

# Voluminous Phyllode Tumour of the Breast: A Case Report and Literature Review from Loandjili General Hospital in Pointe-Noire, Congo

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## Abstract

**Introduction:** Breast phyllodes are rare. Histologically, it is a fibro-epithelial tumour that differs from the fibro-adenoma by a more abundant and more cellular stroma. **Observation:** We report a case of a large breast phyllode tumour in a 42-year-old woman in the Obstetric and Gynaecology Department of Loandjili General Hospital. This tumor has evolved for 3 years. It is by discomfort due to chest pain. The clinical examination showed a voluminous right breast in the form of a calabash that hung down the body with a large collateral circulation, associated with an appearance of “orange peel”, and an axillary lymph node. In addition, there were necrotic areas and retraction of the nipple. In addition to the clinical characteristics, the ultrasound images and the histological analyses following the biopsy made it possible to evoke the diagnosis of phyllode tumour of the breast. The treatment consisted of a full right simple mastectomy with a 50 cm breast with a major axis that weighed 9465 grams, supplemented by homolateral axillary lymph node dissection. At the section of the tumour measuring 40 cm long, the sectional sections alternately showed solid and cystic areas. The histological examination confirmed the phyllode nature of the tumour with intermediate grade 2 malignancy. The lymph nodes showed an inflammatory appearance, with no signs of malignancy. Early post operation period was uneventful. The patient’s follow-up was annual, and the last check dated 09/01/2017 proved to be normal. **Conclusion:** The phyllode tumor is a rare pathology. In our environment, it can be greatly increased by the lack of diagnosis and early management. In all cases, any tumour of the breast operated, must benefit from an

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anatomy-pathological analysis, to determine the benign or malignant character of it, allowing proposing a plan of management better adapted.

## Keywords

Breast, Phyllode Tumor, Pathologist, Diagnosis, Mastectomy

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## 1. Introduction

Breast phyllodes tumours are rare, accounting for 0.3% to 1% of breast tumours [1]. Histologically, it is a fibro-epithelial tumour, which differs from the fibro-adenoma by a more abundant and more cellular stroma [2]. Epithelial proliferation is more active than stroma which is more cellular. There are three types of phyllode tumours namely: benign, intermediate malignant, and malignant.

The clinical aspect in the form of a voluminous single swelling is exceptional and this type of tumour requires a suitable management.

We report a case of giant breast phyllode tumour observed in the obstetric gynaecology department of the Loandjili general hospital in Pointe Noire, Congo Brazzaville.

## 2. Clinical Observation

Mrs. O. G., aged 42, consulted for a voluminous tumour of the right breast, evolving for 3 years, accompanied by a gradually significant discomfort, in the form of gravity and chest pain. She was married and mother of 3 children. She had her menarche at 14, and was normally regulated. She had never benefited from contraception. The right breast pain appeared one year after the last child birth, accompanying a progressive increase in breast volume, and motivating 3 years later the consultation in the service.

Physical examination showed a voluminous right breast in the form of a calabash, which hung down the body (Figure 1). This breast showed considerable collateral circulation, an appearance of "orange peel", ulcero-necrotic zones (Figure 2), and retraction of the nipple. In addition, homolateral regular axillary lymph nodes were palpated. There was no breast discharge. The left breast was clinically normal. Mammography was not performed. Nevertheless, the ultrasound of the right breast had revealed heterogeneous ovoid regular mass. Histological examination of the biopsy showed a dense fuso-cellular proliferation, with a fine, fibrous stroma that evoked the diagnosis of a phyllode tumour with intermediate malignancy or grade 2.

Treatment consisted of a complete right simple mastectomy with right axillary node dissection, carrying 8 lymph nodes. Macroscopically, the mastectomy piece measured 50 cm long, and weighed 9465 g. At the time of cutting, the sectional slices alternately showed solid and cystic zones. The histological control



**Figure 1.** Voluminous right breast in the form of a calabash with a collateral circulation.



**Figure 2.** Extended ulcero-necrotic cutaneous lesions of the right breast.

confirmed the phyllode nature of the tumour, but with intermediate grade 2 malignancy. This was a tumour proliferation composite, mesenchymal and epithelial cells, with a variable cellular stroma, which included nuclear pleomorphism.

Examination of the lymph nodes revealed follicular and reactive hyperplasia. There were no signs of malignancy.

The immediate surgery was simple. Follow-up of the patient was annual and the last check as of 09/01/2017 proved to be normal.

### 3. Discussion

Over a period of 13 years, from 1 January 2004 to 1 January 2017, a phyllode tumour was observed among 142 breast tumours operated in the service, *i.e.* 0.7%. The frequency of phyllode breast tumours observed by Ngou Mve Ngou in Gabon [3] in Central Africa is 0.4%. In general, other authors estimate that the frequency of phyllode tumours represents 0.3% to 1% of tumours [1], confirming the rare character of this type of tumour. The age of our patient corroborates with the age of onset of phyllode tumours which is generally between 35 and 55 years; different from the mean age with an average of 10 years later observed about the appearance of fibro adenomas of the breast [2]. El Hfid in Morocco reported a case of breast tumour in a 39-year-old female patient [4], and Sablan [2] in Lille, France reported an average age of 33.4 years in a series of 08 patients with Tumour phyllode of the breast.

The time interval observed between the discovery of the mass and the gynaecological management was evaluated on average between 14 and 16 weeks according to Sablan *et al.* [2], while in our case the patient consulted about 3 years after the onset of the first symptoms. Risk factors for the occurrence of breast tumour of the breast are little known. Nevertheless, women at the beginning of menopause are the most at risk, as well as nulliparous, according to some authors [2] [5] [6], which does not correspond to the profile of our patient.

The breast phyllode tumour is in the form of an adeno-fibroma. Indeed, it is a nodule bumpy or a nodule with several lobes, mobile, well delimited. It is more often the case of the super-external quadrant in 30% of cases; its size may vary from a few centimetres to several tens of major axis, multi-lobed, not fixed to the skin or the deep [2] [5]. Bilateral locations exist, but they are rare, however, according to Noriss [6], bilateral breast tumours represent 32% of the cases.

The voluminous size of the breast tumour of our patient was associated with collateral circulation, areas softened by necrosis and cutaneous ulcerations. In general, the tumour grows progressively, but can also rapidly increase in size, causing a distension of the skin which becomes bright, translucent, with varicose veins, which can also cause ulceration of the skin or even ischemia [6]. This tendency to increase its volume is frequently observed during pregnancy [7]. Phylloides of the breast have a high incidence of local recurrence, but have little tendency to produce metastases in distant organs [2] [6]. However, when they occur in the malignant form, they preferentially concern the liver and the lungs.

The right breast is more concerned [2], as observed in our patient. Axillary adenopathies are often reactive. Mammographic images of breast phyllode tumours are classified according to the degree of suspicion of their pathological

character. The BIRADS classification of the ACR recommended by ANAES is currently used, which uses a standardized terminology to homogenize the behaviour to deal with the various mammographic anomalies [6]. Cole and Beuglet [7] were the first to describe the mammographic aspect of phyllode tumours. It appears in the form of an oval or polycyclic opacity, of large volume, most often unique, of homogeneous water tone, with regular contours, well limited, without posterior reinforcement or micro-calcifications.

On ultrasound, the tumour results in an oval or polylobed image, hypo-echogenic, sometimes homogeneous or calcified, of heterogeneous echo-structure, with a definite limit [8]. However, according to some authors, the presence of small cystic lesions at the edge or inside a solid nodule without visible micro-calcification, as well as posterior acoustic reinforcement, may evoke the diagnosis of a phyllode tumour; Added to this, the presence of central necrosis [6] [8]. Phyllode tumours of the breast, when malignant, show neo-angiogenesis showing peri- and intra-lesioned hyper-vascularization [6] [8].

Cytopunction, on the other hand, has little interest, since it allows the diagnosis only in the rare cases where there is a myxoid mesenchymal juice [9] [10]. However, the complete anatomopathological study of the surgical specimen confirms the diagnosis of breast tumour of the breast and establishes its staging.

Treatment is most often surgical, related to the higher frequency of benign forms, and raises the question of the extent of the excision. This should consider the age of the patient, the size of the tumor in relation to that of the breast, and the histo-prognostic grade [2] [10]. Surgery is consisted of an *in vivo* lumpectomy with a large safety margin of one to two centimetres for grade 1 and 2 phyllode tumours. On the other hand, grade 3 phyllode tumours have as a reference treatment simple mastectomy without axillary clearing [5] [8]. Dipping is reserved for large tumours larger than 5 cm or for multi-recurring tumours despite the adequate margin of resection [5]. Radiation therapy or chemotherapy may be proposed in some cases of Grade 3 phyllode tumours, depending on the surgical margin and after mastectomy for local recurrences or metastatic lesions [2] [4]. Chemotherapy as well as hormone therapy do not appear to be effective on the phyllode tumour [5].

#### 4. Conclusions

The phyllode tumor is a rare pathology. In our environment, it can be greatly increased by the lack of diagnosis and early management. When the diagnosis is made at the beginning, the surgical management may consist of a tumorectomy.

Indeed, the rapid evolution of the functional and aesthetic discomfort that it causes, and rare cases of malignity observed, counteract a mastectomy.

In all cases, any tumour of the breast operated, must benefit from an anatomopathological analysis, to determine the benign or malignant character of it, allowing proposing a plan of management better adapted.

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