necessary; (4) breast reconstruction with prosthetic implants could be performed after the single mastectomy for phyllodes tumor^[7-8]. Because this patient had the disease successively in both breasts in a short period of time, we considered a higher potential risk of recurrence than the patients with ordinary BPT. Combined with the patient's opinion, we did not perform the breast reconstruction. The effect of radiation therapy is yet uncertain.

Since the BPT, with characteristics of high risk of recurrence and potential metastasis, is not unified in biological behavior and histological classification, selecting the appropriate surgical approach is the key to ensure reducing the risk of local recurrence. This patient had huge BPTs successively in both breasts within two years, so adequate communications should be made with the patient and good psychological care should be taken to help the patient to acquire a comprehensive understanding of this disease. Although, the metastasis of BPT, which is mainly found locally aggressive, is usually rare and so is that of a lymph node, the hematogenous metastasis of highly malignant phyllodes tumor can occur mainly in lung, bone and liver. Therefore, the postoperative follow-up should be enhanced, particularly for such special cases, to improve the surgical outcomes.

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【Key words】 breast neoplasms; phyllodes tumor; bilateral

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