



# Male Breast Cancer Associated with Paget's Disease: A Case Report

## *Paget Hastalığı ile İlişkili Erkek Meme Kanseri: Olgu Sunumu*

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### Abstract

Paget's disease of the breast is an eczematous skin disease that is usually associated with an underlying breast cancer. Male breast cancer accounts for only 1-3% of all breast malignancies. Paget's disease in men is a very rare condition of the male breast. There have been only nine reported cases of Paget's disease of the male breast between 1980 and 2015. We described a breast invasive carcinoma of a 72-year-old man who was previously diagnosed with Paget's disease.

**Keywords:** Paget's disease, breast cancer, male breast

### Öz

Memenin Paget hastalığı ekzematöz bir deri hastalığı olup genellikle altta yatan bir meme kanseri ile birliktedir. Erkek meme kanseri tüm meme malignitelerinin %1-3'nü oluşturur ve Paget hastalığı ile birlikteliği ise daha da nadirdir. 1980-2015 yılları arasında erkek meme kanseri ve Paget hastalığı birlikteliği olan sadece dokuz olgu yayınlanmıştır. Bu yazıda, daha önce tanı almış Paget hastalığı olan 72 yaş erkek hastada ortaya çıkan invaziv meme karsinoma olgusu literatür eşliğinde tartışıldı.

**Anahtar Sözcükler:** Paget hastalığı, meme kanseri, erkek meme

### Introduction

Mammary Paget's disease (PD) is a rare disease that makes up about 1% of breast cancers. Male breast cancer is also very rare, representing nearly 1.0% of all breast malignancies. Therefore, male mammary PD is extremely rare (1). Between 1980 and 2015, only nine case reports were published in the literature on male breast cancer with PD (1). Our data suggest that the prognosis of male Paget's cancer is worse than in "ordinary" male breast cancer. For this reason, it is necessary to be aware of PD with breast lesions in men (2).

In this report, we described a breast invasive carcinoma of a 72-year-old man with PD in the context of the findings of mammography (MG) and also emphasize the combination of PD and breast cancer in men.

### Case

A 72-year-old man with PD was directed to the breast

radiology department of our hospital for MG and breast ultrasonography (US). He had a skin lesion on both of his breast nipples as well as itching, redness, and a palpable breast mass on his right breast (Figure 1). Physical examination revealed a clearly exudative erythema, reddish, enlarged nipple and edema around the areola. No right axillary lymph node was palpable. First of all, for the determination of breast cancer and evaluation of the breast parenchyma changes, MG (IMS Giotto MD digital radiography and Tomosynthesis, Bologna, Italy) and breast US were performed. Right MG confirmed the mass including microcalcification underlying nipple (Figure 2). His left MG was normal. High-frequency grayscale US of the breast using a linear probe (6-13 MHz) (Hitachi Medco's Digital Ultra Sound Examination Device, HI VISION Avius, Tokyo, Japan) revealed 2 cm solid mass that had ill-defined borders and posterior acoustic shadowing in the retroareolar area (BIRADS-4c). Informed consent

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**Figure 1.** The skin lesion that has redness and a palpable breast mass on his right breast



**Figure 2.** Right MLO mammography showed 2 cm mass in the retroareolar area with microcalcifications

was obtained from the patient for the biopsy and he underwent the right breast biopsy (14G automatic core-needle, Geotek, Turkey). The histopathology showed an invasive ductal carcinoma with PD. He underwent a right modified radical mastectomy and right axillary dissection.

### Discussion

PD of the breast was first described, in 1874, by Sir James (3), whereas the first case of PD in a male was described by Elbogen in 1908 (4). PD of the breast in men is quite rare occurrence. Because of the rarity of breast cancer in male patients, our data in men is usually based on case reports and female patients (4). For men, the lifetime risk of getting breast cancer is about 0.8%. But in the relative minority of cases in men, no studies have fairly compared cancer incidence in male patients with PD (5). To our knowledge, between 1980 and 2015, only nine case reports were published in the literature about male breast cancer with PD (1). PD of the breast appears as a skin lesion of the nipple and areola. It must be distinguished from skin lesions or carcinomatous lesions (6). The diagnosis of underlying cancer may be delayed. The clinical appearance of PD is usually characteristic and should alert the clinician to the likelihood of confusion about breast cancer. Suspect cases should be evaluated radiologically by clinicians (3). In clinically suspected cases, MG is the first method to detect an underlying malignancy and to show the mass if there are any positive findings. This may be followed by breast sonography and then maybe magnetic resonance imaging (MRI) especially if MG findings are negative. MG shows skin and nipple changes, malignant calcifications, a mass or masses, architectural distortion or asymmetry. However, MG can be normal in 22-50% of patients, based on a group of women with PD (7). US is sometimes necessary and should be considered a part of the initial evaluation, especially when MG is negative. However, most of the time, the findings are nonspecific and cases of infection. US examination may reveal hypoechoic areas, masses, skin thickening or dilated ducts (8). In our case, he was already a follow-up PD patient. Both MG and US showed a mass on his right breast. MG also showed pathologic microcalcifications.

Studies in females have shown that MRI is more sensitive in detect underlying malignancy. However, male patients generally have little or no breast tissue. For this reason, MG is more sensitive in detecting a mass in men than in women. MRI may have little additional sensitivity over MG in most male patients (7).

Histologically, 90% of male breast cancers are invasive ductal carcinomas (9). 46% of Paget's cases without a mass is usually found in only 38% with ductal carcinoma *in situ* (9,10). In our case, we diagnosed invasive ductal carcinoma by biopsy.

In conclusion, the case highlights the need to be vigilant when new skin lesions are present in male patients with PD and the clinician should be alert to the likelihood of an underlying carcinoma, which should be evaluated radiologically. Malignancy is the most important differential diagnosis.

#### **Authorship Contributions**

Surgical and Medical Practices: T.İ., F.E. Concept: T.İ. Design: T.İ. Data Collection or Processing: T.İ., A.İ. Analysis or Interpretation: T.İ., F.E., Y.S. Literature Search: T.İ., G.G. Writing: T.İ.

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