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Angioneurotic edema of metastatic breast cancer patient associated with letrozole

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ABSTRACT

Breast cancer is the most frequent cancer in women leading to a Significant morbidity and mortality. The majority of breast malignancies are hormone responsive. We present a case of letrozole-associated angioneurotic edema in a 62-year-old woman with metastatic breast cancer. Angioneurotic edema is the insidious side effect of letrozole. Clinical suspicion is the key to the early diagnosis.

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1. Introduction

Breast cancer is the most common cancer type and the leading cause of cancer death among females.[1] Metastatic disease can occur during diagnosis and it can also be during follow-ups. The overall goal of treating metastatic breast cancer is to slow the progression of disease, improve quality of life, and prolong survival without causing significant treatment-associated toxicity. Median overall survival is 18–24 months for these patients. But there has been an improvement in the survival of these patients with metastatic disease over the last few decades as a result of more effective therapies.[2] Hormonotherapy, systemic chemotherapy and targeted therapies play a role in the treatment of metastatic disease.[3] Patients with ER-/PR-positive and bone/soft-tissue only or asymptomatic visceral disease should be considered for initial palliation with endocrine therapy. Aromatase inhibitors, tamoxifen, LHRH agonists, exemestane and fulvestrant are hormonal treatment options. The choice of endocrine therapy is dependent upon the menopausal status of the patient. In postmenopausal women, the aromatase inhibitors show similar or modestly superior efficacy compared with tamoxifen. Skin reactions are among the rare side effects of aromatase inhibitors. We report a patient in whom an angioneurotic edema resulted from letrozole (20 mg/day) at the 2nd day of the treatment.

2. Case

A 62-year-old woman presented with left breast mass. Her medical history was negative for the systemic disease. The biopsy taken from the mass was consistent with the Invasive ductal carcinoma and estrogen receptor 40%, progesterone receptor 30% positive and c-erbB2 negative in the immunohistochemical study. Letrozole as a first-line treatment was started for the patient who had vertebral metastasis in her examination for staging purposes with PET-CT. After about 16 hours of a single dose of the letrozole, she applied to hospital with swelling and erythema on her face (Fig. 1) and she was admitted to the hospital with the diagnosis of angioneurotic edema. After dermatology consultation, steroid (methylprednisolone 1mg/kg) treatment started. On the 3rd day after treatment, the lesions were retracted (Fig. 2). Hormonotherapy stopped and her oncologic therapy continues with systemic chemotherapy.

3. Discussion

The majority of breast malignancies are hormone responsive and adjuvant endocrine therapy is used routinely to prevent breast cancer recurrence and death.[4,5] Endocrine therapies are among the first targeted treatments that aim to inhibit the influence of estrogen receptor activation on tumor proliferation. Several biochemical mechanisms have been the focus of drug development for treatment, including selective estrogen-receptor modulation, aromatase inhibition, and selective estrogen-receptor degradation.[6] In the meta-analysis comparing tamoxifen and AI as

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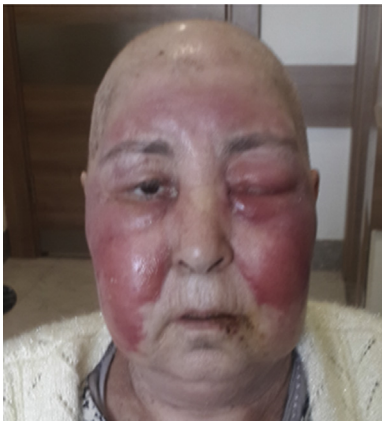

Fig. 1. Swelling and erythema on patient's face after using letrozole.

Fig. 2. On the 3rd day after treatment, the lesions were retracted.

hormonal therapy options for metastatic breast cancer, it was shown that the survival times were better with AI's. For postmenopausal patients; anastrazole, letrozole, exemestane and fulvestrant alternatives are used.

The most frequently observed side effects of aromatase inhibitors are osteoporosis, fractures, increased cardiovascular risk, hypercholesterolemia and musculoskeletal syndrome. Skin reactions are rare and the most common of which are angioedema, anaphylactic reactions, toxic epidermal necrosis, and erythema multiforme. The development of angioedema is a rare yet serious clinical event that may develop due to an adverse drug reaction. It is defined as a sudden localized non-inflammatory swelling of cutaneous and/or submucosal tissues mainly caused by penicillins, iodinated contrast products, converting-enzyme inhibitors. Rapid recognition and treatment of this adverse reaction is critical for optimal patient outcomes. There is no reported angioedema due to aromatase inhibitors in the literature and this side effect reported postmarketing.

In conclusion, we reported this case with the aim of emphasize the life-threatening side effects of aromatase inhibitors that we frequently use in our daily practice. This report increases awareness of everolimus as a potentially causative agent for the development of angioedema.

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