

ADAPTING TREATMENT IN METASTATIC HR+/HER2– BREAST CANCER, AFTER CHEMOTHERAPY REFUSAL: A CASE REPORT

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Abstract

This study case represent breast cancer with positive hormone receptors and HER2-negative status shows the most usual subtype in metastatic breast carcinoma. Clinical management is frequently derived from endocrine therapy together with certain agents. The therapeutic option affected not only by the biological characteristics of the tumor but also by the patient's acceptance and preference influencing treatment persistence in daily medicinal practice. It is presented a case of a 46-year-old female patient with metastatic HR+/HER2– breast cancer with systemic metastatic disease involving the bones, lungs, and liver. The individual had undergone chemotherapy previously, surgery, radiotherapy, and subsequent oral chemotherapy with capecitabine.

Upon further progression of disease, this patient declined continued systemic chemotherapy as a result of treatment-related adverse effects. Additionally, medical therapy was thereafter commenced with ribociclib (a CDK4/6 inhibitor) used concurrently with letrozole and ovarian suppression. Fortunately, upon completion of 12 months of treatment, radiological imaging showed illness maintenance without new lesions. Pulmonary and hepatic metastases continued constant. The therapeutic management was associated with good tolerability, with easily controlled leukopenia during numerous cycles.

A medicine such as ribociclib may indicate a real therapeutic solution in patients with metastatic hormone receptor-positive, HER2-negative breast cancer who decline chemotherapy is what this clinical case depicts.

Keywords: Metastatic breast cancer; HR-positive breast cancer; HER2-negative breast cancer; Ribociclib; CDK4/6 inhibitors; endocrine therapy; treatment adaptation.

Introduction

It has been found the improvement in the past few years regardless of hormone HR+/HER2– tumor indicates the most frequent tumor molecular subtype of metastatic breast carcinoma by owing to advances in therapy, survival and long-term disease control.

Although, the CDK4/6-targeted agents, in combination with endocrine therapy, have become a crucial part of standard treatment, representing significant benefit in disease control and overall survival. Nevertheless, in real-world clinical practice, therapeutic decisions are not due to exclusively on tumor biology or references from international guidelines, but also on individual factors such as prior treatments, tolerability, performance status, and patient choices. This article depicts the case of a young adult patient with metastatic HR+/HER2– breast cancer who, after multiple lines of therapy, decline further chemotherapy and requested a less toxic therapy alternative without impairing disease control.

Case Presentation

In 2021 a 46-year-old female patient was confirmed in the setting of mucinous breast carcinoma of luminal biological profile (ER-positive, PR-positive, HER2-negative, Ki-67 30%). At first diagnosis, radiological examinations confirmed histologically metastatic disease involvement of the skeletal system, lungs, and liver.

Taking in considering the patient's age, overall condition, and the existence of visceral metastases, systemic chemotherapy with anthracyclines was commenced, subsequently treated with taxanes. The patient then received surgical treatment and radiotherapy in accordance with oncological indication. Furthermore, during follow-up examination, as a result of disease development, capecitabine therapy was managed, attaining partial treatment benefit.

After further progression and exposure to multiple treatment lines, the patient refused continuation of chemotherapy due to experienced toxicity and reduced quality of life. Following clinical reassessment, tumor biology, and overall patient condition, treatment with ribociclib in combination with letrozole and ovarian suppression was initiated.

During a 12-month follow-up period, treatment was well tolerated. The main observed toxicity was manageable leukopenia and after follow-up imaging confirmed stable disease, with no additional metastatic spread and no progression in the lungs or liver.

Results

It quite vital to mentioned that this case has undergone through medical assessments, laboratory tests, and radiologic imaging during treatment with ribociclib (Figures 1, 2, 3).

Within a year of treatment, CT imaging revealed disease steadiness, with no new secondary tumors and neither advance of existing lesions in the lungs (Figures 2, 3) nor in liver (Figure 1). On clinical grounds, the patient preserved good performance status and an adequate quality of life through the treatment period.



Figure 1. CT abdomen showing hepatic metastases with no interval change after 12 months.

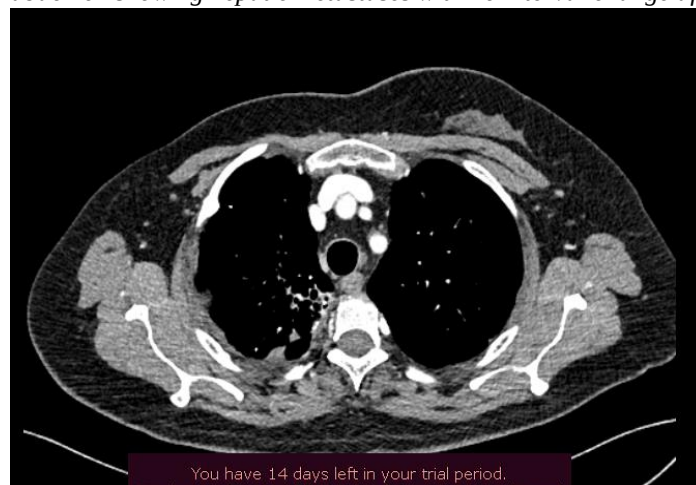


Figure 2. Thoracic CT showing no progression.



Figure 3. CT chest showing pulmonary metastases without change.

Discussion

Although, stage IV breast cancer with hormone receptor positivity and absence of HER2 overexpression is in overall typified by an indolent disease course in comparison with high-grade subtypes. Yet, the presence of metastatic involvement of visceral organs, predominantly in the liver and lungs, is frequently related to greater therapeutic complication and the need for several treatment lines across with progression of disease.

In clinical treatment, those patients characteristically receive several lines of systemic therapy, as well as chemotherapy, endocrine therapy, and, when specified by biological markers, targeted anticancer therapy. However, clinical decisions cannot always be guide by exclusively on clinical protocols. Furthermore, there are factors that often affect treatment choice by including tolerance to earlier treatments, long-term toxicity, useful status, comorbidities, emotional aspects, and individual preference.

This case presented several clinically relevant features. Since, the patient was young, reproductive-age, and with metastatic involvement of the bones, lungs, and liver at diagnosis. In addition, she had experienced multiple therapeutic modalities, including anthracycline-based regimen, taxanes, operation, radiation therapy, and was subsequently treated with capecitabine. In this situation, the doctor would typically have been recommended an extra line of chemotherapy.

Though, as a result prior treatment obstacles, presented with adverse effects, and the patient's denial to continue chemotherapy, it was necessary to choose an individualized therapeutic approach. Moreover, taking in consideration tumor molecular profile, preserved performance status, and the aim of sustaining quality of life, administered with ribociclib in combined with letrozole and ovarian suppression was carefully chosen.

The course of the disease, in this case was promising. At 1-year follow-up of treatment, radiological evaluation established illness stabilization with no appearance of new lesions. Moreover, liver metastases also continued stable, in spite of being commonly associated with an adverse prognosis. Whereas, hematologic toxicity was restricted to controlled leukopenia, with no need for long-term treatment discontinuation.

Based on a prognostic perspective point of view, individuals with metastatic HR+/HER2– breast cancer and metastatic involvement of visceral organs show heterogeneous clinical results. Yet, diagnosis depends on tumor biology, disease load, treatment responsiveness, and the capability to maintain nonstop therapy. This case determines that, beyond established

treatment algorithms, personalized treatment according to medical characteristics and patient preference can contribute to sustained disease management and protection of quality of life.

Conclusion

In conclusion, this case proves that also patients with the last stage of breast carcinoma receiving multiple lines of therapy and reject additional chemotherapy, personalized therapeutic strategies may confer important clinical advantage.

On the other hand, the therapy such as ribociclib in combination with endocrine therapy in this case realized sustained managed disease, good tolerability, and protection of quality of life. Finally, this case demonstrates the importance of therapy adjustment based on clinical features, therapeutic history, and personal patient preferences.

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