

## Update on Paget's Disease of the Breast

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### Abstract

Paget's disease of the breast is a relatively rare oncologic entity in women and rare in man. It should be mentioned and look at all unilateral lesions drawing plate areolar. The breast examination should search for an underlying breast neoplasm. Pathological examination can confirm the diagnosis. We report the case of two patients with Paget's disease of the breast, and underline the interest of the imagery (the couple mammography and breast ultrasound) in the diagnostic approach.

**Keywords:** Paget; Mammography; Ultrasonography; Cancer

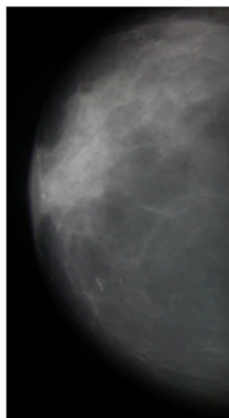
### Introduction

Paget's disease of the breast is a particular form of breast cancer first described in 1874 by Sir James Paget [1]. It is characterized by an accumulation of abnormal cells (Paget cells) in the skin of the nipple and is associated with an underlying cancer [2]. The aim of our work is to achieve, through a literature review, focusing on Paget's disease of the breast and specify the interest of ultrasound mammography in the diagnosis and orientation through two clinical observations.

### Observation no.1

Ms. F. A 42 year old G3P2A1 family history of cancer in his sister consulted for right breast swelling lasting for one year. Physical examination was retracted appearance, blue with multiple ulcerations plate areal right. A échomammographie was performed. Mammography (Figure 1) showed multiple foci of microcalcifications: 4 at the plate areal aspect multiforme, dusty and vermicular. The focus was on the fifth level of the union of the internal quadrants roughly triangular shape, microcalcifications at this level are dusty appearance. There was a thickening of the plate with areolar retraction. Breast ultrasound (Figure 2) showed next to the plate right areolar the presence of a hypoechoic area of architectural distortion seat echogenic spots with microcalcifications suggestive of hypervascularity at color Doppler.

There were also suspicious axillary lymph nodes. The balance



**Figure 1: Mammogram of right breast.** Craniocaudal Multiple clusters of microcalcifications at the plate areolar aspect polymorphic, dusty and vermicular. There is also another focus of microcalcifications dusty sitting at the union of the internal quadrants

was classified ACR5 right. The staging was negative. The patient was operated on. The intraoperative pathological examination concluded that a low residual tumor intra ductal carcinoma high grade with Paget's disease of the right nipple. It was made right type Patey mastectomy with ipsilateral axillary lymph node dissection. Adjuvant chemotherapy was performed. The suites were simple and the patient receives regular monitoring without recurrence.

### Observation no. 2

Ms. FZ 68 years old with no history consulted for specific pathological swelling of the right breast had been developing for a few months. Physical examination was ulcerated lesion eczema areolar region of the right breast (Figure 3) with the presence of indurated crusts clear limits associated with a firm painless mass in the right breast ill-defined. Mammography revealed an opaque mass of oval contours ill-defined spiculated 7 to 8 cm of diameter. Breast ultrasound has not been possible given the state of areolar plate. The patient underwent a breast biopsy micro concluded that ductal carcinoma in Paget's disease of the right breast.

The patient received chemotherapy first for any further surgery after cytoreduction. The patient had died after the 3rd treatment.

### Discussion

Paget's disease of the breast is a relatively rare disease that accounts for less than 5% of breast cancers in women. It is exceptional in humans [3]. Two theories have been proposed concerning the histogenesis of Paget's disease of the breast [4-6]:

- The first is the theory épidermotrophique which corresponds to a migration of Paget cells from a breast carcinoma underlying through channels galactophoric, towards the nipple skin.
- The second refers to a malignant transformation intra epidermal keratinocytes nipples, independent of any underlying breast pathology.

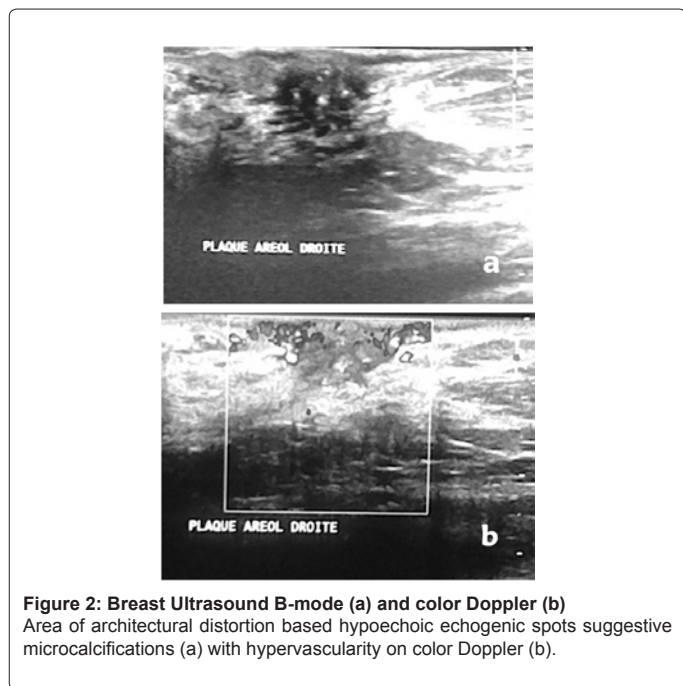
Paget's disease of the breast is reflected clinically by the appearance

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of a lesion, most often unilateral nipple. Early stage of this lesion is red and shiny and becomes rough and scaly at the intermediate stage. It evolves by following late-stage form of erosion, oozing ulceration and crust indurated very limited. The evolution of these lesions is centrifugal and exceeds the nipple. Patients may complain of pruritus, burn, hypersensitivity, pain, runny mamelonniare. Palpable breast mass intra may be associated with abnormalities of the nipple-areola complex. Imaging is contributive to the diagnosis, mammography combined with breast ultrasound examination is performed by first intention.

Mammography may be normal in 50% of cases [6] as it may show abnormalities in type:

- Masses
- Asymmetry breast density architectural disorganization
- Thickening Micro calcifications plate areolar

Breast ultrasound is a test which increases the sensitivity of mammography in detecting cancer even if underlying negativity of mammography [1]. It can guide the biopsy of suspicious lesions and examine lymph nodes.

The breast MRI is not performed routinely; it significantly improves the low sensitivity of the torque / clinical mammography in research associated carcinoma in Paget disease of the breast. The goal of MRI is twofold, it enables a study from the areola mammelonnaire other hand to search for associated abnormalities of the breast parenchyma. In MRI, the plate can be aréolomamelonnaire normal as there may be morphological abnormalities associated or not with an enhancement-type mass enhancement curves type III (washout) or type I (progressive) [1]. The study of abnormal mammary parenchyma may show a pathological enhancement.

The interventional imaging can help in the diagnosis. The stereotactic biopsy allows the removal of microcalcifications without translation ultrasound. Ultrasound-guided biopsy allows the removal of sonographically detectable lesions. Biopsy under MRI allows the removal of lesions not visible on ultrasound. Point of view Histologically, Paget's disease leads to colonization of the skin of the nipple by Paget cells, large cell cytoplasm and nucleolus hyperchromatic clear. These anomalies are associated with a common way ductal carcinoma in situ or invasive ductal carcinoma with underlying layer below the epidermal cells found in 70-100% of cases and sitting near or remote aréolomamelonnaire plate. The association with lobular carcinoma in situ or invasive is less frequent [5].

### Conclusion

Paget's disease of the breast is a rare form of presentation of breast cancer. The preoperative evaluation is based primarily on mammography coupled with breast ultrasound. The latter study also lymph nodes. Imagery can also help in guiding percutaneous biopsies (biopsies under ultrasound or MRI) or stereotactic biopsy sampling of microcalcifications in translation without ultrasound. MRI may also establish a positive diagnosis in case of injury or subclinical not detected by torque-mammography breast ultrasound.

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