Giant Phyllodes Tumor of the Breast

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ABSTRACT

Phyllodes tumor is a benign but potentially malignant breast cancer. The incidence phyllodes neoplasm is only about 0.3%-1% of all breast malignancies. A large phyllodes tumor in a 35-year old female was reported. She had history a slowly growing mass in the right breast since 15 years ago and grew rapidly in the last 3 months. After infection control, a right mastectomy with resection of the pectoral muscle was performed followed with secondary closure of the defect with skin graft after 6 weeks. The tumor measured 46x49x24 cm in size and weight of 10.2 kg with malignant histopathological result; no evidence of local or distant recurrence after 3 month follow up.

Keywords: Breast, cancer, phyllodes tumor.

ABSTRAK

Tumor *phyllodes* adalah kelainan payudara yang bersifat jinak, namun berpotensi ganas. Insiden tumor *phyllodes* sekitar 0,3%-1% dari semua tumor payudara. Dilaporkan kasus pada wanita berusia 35 tahun dengan tumor *phyllodes* yang berukuran sangat besar. Massa payudara kanan berukuran kecil yang tumbuh perlahan telah ada sejak 15 tahun. Dalam 3 bulan terakhir terjadi pertumbuhan massa yang cepat dan progresif. Setelah pengendalian infeksi, dilakukan mastektomi kanan dengan reseksi otot pektoralis. Selanjutnya dilakukan perawatan luka sekunder dan diikuti dengan penutupan defek dengan tandur kulit setelah 6 minggu. Didapatkan tumor berukuran 46x49x24 cm dan berat 10,2 kg dengan hasil histopatologi keganasan. Tidak ada bukti kekambuhan lokal atau jauh setelah 3 bulan tindak lanjut. **Fonda RP Silalahi, Mirton. Tumor *Phyllodes* Payudara**

Kata Kunci: Payudara, kanker, tumor phyllodes.

INTRODUCTION

Phyllodes tumor is a rare tumor of the breast; the incidence is 0.3%-1% of all breast malignancies and 2.5% of fibroepithelial lesion.[1-3,9] Most of these tumors are benign, but some have a malignant potential. These tumors commonly occur in females in the age 40 and 50 years.[1,2,4,9] Phyllodes tumor can grow rapidly and mimic other types of breast carcinoma, particularly if the mass is firm, ulcerating, and bleeding.[1,2,5,6] Phyllodes tumor usually compresses the surrounding tissue and consists of connective tissue, gelatinous cyst, and solid tissue.[1-3,8] Phyllodes tumors are classified into benign, borderline, and malignant.[1,2,6,7] The majority of phyllodes tumors have been described as benign (35% to 64%), with the remainder divided between the borderline and malignant subtypes.[1,2,6,7] A 5-year survival rate was observed in almost 100% of patients with benign tumors, 98% with borderline, and about 88% with malignant, and 10-year survival is 87%.[3] The number of mitotic activity in histological view may help in the diagnosis of the malignant subtype.[1,2,6] The only treatment option for these tumors is surgical removal.[1,2,5-7] All forms of phyllodes tumors have malignant potential and can behave like sarcomas with blood-borne metastasis to various organs, commonly the lungs, bone, and abdominal viscera.[2-5,6] The cut off point for the giant phyllodes tumor is 10 cm.[10] What was fascinating about our case was the aggressiveness of this variation of phyllodes, because the mass had been enlarged and being giant just 3 months after became ulcerated. There were multiple hugely dilated feeding blood vessels to the tumour especially subcutaneous veins and perforating intercostal vessels, which can be surgically challenging, and the reconstruction after excision.

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CASE

A 35-year-old single female presented to Harapan and Doa Hospital Public Hospital at Bengkulu City, Indonesia, in May 2022, with a lump in her right breast since 15 years ago but rapidly increasing in the last 3 months, becoming huge, ulcerated, and bled with severe pain. On breast examination, giant ulcerating mass (>10 cm in diameter) occupied the whole right breast. The mass was mobile and firm at palpation and had enlarged prominent cutaneous blood vessels. No other masses were palpable; the left breast was normal.

No obvious chest wall or pulmonary metastasis was noted in chest X-ray. Right wide mastectomy with excision of pectoralis major and axillary lymph nodes was performed. The dissection was very tedious as blood vessels were grossly dilated. The tumor specimen measured 46x49x24 cm in size and 10.2 kg in weight. Histology examination revealed malignant


phyllodes with more than 5 hpf mitoses.

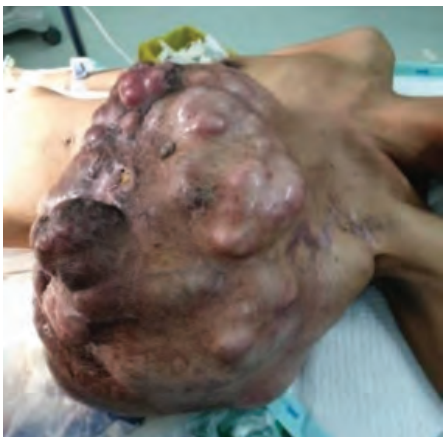

Figure 1. The right phyllodes tumor.

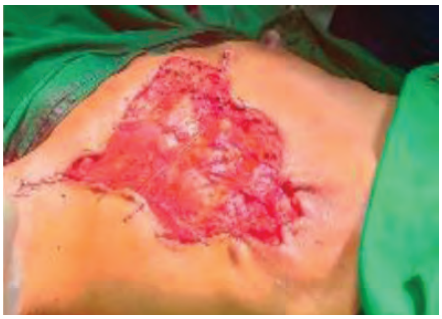

Figure 2. After right mastectomy.

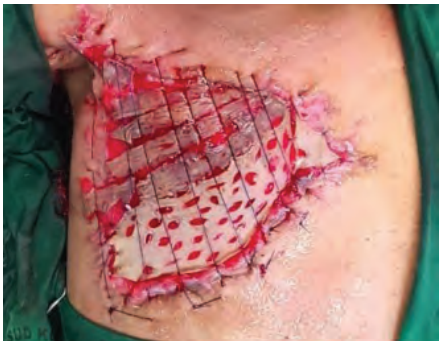

Figure 3. Closure defect with skin graft.

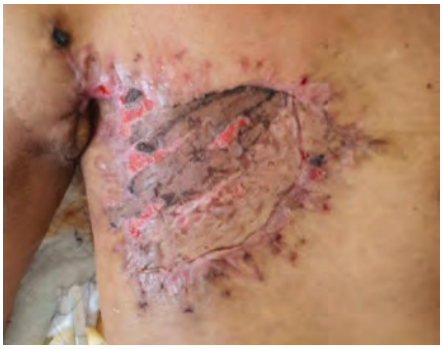

Figure 4. Clinical picture in observation.

The patient had a successful postoperative recovery. After 6 weeks patient underwent secondary closure with skin flap. Within 3 months observation, there were no evidence of local and distance reccurences.

DISCUSSION

This case highlights the potential of these tumors to grow aggressively and become giant phyllodes (tumor size more than 10 cm in diameter) within 3 months. The tumor in this case first appeared in the age of 35 years. The growth of these tumors, regardless of size, is usually not in a vertical growth pattern like many other aggressive, malignant tumors, rather, in a horizontal-radial pattern expressing a mass-effect on the surrounding breast tissue. The growth can cause thinning of the skin resulting in ulceration, hemorrhage, and increased risk of infection. World Health Organization classified phyllodes tumors 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 margin appearance **(Table 1).**[1]

Borderline tumors have the greatest tendency for local recurrence. Malignant phyllodes tumors are infiltrative with high local recurrence and distant metastases.[1,4]

First-line treatment for phyllodes tumor is surgical resection.[1,2,4-7] According to the National Comprehensive Cancer Network (NCCN) guidelines for breast cancer, the management for phyllodes tumor size >3.0 cm is with surgical excision with clear margins of at least 1.0 cm without axillary staging.[7] Previous literature has reported a recurrence rate as high as 20% when surgical resection is performed with less than 1.0 cm margins.[5] While in tumor-free margins, the recurrence rate is less than 13%.[1] Recurrence is particularly higher when the tumor size is larger than 10 cm.[1,3]

A variety of techniques have been utilized to improve pre-operative diagnosis of phyllodes tumours, such as ultrasound, mammogram, MRI, and core needle biopsy. Ultrasound and mammography are the most commonly used first line investigation for this disease.[1,4] There are no pathognomonic mammographic or ultrasound features of phyllodes tumour.[3-5] Neoadjuvant and adjuvant therapy with chemotherapeutic agents and/or radiation treatment does not have a clear indication for this pathology.[1,2,4,5]

Treatment for both benign and malignant phyllodes is wide excision with tumor-free margins. The wider the margin, the less local recurrence. The margin of excision is up to 1 cm of the normal tissue obtained.[1,3,4] Closure of wound after excision of a giant phyllodes tumor remains a great challenge.[1,4,10] There is no contraindication to immediate reconstruction after mastectomy in cases of giant phyllodes tumour, and this decision can be made solely based upon patient preference.[4,10] Most often immediate reconstruction of the chest wall was performed with prosthetic implant or chest wall are covered with splits skin graft, marlex mesh, or latissimus dorsi muscular or myo-cutaneous flap.[1,4,10] The role of adjuvant radiotherapy and chemotherapy remains uncertain, but consideration can be given for malignant phyllodes tumours.[1,4] After surgery, it is recommended for patient to control every 6 months for the first 2 years because local recurrence events often occur in this time period.[1,4,5,10] Possible local recurrence is within 2 years, mostly with the same histopathology with the previous tumor.[1,4]

CONCLUSION

Phyllodes tumor should be considered in all patients with progressive enlargement of breast lump. Excision should be done as soon as possible, as unnecessary delay can lead to disease progression and morbidity and mortality increase.

Author contribution

Table 1. WHO classification of phyllodes tumor subtypes.[1]

Histologic Features	Benign	Borderline	Malignant
Stromal cellular atypia	Mild	Marked	Marked
Mitotic activity	<4/10 hpf	4–9/10 hpf	≥10/10 hpf
Stromal overgrowth	Absent	Absent	Present
Tumor margins	Circumscribed	Circumscribed or infiltrative	Infiltrative

All authors have equally contributed in designing, organizing collecting data, and analyzing the manuscript.

Consent

Patient consent was obtained.

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