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# Epidermoid Carcinoma of the Breast: Report of an Observation and Review of the Literature

Bangoura Mohamed Saliou<sup>1,\*</sup>, Diallo Mamadou Saliou<sup>1</sup>, Soumah Mohamed Salifou<sup>1</sup>, Youla Alpha Mohamed<sup>1</sup>, Cisse Fode<sup>1</sup>, Diallo Alseny<sup>1</sup>, Camara Naby Laye Youssouf<sup>1</sup>, Keita Abdoulaye<sup>2</sup>, Yattara Abdoulaye<sup>3</sup>, Soumaoro Labile Togba<sup>1</sup>, Toure Aboubacar<sup>1</sup>

<sup>1</sup>Department of General Surgery, Ignace Deen National Hospital, Conakry, Guinea

<sup>2</sup>Department of General Surgery, Le Dantec University Hospital, Dakar, Senegal

<sup>3</sup>Department of General Surgery, Regional Hospital Center, Ndioum, Senegal

## Email address:

medsaliou@yahoo.fr (Bangoura Mohamed Saliou)

\*Corresponding author

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**Abstract:** *Introduction:* primary squamous cell carcinoma is a well-known entity believed to be most common in the skin and other squamous cell-lined organs such as the esophagus and anus. Breast epidermoid carcinoma is very rare. *Observation:* we report the observation of a 30 years old woman, mother of 5 children and without particular pathological history addressed from a health center, for a tumor of the right breast evolving for 12 months. The tumor arisen following the drainage of an abscess collected from the right breast. On admission, the physical examination revealed a 6 cm ulcero-budding tumor in the supero-external quadrant, mobile in relation to the deep plane, painless, with the presence of two right axillary adenopathies of 3 cm and 1 cm which were mobile and painless. She performed a mammogram which revealed a mammary mass with fuzzy contours classified ACR4. A biopsy was done which showed a malignant tumor proliferation with predominance of squamous cells. The extension assessment was negative. She had 4 irregular courses of neoadjuvant chemotherapy with tumor stability. She underwent a total mastectomy with axillary dissection as well as radiotherapy of the axillary wall and hollow. The short and medium term follow-ups were simple. *Conclusion:* Squamous cell carcinoma of the breast is a rare tumor, with non-specific clinical and radiological characteristics and whose prognosis remains pejorative.

**Keywords:** Epidermoid Carcinoma, Squamous Cell, Breast

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## 1. Introduction

Breast epidermoid carcinoma is a rare malignant tumor. Primitive epidermoid carcinomas of the breast are rare tumors which represent 0.1% to 2% of breast cancers. They are part of the metaplastic breast carcinomas, and are of controversial etiopathogeny and prognosis [1]. According to the WHO it is one of the infiltrating canal carcinomas including total or partial reshuffles. The origin might be glandular or myoepithelial [2]. The histological diagnosis of this type of cancer is only established after having eliminated a skin or nipple origin, a breast metastasis of an epidermoid

carcinoma at a distance and finally a significant glandular component within the tumor (Muco-epidermoid carcinoma). The age of occurrence of breast epidermoid carcinoma is similar to other breast carcinomas it affects women between 31 and 83 years old with a peak at 55 [3].

## 2. Observation

We report the observation of woman aged 30, mother of 5 children without a particular pathological history addressed by a level I hospital for a right breast tumor. The history would go back to 12 months marked the occurrence of a

painful breast mass located at the level of the supero-external quadrant of the right breast. A breast ultrasound carried out had highlighted an abscess collected from the right breast and she had surgery with drainage of the abscess (figure 1). The course was marked by the absence of healing two months later and by the appearance of an ulcerative-bourgeoning tumor. The clinical examination at admission highlighted a 6 cm ulcero-bourgeoning tumor at the level of the supero-external quadrant, mobile compared to the deep, painless, with two homolateral axillary adenopathies of 3 cm and 1cm mobiles and painless.



**Figure 1.** Image after surgery for breast abscess.

The mammography had highlighted an ill-limited mass, with blurred contours, an architectural disorganization, with the presence of ACR4 classified calcifications. The biopsy carried out was in favor of malignant tumor proliferation with predominance of Malpighian cells. The thoraco-abdomino-pelvic tomodensitometry carried out as part of the extension assessment has not shown a secondary location of the tumor. Biological examinations were without particularities. She underwent 4 irregular cures of neoadjuvant chemotherapy according to the AC protocol (doxorubicin and carboplatin) with a mediocre tumor response. Then had a total mastectomy with cleaning axillary nodes (figure 2). The short and medium term course were simple.



**Figure 2.** Per - operatory image of the axillary hollow after nodes cleaning.

Additional treatment consists of a radiotherapy on the wall and on lymph node areas. The patient was regularly seen for two years without recurrence.

### 3. Discussion

Breast epidermoid carcinomas are rare tumors, however their incidence is difficult to specify, because of their histopathological selection criteria which are not always identical according to the authors. They would represent 0.1 to 2% of malignant breast tumors [1, 4].

These tumors arise by total or partial metaplasia, transforming an epithelial, myoepithelial or totipotent reserve cell into another type of epithelial or mesenchymal cell [5]. On the other hand, they could occur from a dermoid dermoid cyst, a chronic breast abscess, or from a phyllode cystosarcoma [5].

No risk factor has been formally accused, however the concept of trauma has been mentioned by certain authors [4]. Epidermoid carcinoma of the breast reaches women between 31 and 83 years old with predominance at the age of 55 [6].

Clinically, it is in the form of a breast mass whose average size is to 5 cm with extremes from 2 to 16 cm. In addition, large tumors tend to undergo a central cystic degeneration with invasion and ulceration of the skin by gaze, which sometimes makes it difficult to distinguish between breast - style carcinoma mammary primitive and secondary [4, 7].

On the radiological level, the aspect is not specific. It is generally a mass rounded, without spicule, partially irregular to necrotic or cystic center which Explain the pseudo cystic or abridged aspect that is found [2, 3, 5].

In our patient, the mammography carried out has highlighted an ill -limited mass, with blurred contours, an architectural disorganization, with the presence of ACR4 classified calcifications. The preoperative diagnosis can be carried out by simple cytological aspiration or by a micro-biopsy as this is the case of our patient. However, the histological examination is essential to seek a probable adenoid component and eliminate a possible local extension of an epidermoid carcinoma of the skin, the nipple or a remote metastasis. Immunohistochemistry shows an expression of epithelial tumor cells of High molecular weight cytokeratins, especially CK14, CK5/6 and CK17 [8].

Nevertheless, the majority of these tumors do not express hormonal receivers, as well as the amplification of the Her 2. On the other hand the proliferative character (Ki 67) was strongly demonstrated by the study conducted by Grenier et al [8]. Molecular studies demonstrate hyper expression of the protein P53 and markers of VEGF and angiogenesis - 1 $\alpha$  [9]. Our patient could not carry out the immunohistochemistry. The treatment of breast's epidermoid carcinoma is similar to that of canal carcinoma infiltrating. Conservative surgery is possible for inferior tumors at 4cm; for the larger tumors, mastectomy with lymph node cleaning is indicated followed by a radiotherapy.

The use of hormone therapy is limited by the absence of the hormonovenance of this cancer [3, 10]. Indeed, neo adjuvant chemotherapy is not justified to consider treatment Conservative since its results are poor [10]. Likewise, hormone therapy has little place given the absence of overexpression of hormonal receptors in this form

histological. [11, 12].

The main prognostic factors are represented by: tumor size, Axillary lymph node invasion the fusiform component, necrosis, and cellular acantholysis [10].

The prognosis of epidermoid carcinomas remains pejorative with average survival at 5 years estimated between 50 and 63% [8, 10]. The future prospects would be targeted therapy, in particular of the EGFR receiver, to improve the prognosis [13-15].

## 4. Conclusion

The epidermoid carcinoma of the breast is a rare tumor with nonspecific clinical and radiological characteristics. In industrialized countries, breast cancer is diagnosed at a very early stage; However, in our context because of socio-cultural prejudices regarding women's breast diseases and the precariousness of the means of investigation, these tumors are often discovered late either fortuitous or during complications. Its prognosis remains poor; thus, more research works are need to improve the management and outcome of patients with epidermoid carcinoma of the breast.

## Conflicts of Interest

The authors declare no conflicts of interest.

## Author's Contributions

All authors have contributed to the development and implementation of this work. The authors also declare that they have read and approved the final version of this manuscript.

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