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Case Report

Integrated oncological treatment in the course of metastatic mammary neoplasia: a complete resolution case

M. Bonucci^{1,2*}, R. Strangis³, Z. Maroccia⁴ and C. Fiorentini^{2,4}

¹Department of Outpatient Oncology, Villa Benedetta Hospital, Rome, Italy

²Associazione Ricerca Terapie Oncologiche Integrate (ARTOI), Rome, Italy

³National Outpatient of Medicine, Messina, Italy

⁴Italian Center for Global Health, Istituto Superiore di Sanità, Rome, Italy

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ABSTRACT

Metastatic breast cancer has a poor prognosis. The validated anticancer drugs used so far are unable to reverse the metastatic spread and consequently the progression of the disease. Recently, it has come to light that the combined use of clinically-relevant anticancer treatments in association with natural substances, acupuncture techniques and adequate nutrition, can lead to the resolution of cases with metastatic diffusion. We herein report the case of a 72-year-old woman who, after a radical mastectomy surgery for breast cancer in 2000 and hormone therapy until 2009, presented a pulmonary recurrence in 2014. For this reason, the patient underwent an integrated therapy, combining the standard oncological treatment with the use of herbal medicine, minerals and mushroom therapy, acupuncture and nutritional counseling. This not only permitted an improvement in her quality of life, with reduction of pain and analgesic intake, but also led to the metabolic disappearance of secondary neoplastic lesions. The case focuses the importance of integrative approaches for cancer patients in a conventional medical setting.

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Introduction

Metastatic breast cancer has a poor prognosis [1]. Standards anticancer treatments often tend to chronicize and consequently stabilize the disease. The validated drugs used are unable to reverse the metastatic spread and consequently the progression of the disease is slow but continuous. In recent years, it has progressively emerging that the combined use of clinically-relevant anticancer treatments in association with natural substances, acupuncture techniques and adequate nutrition, has led to the resolution of cases with metastatic diffusion. Substances, such as turmeric (*Curcuma longa*), graviola (*Annona muricata*), *Boswellia serrata*, and sulforaphane have been reported to have a potential antitumoral activity [2-7]. Several studies are focused on the 'integrative oncology' a term that has coined to identify the use of complementary and integrative therapies in combination with conventional oncological care [8, 9]. Nowadays, an increasing number of clinical cases, where the integrative approach and the standard

anticancer therapies are used simultaneously, have shown the validity of this association, with an improvement in terms of quality of life (QoL) and survival [10-12].

Case

In this work, we present the case of a 72-year-old woman who was submitted to left radical mastectomy for invasive ductal carcinoma (pT3, N0 (0/8) 80% ER, PgR 80%, MB-1 10% (LOW) in 2000. She assumed Tamoxifen (20 mg, 1 tablet /day), from 2000 to 2003, then Arimidex (1 mg, 1 tablet/day) from 2003 to 2009. In 2014, she had surgery for left carpal tunnel because of a persistent pain and numbness in the hand and arm that remained unsolved even after the operation. To address this inconvenience, a painkiller was prescribed (PATROL: 37.5 mg+325 mg). In the same year, being affected by dysphonia, she underwent a CT examination that evidenced a neoformation on the left vocal cord of about 1.2 cm, which caused paralysis in abduction, and lung

*Correspondence to: Massimo Bonucci, Department of Outpatient Oncology, Villa Benedetta Hospital, Rome, Italy E-mail: maxbonucci@artoi.it

neoformations. No surgery was performed on the vocal cord but, instead, the patient was hospitalized at the Thoracic Surgery Clinic Humanitas of Catania, Italy, where, on 17 October 2014, was subjected to PET/CT (Figure 1A, B) showing metastatic lesions in the lung and to bone scintigraphy examination (Figure 1C) that resulted a wide diffusion of metastasis to the bones. Also, on 5 November 2014, a biopsy on neoformations of the thoracic wall was performed and the histological outcome was metastasis of solid-cordonal carcinoma of the breast type, with positive results for Estrogen, Progesteron receptors. Therefore, on 20 November 2014, she initiated a cure with Exemestrane (EXEGEN: 25 mg, 1 tablet/day).

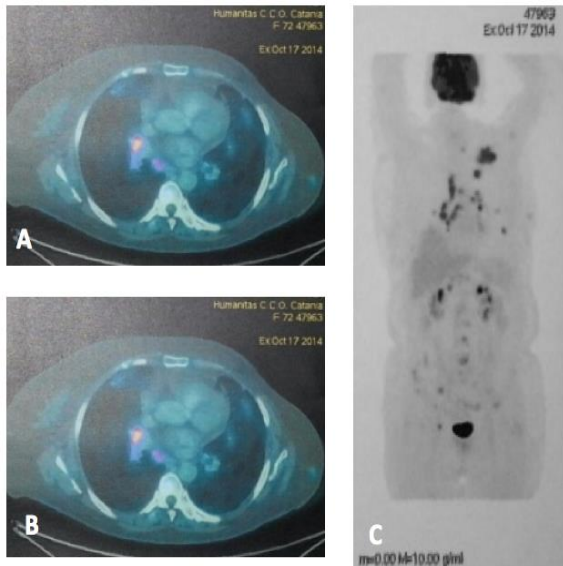


Figure 1: (A, B) PET/CT showing metastatic lesions (in yellow) at pulmonary level in October 2014. (C) Bone scintigraphy showing metastatic lesions in the bone and lymphnodes as well as in the lung in October 2014.

Table 1: Natural substances administrated during and after chemotherapy.

Compound	Dosage
Oncophyt 1	1 sachet, 1 time per day
Oncophyt 8	1 sachet, 1 time per day
Oncophyt 3 (Biogroup)	1 tablet, 3 times per day
Algiplus	1 capsule, 2 times per day
Sulforafane 600 mg (tit. 10%)	1 capsule, 2 times per day
Galium HEEL	30 drops per day
Alkaflor AVD	1 spoon per day

In December 2014, the patient started an integrated therapy (Table 1), including potassium and ribose ascorbate (ONCOPHYT 1), mushroom therapy (extracts of maitaki, shiitake, *Cordyceps sinensis* and ganoderma, ONCOPHYT 8), graviola extract, momordica extract, acid ellagic extract (ONCOPHYT 3), GALIUM drops to drink in 1 day, *Boswellia carterii*, *Curcuma longa*, (ALGIPLUS), bicarbonates alkalinizing water (ALKAFLOOR), sulforaphane (broccoli extract). She also followed a nutritional approach according to ARTOI guidelines [13].



Figure 2: (A, B) PET/CT showing the disappearance of metastatic lesions in March 2015. (C) Bone scintigraphy showing the absence of metastatic lesions in March 2015. (D) PET/CT completely negative for metastatic lesions in February 2016.

From March 2015, she underwent 2 sessions a week of analgesic acupuncture, with reduced intake of PATROL, which was assumed by the patient only in case of need. A PET/CT control, performed on 25 March 2015, showed a picture indicative of an almost complete resolution (Figure 2A, 2B), a result confirmed by bone scintigraphy (Figure 2C) and that was still maintained in February 2016 (Figure D).

Discussion

It is renowned that metastatic breast cancer has a poor prognosis. Often, chemotherapy treatments can give an advantage in maintaining stable the metastatic disease, but this hardly happens with the use of an antiestrogen (exemestran). The use of natural substances and methods,

such as acupuncture in reducing treatment related side-effects, pain and fatigue and the daily consumption of dietary phytochemicals, have shown to improve QoL and, in some instances, lead to increased survival [14-17]. This case shows that integrating the standard oncological therapy with the use of *Boswellia serrata* and potassium ascorbate, combined with minerals and mushroom therapy, acupuncture and nutritional counselling not only permitted an improvement in QoL with reduction of pain and painkiller intake, but also led to the metabolic disappearance of secondary neoplastic lesions.

Historically, Nature is the best source for the treatment of various diseases, and because of their anti-cancerous activity, a plethora of natural products play a crucial role as source of anticancer drugs [18]. For example, paclitaxel, isolated from *Taxus brevifolia*, camptothecin, derived from the Chinese “happy tree” *Camptotheca acuminata*, and combretastatin, derived from the South African willow tree *Combretum caffrum* are natural-derived compounds whose efficacy as anticancer drugs has been already proved [19]. Moreover, several phytochemicals are in preclinical or clinical trials for cancer chemoprevention and epidemiological studies have shown that high dietary consumption of vegetables and fruits reduced the risk of cancer [20]. Interestingly, from small molecules approved for cancer chemotherapy between 1940 and 2014, around 49% are natural products [21].

The case in question is a further demonstration that the integration of herbal medicine, acupuncture, diet intervention, associated with hormone replacement treatment, may be a path to follow even in cases of metastatic neoplastic disease with poor prognosis.

Conclusion

‘Integrative oncology’ better represents the process of care that is provided when patients are receiving integration of interventions such as acupuncture, mindfulness and yoga, and lifestyle counseling in addition to their standard cancer treatments [22]. Recognized the rise and innovation in the integrative oncology area, it is estimated that, on average, about 40% of cancer patients reported current or previous use of ‘non-standard’ approaches during their cancer treatment [23]. As a consequence, further studies should be carried out to correctly evaluate the role of the integrative therapy, and eventually to define a clear relationship between the disappearance of the neoplastic pathology and the natural substances used, considering also the growth of integrative medicine also in clinical centers [24]. In fact, future research focusing on the natural anti-breast-cancer agents can open a new horizon in breast cancer treatment, which will play a great role in enhancing the survival rate of breast cancer patients [25, 26].

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