Giant Malignant Phyllodes Tumor of the Breast: A Case Report

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ABSTRACT

Phyllodes tumors are rare fibro-epithelial lesions that account for about 0.3% to 0.9% of female breast tumors. The tumors could be classified into benign, borderline, and malignant lesions based on the histological features. The malignant types represent only about 10 to 30% of these tumors. These tumours could grow rapidly to giant sizes when mastectomy would be required for adequate tumor free margin to be achieved. The patient should be closely followed up for possible recurrence. We report a case of malignant phyllodes tumor in a 38 year old female who presented with left breast lump of 18 years duration with sudden increase in size 6 months prior to presentation, and ulceration. Examination revealed a huge ulcerated mass involving the entire left breast, measuring 24cm x 20cm in size with no axillary lymph node enlargement. The contralateral breast and axilla showed normal features. In cisional biopsy and histology suggested malignant phyllodes tumor. Total mastectomy was done. Postoperatively, she received cyclical Adriamycin and Ifosfamide chemotherapy. She has undergone follow up to sixth months.

Keywords: Malignant phyllodes tumor, breast, mastectomy

INTRODUCTION

Phyllodes tumors are rare fibroepithelial lesions accounting for about 0.3% to 0.9% of female breast tumors[1-3]. The disease incidence peaks in women aged 45 to 49 yrs[4,5]. It is rarely seen in adolescents and the elderly.[6,7]This range of tumors has been divided into 3 types: benign, borderline and malignant, based on the histopathologic pattern[8]. The benign tumors are more common than the malignant ones which represent about 10 to 30% of these tumors.[5] The median size of these tumors is 4cm[9], however about 20% of them grow larger than 10cm and are called giant phyllodes tumors[10]. Surgical treatment is the primary mode of treatment, which could be wide local excision or mastectomy depending on the size of the tumor and ability to provide histologic clear margins[11,12,13]. We present a rare case of a young woman with a giant malignant phyllodes tumor of the left breast.

CASE PRESENTATION

A 38 year old woman noticed a small lump in the left breast 18 years prior to presentation while taking her bath. The lump was initially slow growing over the years but 6 months prior to presentation there was rapid increase in size to involve the entire left breast and subsequently ulcerating a month to presentation. There was associated breast pain (relieved by analgesics only), intermittent oozing of blood from the ulcer and weight loss but there were no symptoms suggestive of systemic metastasis. She has no known systemic disease, no known allergy and not on routine drugs. She is Para 5^{+0}, she breast fed all her children for at least 1year, had menarche at 12 years and menstruates regularly. She never took hormonal drugs and was not exposed to ionizing radiation. She has no family history of breast tumour amongst her first degree relatives and there was no history of use of alcoholic beverage or tobacco products. Physical examination showed a chronically ill looking woman, who was pale with a large oval-shaped, fungating left breast mass involving the entire breast with malodorous purulent discharge, amputation of the nipple, areolar ulceration and paeu d'orange (Fig. 1). The tumour measured 24cm x 20cm in size while the largest ulcer at the lower outer quadrant measured 8 x 6cm in size with the tumour protruding through it (Fig 1). There were also six shallow ulcers located at the central region of the breast with the nipple amputated. The tumour was of mixed consistency (soft, firm and hard) and multi-nodular. The tumour was not attached to the underlying chest

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wall and there were no palpable axillary lymph nodes. The contra-lateral breast and axilla were normal. The chest was clinically clear and the liver was not palpable.Her baseline haemoglobin was 5.9g/dl and white blood cell count was $18.1x10^9$/L with neutrophilia. Pre operative wound swab for microscopy, culture and sensitivity showed a mixed bacterial growth of Staphylococcus aureus, Pseudomonas aeruginosa, and Proteus species and all were sensitive to Ciprofloxacin which was administered accordingly. A wedge biopsy of the ulcer edge and the protuberant tumour was done and sent for histology. The histological section of the breast tumor showed a malignant neoplastic lesion, composed of pleomorphic spindle cells with hyperchromatic nuclei and abnormal mitotic figures, there were no epithelial (ducts and glands) components: these features are consistent with malignant phyllodes tumor of the breast (Fig. 3). Chest X-Ray and abdomino-pelvic ultra sound scan showed no evidence of metastasis to chest structures and abdomino-pelvic viscera respectively. The clotting profile and serum creatinine, urea and electrolytes were essentially normal. She was admitted, received pre-operative blood transfusion and worked up for simple mastectomy of the left breast which she underwent under general anaesthesia and endo-tracheal tube (Fig 2).The weight of the excised tissue was 1.83 kg. Histo-pathological examination of the excised tissue confirmed malignant phyllodes tumour, but the excision margin was not free of microscopic tumour. Postoperatively she developed superficial surgical site infection which was treated according to the bacterial sensitivity, until the wound healed before discharge from hospital. Adjuvant cyclical chemotherapy with Adriamycin (60 mg/m2) and Ifosfomide (3 g/m2) were administered, five cycles so far. She was counseled on monthly self breast examination of the contra-lateral breast. Follow up for 6 months has shown no recurrence.

DISCUSSION

Fig. 1 A fungating malignant phyllodes tumour of the left breast in a 38 year old woman showing multiple ulcers, absent nipple (amputated) and tumour protruding through the largest ulcer

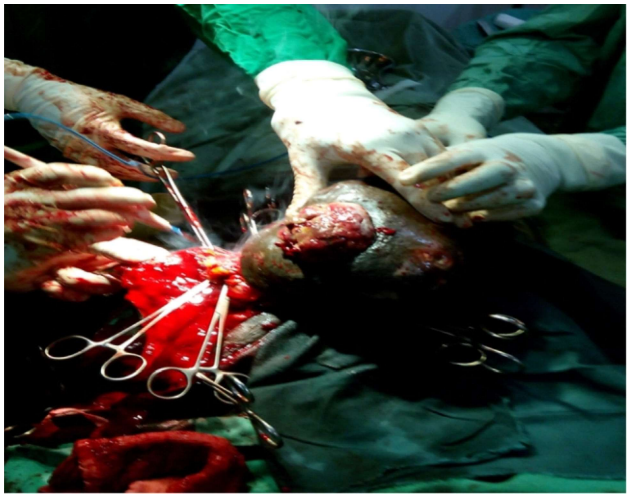

Fig. 2 Mastectomy of left breast involved in giant malignant phyllodes tumour

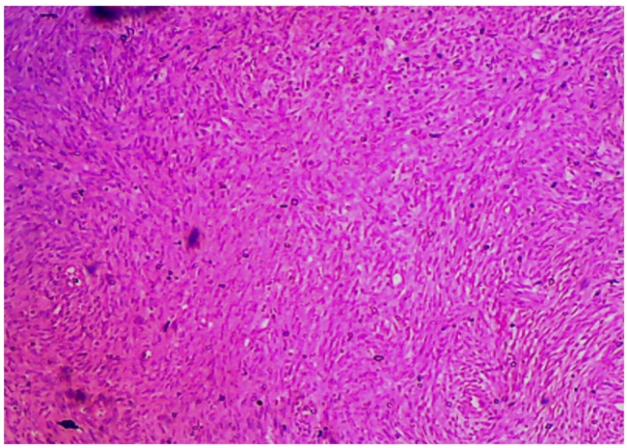

Fig. 3 Photomicrograph of the malignant phyllodes tumour showing pleomorphic spindle cells with hyperchromatic nuclei and abnormal mitotic figures with no epithelial (ducts and glands) components

Phyllodes tumor was described in 1838 by Johannes Muller, who gave it the name *Cystosarcoma phyllodes*; an inappropriate term since the tumor is rarely cystic and is mostly benign.[14] It was the World Health Organization (WHO) that decided Phyllodes tumor should be the accepted nomenclature for the disease with its wide range of pathologic behavior from benign at one extreme to malignant at the other.[15] Malignant phyllodes tumor has a propensity for rapid growth and metastatic spread.[8] In some patients, like in this case, a breast lesion may have been there for many years only for the patient to present because of sudden increase in its size.[10,16,17] This sudden increase in size in the index case might have signified malignant change from benign phyllodes tumour to malignant phyllodes tumour. Ulceration is uncommon but can occur as in this patient.[16] The reasons for the ulceration are skin invasion leading to the malignant ulcer and pressure effect of the large tumour on the overstretched breast skin leading to ischaemic necrosis and subsequent ulceration. Subsequent infection aggravated the ulcer. Metastasis to the axillary nodes is uncommon, but malignant spread to axillary nodes can occur in 20% of patients with phyllodes tumor.[10,12,18] Giant malignant phyllodes tumors of the size seen in this patient require mastectomy for adequate tumor free margin to be achieved.[12,13]Axillary clearance is only required if there is evidence of axillary lymph nodes metastasis but our patient did not have axillary lymph nodes enlargement hence axillary clearance was not done. Although adjuvant chemotherapy was given to this patient, the benefit of adjuvant chemotherapy or radiotherapy in the management of malignant phyllodes tumor remain unknown, even though isolated reports of good palliation of metastatic disease from chemotherapy have been published, this role is yet to be well established.[8,19-25] The effectiveness of systemic chemotherapy against metastatic malignant phyllodes tumour is based on the principles of sarcoma rather than carcinoma treatment.[26, 27]After surgical treatment, regular follow up of the patient with regular breast examinations and imaging studies are advocated.

CONCLUSION

We conclude that early patient presentation and prompt treatment will lead to a good prognois and propose that more clinical trials be done in order to find more effective systemic chemotherapeutic treatment for malignant phyllodes tumor.

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