Contemporary Oncology (2011) vol. 15; 1 (44–46)

DOI: 10.5114/wo.2011.20531

A case of a giant phyllodes tumour of the breast

Monika Szrajda[1], Robert Szyca[1,2], Andrzej Jasiński[1], Marek Gryz[1], Krzysztof Leksowski[1,2]

[1]Department of General, Thoracic and Vascular Surgery, Military Clinical Hospital, Bydgoszcz, Poland
[2]Chair of Public Health of the *Collegium Medicum* of Nicolaus Copernicus University, Bydgoszcz, Poland

Phyllodes tumour appears with the frequency of 0.5-1% of all breast cancers. It is diagnosed in women between 30 and 70 years old. The name comes from the appearance of the tumour, which in cross-section resembles the head of a cabbage. Phyllodes tumour is a seldom diagnosed tumour among breast cancers. It consists of epithelial elements, which show features of histopathological malignant and mesenchymal parts which condition the clinical course of the disease. The tumours are histopathologically classified into benign, borderline and malignant tumours. The article presents the case of a 41-year-old patient, sent to the Clinic of Surgery of the 10th Military Clinical Hospital in Bydgoszcz because of a giant tumour of her right breast. On admission to hospital the patient was in a serious condition. The woman's body was ravaged by the disease. For three months she had been bedridden and treated symptomatically with narcotic analgesics. In additional investigations: anaemia (8 g/dl), lowered level of total protein and albumins, paroxysmal hypoglycaemia. Locally there was a giant, decaying tumour in the right breast. It was 40 cm in diameter with ulceration and clinically enlarged lymph nodes of the right armpit. The patient was qualified for surgery on an urgent basis. A mastectomy was performed by Madden's method with oncoplastic surgery, on account of the extensive tumour. The postoperative course was uneventful. Phyllodes tumour was diagnosed in the postoperative pathological examination – in the central part of the tumour there was weaving of the malignant mesenchymal tumour type, without features of metastases in lymph nodes of the armpit. After a month of hospitalization at the Surgical Clinic the patient was transferred for further rehabilitation. One year after the surgery the woman, in good general condition and without any clinical signs of relapse, remains under oncological observation.

Key words: breast cancer, phyllodes tumour, benign, borderline and malignant tumours.

Phyllodes tumour appears with the frequency of 0.5-1% of all breast cancers [1]. It is diagnosed in women between 30 and 70 years old [2]. The name comes from the appearance of the tumour, which in cross-section resembles the head of a cabbage [3]. Phyllodes tumour is a seldom diagnosed tumour among breast cancers. It consists of epithelial elements, which show features of histopathological malignant and mesenchymal parts and which condition the clinical course of the disease [4]. The tumours are histopathologically classified into benign, borderline and malignant tumours [4, 5]. Benign tumours do not metastasize, but they have a tendency to aggressive growth and local conversion [2, 5]. Malignant and borderline tumours account for approximately 15-30% of phyllodes cancers and metastasize in approximately 25-40% of cases [1, 5]. Metastatic tumours are composed exclusively of stromal cells and from here, as in the case of sarcoma metastasis, they spread via blood circulation to the lungs, bones and liver [3, 6]. Metastasis via the lymphatic system is very rare. Lymphadenopathy, which accompanies the tumours, is associated mostly with necrotic degradation within them [5].

Clinically, it is a well-limited tumour, usually of approximately 4-5 cm, mobile, hard, single and painless [5]. The tumour is morphologically well separated from the surrounding tissues and it usually has an alleged capsule [7]. There are no pathognomonic signs in ultrasound and mammography allowing this tumour to be distinguished from other proliferative lesions [8]. The thin-needle biopsy is often nondiagnostic [5]. Morphological changes typical of phyllodes tumour can only be observed in the magnetic resonance imaging (MRI). A preliminary histopathological diagnosis can be made on the basis of the opened biopsy [2, 5].

Operative treatment is essential [1, 4]. In the case of benign tumours sparing operations are performed. On account of the great risk of recurrence because of microinsets within the alleged capsule, a wide local excision with a margin 1-2 cm long is recommended. In the case of malignant tumours and benign tumours of considerable size, a simple or modified radical mastectomy is performed, and if necessary a Halsted mastectomy [4, 5, 9]. Sentinel node biopsy and axillary lymphadenectomy is not routinely performed. Lymphadenectomy is recommended in the event of finding palpably enlarged lymph nodes, which are present in 10-20% of cases, and metastases are diagnosed in less than 5% of cases [5]. There is no evidence on the effectiveness of radiotherapy and chemotherapy. Hormone therapy, like other elements of adjuvant treatment, is not applicable, even though the phyllodes tumours express oestrogen and progesterone receptors (epithelial elements), while the stromal elements do not possess this characteristic [1, 3, 4].

Description of the case

A female patient aged 41 was admitted to the Department of Surgery, due to a huge right breast tumour with a diameter of 40 cm (fig. 1). In the 6-year history, the patient was treated at a regional centre. Initially the tumour was

Fig. 1. Patient before the surgery

Fig. 2. Patient after the surgery

Fig. 3. Patient 6 months after the surgery

small. Two thin-needle biopsies did not show cancerous changes in the tumour, and the woman did not consent to surgical treatment. Then from three months there was rapid growth of the tumour. The patient was hospitalized in November 2008 in the regional centre. At that time the tumour had a diameter of about 20 cm. In the histopathological examination of the surgical biopsy it was stated that there were no features of cancer proliferation. The patient was discharged with the recommendation of hospice care at home. The patient was admitted to the Clinic of Surgery of the 10th Military Clinical Hospital in Bydgoszcz in February, 2009. On admission to hospital the patient was in a serious condition. She was ravaged by the disease. For three months she had been bedridden and treated symptomatically with narcotic analgesics. In additional investigations: anaemia (8 g/dl), lowered level of total protein and albumins, paroxysmal hypoglycaemia. Locally there was a giant, decaying tumour of the right breast. It was 40 cm in diameter with ulceration and clinically enlarged lymph nodes of the right armpit. For histopathological examination a surgical biopsy of the tumour was taken and the following result was obtained: probably malignant phyllodes tumour. A culture was taken from the ulcer and two bacteria were identified: methicillin-sensitive *Staphylococcus aureus* and *Enterococcus faecalis*. Antibiotic therapy was prescribed in accordance with an antibiogram and parenteral nutrition. The patient was qualified for surgery on an urgent basis. A mastectomy was performed by Madden's method with oncoplastic surgery, on account of the extensive tumour (fig. 2). The postoperative course was uneventful. Tumour phyllodes was diagnosed in the postoperative pathological examination – in the central part of the tumour there was weaving of the mesenchymal malignant tumour type, without features of metastases in lymph nodes of the armpit. After a month of hospitalization at the Surgical Clinic the patient was transferred for further rehabilitation. One year after the surgery the woman is in good general condition without any clinical signs of relapse, and remains under oncological observation (fig. 3).

The typical course of the disease, in which the long-existing breast nodule grows rapidly within a short time, is characteristic of phyllodes tumours. This case represents one of the largest tumours reported in the literature [10, 11]. The fact that the patient was categorised for hospice treatment at diagnosis of the phyllodes tumour is alarming. On the basis of the analysed case it is possible to state that adverse prognostic factors (a body ravaged by disease, enormous size of the tumour) do not disqualify the patient from surgical treatment, particularly if the treatment is technically manageable, after the proper preparation of the patient.

References

1. Chaney AW, Pollack A, McNeese MD, et al. Primary treatment of cystosarcoma phyllodes of the breast. Cancer 2000; 89: 1502-11.
2. Farria DM, Gorczyca DP, Barsky SH, Sinha S, Bassett LW. Benign phyllodes tumor of the breast: MR imaging features. AJR 1996; 167: 187-9.
3. Parker SJ, Harries SA. Phyllodes tumours. Postgrad Med J 2001; 77: 428-35.
4. Pawlicki J, Król R, Kajor M, Ziaja J. Przypadek złośliwego guza liściastego z konwersją do włókniakomięsaka. Pol Merk Lek 2007; 22: 215.
5. Liang MI, Ramaswamy B, Patterson C, McKelvey M, Gordillo G, Nuovo G, Carson W. Giant breast tumors: Surgical management of phyllodes tumors, potential for reconstructive surgery and a review of literature. World J Surg Oncol 2008; 6: 117.
6. Parfitt JR, Armstrong C, O'Malley F, Ross J, Tuck AB. In-situ and invasive carcinoma within a phyllodes tumor associated with lymph node metastases World J Surg Oncol 2004; 2: 46.

7. Pytel J, Dedecius M, Naze M, Stróżyk G, Brzeziński J. Złośliwy guz liściasty gruczołu piersiowego u kobiety w ciąży. Prz Menopauz 2009; 6: 331-3.
8. Mangi AA, Smith BL, Gadd MS, Tanabe KK, Ott MJ, Souba WW. Surgical management of phyllodes tumors. Arch Surg 1999; 134: 487-93.
9. Reinfuss M, Mitus J, Duda K, Stelmach A, Rys J, Smolak K. The treatment and prognosis of patients with phyllodes tumor of the breast: an analysis of 170 cases. Cancer 1996; 77: 910-6
10. Hiers C, Cook J, Sales E. Case report of a 30.8 pound cystosarcoma phyllodes of breast. Journal of the Arkansas Medical Society 2009; 106: 134-6.
11. Agrawal PP, Mohanta PK, Singh K. Cystosarcoma phyllodes with lymph node metastasis. Community Oncology 2006; 3: 44-8.

Address for correspondence

Robert Szyca, MD
Department of General, Thoracic and Vascular Surgery,
Military Clinical Hospital
ul. Powstańców Warszawy 5
85-651 Bydgoszcz, Poland
e-mail: robin22@poczta.onet.pl