

The importance of symptoms in breast cancer follow-up

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CASE REPORT

A 75-year-old woman was under follow-up by medical oncologist due to an early stage breast cancer treated eight years before and without tumor relapse evidence.

She made consultation due to two months fatigue and bone pain in her back and hips. Her tumor was an invasive ductal carcinoma with Luminal B genotype (estrogens and progesterone positive receptors, HER-2 negative, and high Ki67) with positive axillary nodes. She was treated by surgery (quadrantectomy and lymphadenectomy) and adjuvant chemotherapy and radiotherapy. Physical examination revealed dorsal and lumbar regions painful spinal palpation as well as left hip pain. No deformities were found. She was admitted on oncology to make investigations.

Hips and spinal simple X-ray-image revealed several lytic lesions. Left femoral subtrochanteric affectation was the most important, with bone tissue loss and irregular cortex. No evidence of fracture was found (Figure 1). Blood test revealed impaired renal function, mild hypercalcemia, and cholestasis. The patient suffered, without previous traumatism, acute worsening of her left hip pain, with shortening and external rotation (Figure 2). Pathologic subtrochanteric fracture over previous known lytic lesion was confirmed by X-ray-image (Figure 3). She was operated by orthopedics service by close reduction and short gamma nail (Figure 4). Global assessment by computed tomography (CT)-scan-image revealed multiple bone and liver lesions. Histology sample from



Figure 1: Patient's hospital admission hips simple X-ray. It reveals multiple lytic lesions. The most important is located at subtrochanteric left femur, with bone tissue loss and cortical irregularities. No fracture signs are observed.



Figure 2: Left hip physical examination. It reveals hip fracture signs: shortness and external rotation.

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Figure 3: Left hip simple X-ray. It reveals left femoral subtrochanteric fracture over lytic lesion previously described.



Figure 4: Hips simple X-ray after surgery. It reveals close reduction with short gamma nail.

liver lesion confirmed previous breast cancer relapse. She started treatment with strong opioids and radiotherapy for her back pain and biphosphonates and palbociclib-fulvestrant as first line chemotherapy for metastatic hormone-sensitive breast cancer. The patient presented

disease progression after three months of treatment. Her liver metastases had enlarged and she developed bone marrow infiltration and performance status was worsening. She started treatment with oral vinorelbine, with stable disease during five months. In that moment she began third line treatment with oral capecitabine, which is her current treatment after three months from its beginning.

DISCUSSION

Bone metastasis are frequent in breast cancer, affecting two-thirds to three-quarters of patients with advanced disease [1, 2].

Survival prospects after metastasis to bone vary greatly depending on tumor type and sites of involvement. Bone metastatic breast cancer as unique site, usually experiment long time overall survival. The main challenge in metastatic context is to improve the quality of the patient's remaining life.

The morbidity associated with metastatic bone disease includes pain, hypercalcemia, pathologic fractures, and spinal cord compression. Pain is the most common symptom. It initially may be either well localized or diffuse pain, typically worse at night. Mechanical pain is more typically associated with the focal bone loss within lytic lesions. The development of functional pain may be a marker for bone at risk of fracture. Up to 35% of breast cancer patients with bone disease will experience a fracture. Bone metastasis assessment usually requires opiates, radiotherapy, or surgery [3].

Metastatic breast cancer is defined by tumor spread beyond the breast, chest wall, and regional lymph nodes [4, 5]. Tumor dissemination can occur through blood and lymphatic vessels and the chest wall.

The most common sites for breast cancer metastasis include the bone, lung, liver, lymph nodes, chest wall, and brain. Hormone receptor-positive tumors are more likely to spread to bone as the initial site of metastasis. Hormone receptor-negative and/or HER-2 positive tumors are more likely to recur initially in viscera.

Most women with metastatic disease will have been initially diagnosed with early-stage breast cancer, treated with curative intent, and then experience metastatic recurrence. Only about 10% of newly diagnosed breast cancer have metastatic disease at presentation. These data are highly correlated with screening programs, and those areas where screening is not available, these data greatly differ.

Following initial treatment for breast cancer, patients require surveillance for local–regional tumor recurrence, contralateral breast cancer and distant metastatic disease, and for monitoring late effects of treatments [6–8].

Although the greatest risk or recurrence is the first five years after breast cancer diagnosis, disease relapse risk remains for many years after their treatment, especially hormone-positive tumors. This experience justifies long

time follow-up by breast cancer oncologists, although, particularly in later years, follow-up is often shared with primary care clinicians. Local and contralateral recurrence can be treated with curative intent, so screening for these types of recurrences is high priority and women should undergo regular breast examinations and annual mammography [9, 10].

By contrast, it is not clear that early detection of distant metastatic disease contributes to relevant improvement in clinically relevant end points. Most distant recurrences are detected following patient-reported symptoms, such as bone discomfort, lymphadenopathy, chest wall and breast changes, or respiratory symptoms. Asymptomatic detection through screening laboratory tests or radiology studies occurs in only a modest fraction of patients. In some cases, physical examination or radiologic findings will demonstrate unequivocal evidence of metastatic breast cancer [11, 12].

The treatment goals in women with advanced breast cancer include prolongation of life, control tumor burden, reduction in cancer-related symptoms or complications, and maintenance of quality of life and function. Therapy is not generally considered curative [13–15].

The patient, we present, symbolizes a faithful example of the main points that literature reveals in breast cancer follow-up.

She was under follow-up by her Medical Oncology Doctor, which is the main clinician that develops breast cancer follow-up.

She experienced disease relapse eight years after treatment of her locally stage Luminal B breast cancer. As we can see, time relapse in breast cancer is usually during the first five years after treatment, but late relapses, especially in hormone-positive tumors are not infrequent.

She suffered bone and liver metastatic relapse, which was detected due to patient-reported symptoms: fatigue and bone pain. Bone metastasis are the most frequent relapse location in hormone-positive tumors. Distant relapse is often detected by patient alluded symptoms, as it happened in our patient. Its early detection does not clearly contribute to relevant improvement in survival, but it has an impact on patient's life quality. Her relapse was detected by physical examination and radiologic findings, which demonstrated presumptive previous breast cancer relapse. Pathological study was carried out to confirm the diagnosis and discriminate other entities. The first treatment goal in our patient was relieving symptoms. She went under surgery, which provided pain relief and function recovery. She also received strong opioids, biphosphonates and radiotherapy for her back pain. She also started palbociclib-fulvestrant as first line chemotherapy for metastatic hormone-sensitive breast cancer.

CONCLUSION

Surveillance of patients with breast cancer intends to identify patients with isolated relapse amenable to

curative salvage therapy as well as recognizing long-term toxicity, in order to provide patients adequate medical and psychological support. Late bone and other organs relapse in hormone-positive receptor breast cancer are relatively common events, so these patients must receive a close and careful follow-up.

Keywords: Breast cancer, Follow-up, Palbociclib-fulvestrant, Pathologic fracture

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REFERENCES

1. Siegel RL, Miller KD, Jemal A. Cancer statistics, 2019. *CA Cancer J Clin* 2019;69(1):7–34.
2. Colleoni M, Sun Z, Price KN, et al. Annual hazard rates of recurrence for breast cancer during 24 years of follow-up: Results from the international breast cancer study group trials I to V. *J Clin Oncol* 2016;34(9):927–35.
3. Yang HL, Liu T, Wang XM, Xu Y, Deng SM. Diagnosis of bone metastases: A meta-analysis comparing ¹⁸F FDG PET, CT, MRI and bone scintigraphy. *Eur Radiol* 2011;21(12):2604–17.
4. Lu W, de Bock GH, Schaapveld M, Baas PC, Wiggers T, Jansen L. The value of routine physical examination in the follow up of women with a history of early breast cancer. *Eur J Cancer* 2011;47(5):676–82.
5. Montgomery DA, Krupa K, Cooke TG. Follow-up in breast cancer: Does routine clinical examination improve outcome? A systematic review of the literature. *Br J Cancer* 2007;97(12):1632–41.
6. Montgomery DA, Krupa K, Cooke TG. Alternative methods of follow up in breast cancer: A systematic review of the literature. *Br J Cancer* 2007;96(11):1625–32.
7. Rojas MP, Telaro E, Russo A, et al. Follow-up strategies for women treated for early breast cancer. *Cochrane Database Syst Rev* 2005;(1):CD001768.
8. de Bock GH, Bonnema J, van der Hage J, Kievit J, van de Velde CJ. Effectiveness of routine visits and routine tests in detecting isolated locoregional recurrences after treatment for early-stage invasive breast cancer: A meta-analysis and systematic review. *J Clin Oncol* 2004;22(19):4010–8.

9. Drotman MB, Machnicki SC, Schwartz LH, Winston CB, Yoo HH, Panicek DM. Breast cancer: Assessing the use of routine pelvic CT in patient evaluation. *AJR Am J Roentgenol* 2001;176(6):1433–6.
10. Rutgers EJ, van Slooten EA, Kluck HM. Follow-up after treatment of primary breast cancer. *Br J Surg* 1989;76(2):187–90.
11. Hannisdal E, Gundersen S, Kvaløy S, et al. Follow-up of breast cancer patients stage I-II: A baseline strategy. *Eur J Cancer* 1993;29A(7):992–7.
12. Tomin R, Donegan WL. Screening for recurrent breast cancer – its effectiveness and prognostic value. *J Clin Oncol* 1987;5(1):62–7.
13. Wickerham L, Fisher B, Cronin W. The efficacy of bone scanning in the follow-up of patients with operable breast cancer. *Breast Cancer Res Treat* 1984;4(4):303–7.
14. Pedrazzini A, Gelber R, Isley M, Castiglione M, Goldhirsch A. First repeated bone scan in the observation of patients with operable breast cancer. *J Clin Oncol* 1986;4(3):389–94.
15. Impact of follow-up testing on survival and health-related quality of life in breast cancer patients. A multicenter randomized controlled trial. The GIVIO Investigators. *JAMA* 1994;271(20):1587–92.

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Miguel Borregón Rivilla – Conception of the work, Design of the work, Acquisition of data, Analysis of data, Interpretation of data, Drafting the work, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Katherin Aly Martínez Barroso – Conception of the work, Design of the work, Acquisition of data, Analysis of data, Interpretation of data, Drafting the work, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

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Authors declare no conflict of interest.

Data Availability

All relevant data are within the paper and its Supporting Information files.

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