

Breast-Conserving Surgery in a Young Man - Case Report

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Abstract

Accounting for less than 1% of all breast cancer cases, male breast cancer (MBC) is a rare disease. Unlike female breast cancer, there are no randomized controlled trials to confirm the safety of breast-conserving surgery (BCS). Additionally, male patients have poor radiation therapy (RT) compliance after BCS, which raises concern about curative treatment of these patients. Therefore, BCS is less used in the treatment of these patients. The authors report a case of a 35-year-old male with the diagnosis of neoplasm of uncertain behavior of the breast (NUnBB) with raised suspicion on breast imaging studies. He was submitted to excisional biopsy of the lesion, and the pathologist examination showed a luminal B invasive carcinoma with free margins. Due to this postoperative diagnosis, he was submitted to axillary lymph node sampling that was negative for malign cells. The final pathology staging was pT1bpN0cM0. He was referred to oncology consultation for follow-up and adjuvant therapy with chemotherapy, RT, monoclonal antibody, and hormone therapy. He remains free of disease to date, at 36 months follow-up. This case report describes a male patient treated with BCS with good oncologic results and highlights the need to build evidence-based research that support treatment recommendations in MBC.

Keywords: Male breast cancer; Breast-conserving surgery; Surgery; Case report.

Introduction

Male breast cancer (MBC) is an understudied type of cancer, accounting for less than 1% of all breast cancer cases [1]. At our center, seven male patients

were diagnosed with MBC in the last 10 years (0,46% of all breast cancer cases). Breast-conserving surgery (BCS) is a reasonable treatment approach for men and is associated with comparable survival to mastectomy.

However, the low rates of radiotherapy compliance among BCS male patients are concerning and, unlike female breast cancer, there are no randomized controlled trials to confirm the safety of breast conserving surgery for selected cases of MBC [1, 2]. These findings suggest that shared decision-making with MBC patients is essential when selecting the best treatment strategy, regarding the curative intention.

We present a case of MBC submitted to an “incidental” BCS of the left breast after the diagnosis of a neoplasm of uncertain behavior of the breast (NUnBB) [3], followed by axillary lymph node dissection (ALND) and adjuvant therapy, with good oncologic results. We present the following case in accordance with the CARE (Case Reports) reporting checklist.

Case Report

A 35-year-old obese male was referred to a breast surgery consultation for a two-month history of a blood-stained nipple discharge and tenderness of the left breast. He was in class 3 obesity scale, with body mass index of 43.6 kg/m².

He had no previous surgeries and no family history of malignancy. Breast ultrasound and mammography showed an irregular hyperechoic solid micro-node with 2.7 × 1.8mm and duct ectasia in retroareolar position of the left breast (BIRADS 4) (Figure 1). Exfoliative cytology (EC) of the discharge showed epithelial and myoepithelial cells in papillary aggregates.

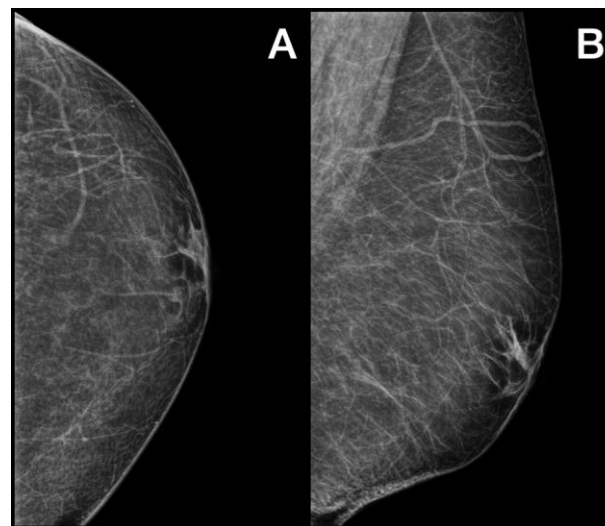


Figure 1. Left breast craniocaudal view (A) and left breast mediolateral oblique view (B) mammography, demonstrating an irregular microcode in retroareolar position of the left breast.

Ductography of the single duct was performed, which showed a 4.6 mm duct ectasia with two intraductal

lesions, 9 and 10 mm from the nipple, suggesting intraduct papillomas (Figure 2). A nipple sparing excisional biopsy

was performed to clarify the lesions' nature. The histopathological report revealed the presence of an invasive carcinoma of no special type (NST), well differentiated (grade 1), without vascular invasion, with minimal margin of

3 mm. Tumor cells were positive for estrogen receptors (ER), progesterone receptors (PR) and HER2/neu gene, with a Ki-67 proliferative index of 75% (Figure 3).

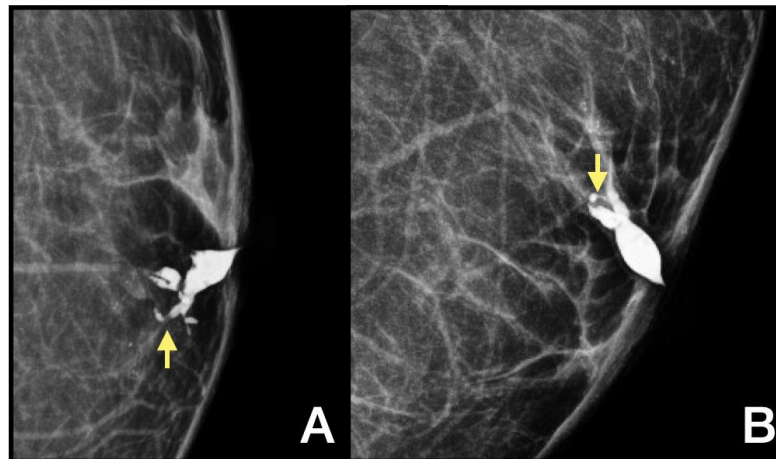


Figure 2. Ductography, left breast craniocaudal view (A) and mediolateral oblique view (B) showing duct ectasia and two intraductal lesions (arrows), suggesting intraduct papillomas.

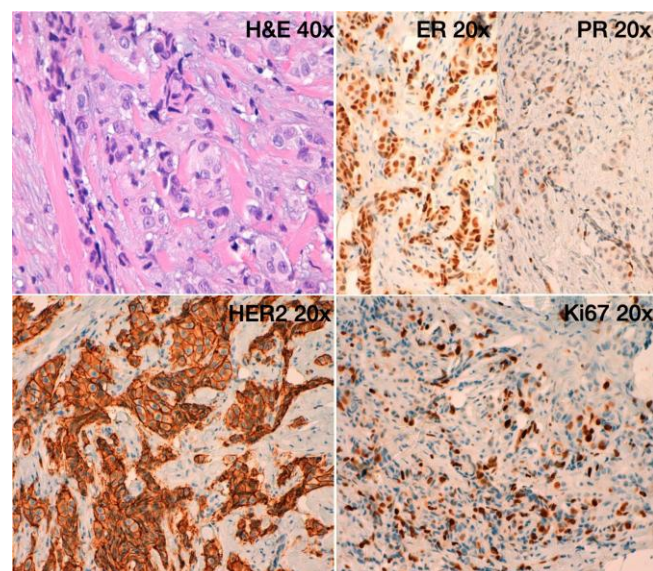


Figure 3: Histopathological studies - hematoxylin and eosin (H&E) stain, x40 (left upper image); estrogen (ER) and progesterone receptors (PR), x20 (right upper image); HER2 gene status determination, x20 (left lower image); Ki-67 proliferative index, x20 (right lower image).

He was then submitted to an ALND, which was free of metastasis. The final pathological cancer staging

was pT1bpN0cM0. No surgical complications occurred. The patient was

referred to oncology consultation for follow-up and adjuvant therapy.

He was treated with 3 cycles of intravenous epirubicin 100mg/m², 5-fluorouracil 500mg/m² and cyclophosphamide 500mg/m² repeated every 21 days, followed by 3 cycles of docetaxel 100 mg/m² repeated every 21 days; 25 fractions of RT (total dose

60Gy); additionally, he received adjuvant therapy with trastuzumab for 1 year, and hormonal treatment with tamoxifen for 36 months so far (Figure 4). He is on regular follow-up in the oncology consultation and remains free of disease to date.

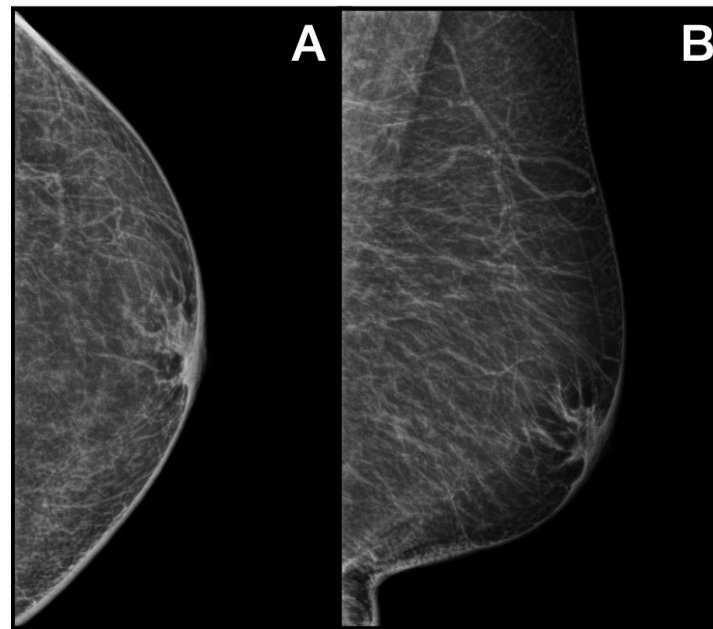


Figure 4: 24 months follow-up mammography. Left breast craniocaudal view (A) and left breast mediolateral oblique view (B).

Discussion

Breast cancer is the most diagnosed cancer globally. Is very rare in males, accounting less than 1% of all malignant diseases in this gender. However, its incidence is increasing. There are numerous risk factors linked to MBC, such as family history, cryptorchidism, orchidectomy, orchitis, infertility, Klinefelter's syndrome, smoking, physical inactivity, alcohol consumption, previous thoracic radiotherapy, altered estrogen-

testosterone ratio, use of exogenous androgens and estrogen, obesity and the associated metabolic abnormalities [4].

Since there are no randomized trials for local therapy in MBC, treatment approaches are extrapolated from studies in female breast cancer [1, 2, 4]. Although its rare use in males, BCS combined with RT (also called breast-conserving therapy) has been associated with survival rates equivalent with mastectomy in observational studies, suggesting that data from trials in women may be safely applied to men

[2]. In addition, breast-conserving therapy offers improved cosmetic and functional outcomes, with lower psychological impact. Sentinel-node biopsy is the standard approach for women with clinically negative axilla, and this approach is also feasible in MBC [2, 4].

Our patient's case was interesting as his diagnosis was not clear - although the exfoliative cytology and ductography showed no characteristics of malignant disease, the breast ultrasound and mammography were suspicious. An excisional biopsy was performed but, posteriorly, due to the histopathological results, what was once a diagnosis procedure has become a part of a breast-conserving treatment with the combination of RT and axillary surgery. His results point towards the use of BCS and RT in selected MBC patients.

Discussion

We present an interesting case of a man "incidentally" treated with breast-conserving therapy for MBC with good oncologic results. As in women, the use of less invasive surgical procedures should be discussed in the decision-making process of patients with MBC.

Although feasible, it's important to emphasize the need for postsurgical RT and long-term hormone treatments in these patients, as well as the potential long-term side-effects of these therapies. This case report emphasizes the need for more clinical research, in order to build evidence-based data that support breast-

conserving therapy recommendations in MBC.

References

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