ABSTRACT
Tamoxifen-related chronic aphthous stomatitis: Case report
Tamoxifen is a member of the selective estrogen modulator (SERM) family. SERMs exert selective agonist or antagonist effects on various estrogen target tissues. Tamoxifen is used as an adjuvant treatment in early and advanced breast cancer patients. Aphthous oral ulcers are painful lesions of the oral mucosa and are common in the general population. Usually the etiology is unknown. Herein we present a patient with breast cancer who had recurrent oral aphthous lesions that occurred following tamoxifen treatment.
Key words: Tamoxifen, aphthous stomatitis, side effect

INTRODUCTION
Tamoxifen is a member of the selective estrogen modulator (SERM) family. SERMs exert selective agonist or antagonist effects on various estrogen target tissues (1). Tamoxifen is used as an adjuvant treatment in early and advanced breast cancer patients, and in metastatic patients, as well. Hot flashes and thromboembolic events are some of the side effects associated with tamoxifen. Skin changes can be observed in 6%-19% of patients treated with tamoxifen.

Aphthous oral ulcers are painful lesions of the oral mucosa and are common in the general population. Usually the etiology is unknown. Recurrent aphthous stomatitis (RAS) affects approximately 25% of the general population (2). Herein we present a patient with breast cancer who had recurrent oral aphthous lesions that occurred following tamoxifen treatment.

CASE REPORT
A 39-year-old female patient presented with a mass on her right breast and was diagnosed to have an invasive ductal carcinoma based on pathologic examination of a biopsy specimen. The staging work-up showed that the patient had locally advanced (stage III) disease. The patient underwent right modified mastectomy with
axillary lymph node dissection. Following surgery, 6 cycles of the FEC chemotherapy regimen consisted of cyclophosphamide 600 mg/m², epirubicin 90 mg/m², and fluorouracil 500 mg/m² was administered every 3 weeks. She also received adjuvant radiation therapy to the involved chest wall following chemotherapy. The patient had estrogen and progesterone-positive disease and therefore was given tamoxifen as 20 mg bid.

Following the start of the tamoxifen treatment, the patient began to complain from painful aphthous lesions in the oral mucosa. Examination oral mucosa revealed erythematous aphthous ulcer covered with pseudomembrane at the base of mouth. Ulcer has central white necrotic area with slightly elevated borders. The etiology of these aphthous lesions was investigated during the fifth year of her follow-up. No genital ulcers, skin lesions, or gastrointestinal problems were observed. She did not have any joint problems and her physical examination was normal. Examination of her oral mucosa showed 3 minor aphthous lesions. Ophthalmologic examination did not show any signs of uveitis. Her laboratory test results were as white blood cells: 6.79x10³/mm³; red blood cells: 5.10x10⁹/mm³; hemoglobin: 12.9 g/dL; hematocrite: 39.1%; mean corpuscular volume: 76.7 fl; platelets: 174x10³/mm³; blood urea nitrogen: 10 mg/dL; creatinine: 0.7 mg/dL; lactate dehydrogenase: 190 U/L; aspartate transaminase: 17 U/L; alanine transaminase: 31 U/L; vitamin B12: 214 pg/ml; folic acid: 14.54 ng/ml. ELISA HIV and pathergy test results were negative. Tamoxifen treatment was stopped and the patient was put on a topical steroid regimen. During follow-up, 6 months later the aphthous lesions disappeared, and topical steroid treatment was withdrawn. Because the patient already had received tamoxifen for 5 years, it was not started again. At the time this report was written the patient was symptom free.

**DISCUSSION**

RAS is defined as the presence of aphthous ulcers in the absence of systemic disease. Physicians should rule out reversible ulcer-forming conditions, such as vitamin B12 deficiency, iron deficiency, and folate deficiency. The etiology of RAS is multifactorial; predisposing factors are trauma, stress, food allergies, and hormonal disorders, as well as immunologic disorders (3).

The diagnosis of RAS is based on patient history. Medical history should include information on Behçet’s disease, Crohn’s disease, HIV infection, and neutropenia. Behçet’s disease is a systemic vasculitis, which is characterized by recurrent oral aphthous lesions (4). The presented case had no other clinical sign of Behçet’s disease. RAS generally begins during childhood (5). The lesions in the presented case were observed following tamoxifen treatment when she was 39 years old. Based on these facts, the aphthous lesions were attributed to tamoxifen. To the best of our knowledge this is the first report of tamoxifen-related RAS in the English literature. As such, according to the findings in the presented case, in breast cancer patients with RAS cessation of tamoxifen treatment should be considered.

**REFERENCES**


