Breast cancer metastasizing to the tongue

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Involvement of the oral cavity by metastatic disease is rare and can include either bone or soft tissue. In this note, we describe the case of a young woman who had a metastatic deposit on her tongue, secondary to primary breast cancer.

Case report

A 24-year-old woman presented with a lump in the right breast. A right mastectomy and axillary clearance with immediate reconstruction was performed. The operative specimen revealed a 38-mm, grade 2, invasive ductal carcinoma that gave weakly positive results for estrogen receptors (ERs) but negative findings for progesterone receptors (PRs) and human epidermal growth factor receptor 2 (HER2). One of 14 axillary lymph nodes was found to contain cancer cells, and there was extracapsular spread. She received 6 cycles of adjuvant 5-fluorouracil (600 mg/m^2), epirubicin (60 mg/m^2) and cyclophosphamide (600 mg/m^2) followed by adjuvant radiotherapy and was subsequently started on tamoxifen. Ten months after she completed chemotherapy, she presented with shortness of breath on exertion and a painful ulcer on the lateral aspect of the tongue that had been present for the preceding 2 months. Examination revealed dullness and reduced breath sounds over the right lung base and an ulcerated area over the lateral aspect of the tongue, with extensive induration. Computed tomography revealed a right-sided pleural effusion and multiple parenchymal masses in the lung fields, consistent with metastatic disease. A biopsy of the tongue lesion revealed a high-grade invasive carcinoma that appeared focally to be forming glands (Fig. 1, left); the tumour expressed cytokeratin 14 (Fig. 1B) and cytokeratin 7 but was negative for ER, PR and HER2. Comparison was made with the primary breast cancer, and the lesion was confirmed as a metastatic deposit from that tumour. Chemotherapy with docetaxel 100 mg/m^2 stabilized the tongue metastasis, but there was progression of the pulmonary metastasis. She received further chemotherapy but died from her disease a little over 2 years from the time of original presentation.

Discussion

An oral metastatic deposit is the first manifestation of an occult primary malignant tumour in up to one-third of cases. A review of over 6000 autopsies revealed 12 cases of

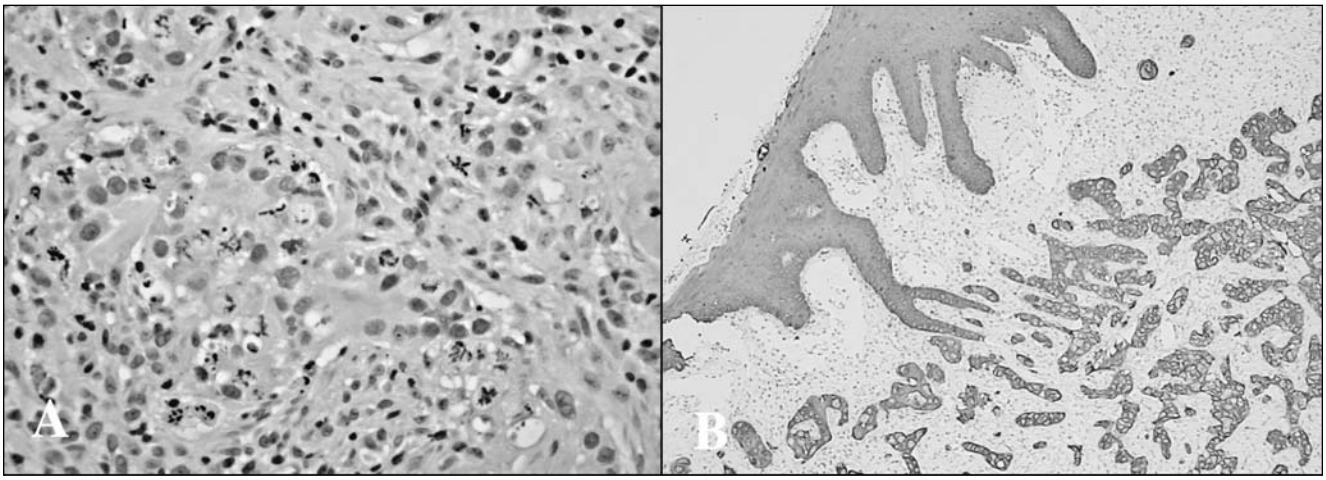

FIG. 1. Tongue biopsy showing (A) high-grade anaplastic carcinoma (hematoxylin–eosin, original magnification ×200) and (B) immunostaining for cytokeratin 14 (original magnification ×25).

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lingual metastases. The most common primary tumour was malignant melanoma (5 cases), followed by breast and lung cancer (2 cases each); other primary sites were the colon, pancreas and esophagus.[1] The base of the tongue was the most common anatomic location, the lesion being clinically apparent in 83% of cases, although the diagnosis was only made before death in one-third of cases, and in 1 case, the lingual metastasis was the only apparent site of metastatic disease.[1] Four cases have been reported in the English literature of metastatic deposits to the tongue secondary to breast cancer: 2 involved the mobile part,[2,3] 1 the tip[4] and 1 the base of the tongue.[5] In 1 case, the primary and metastatic lesions were diagnosed concurrently[2]; in another case, the patient had established metastatic disease[3]; and in 2 cases, it was the first sign of recurrent disease.[4,5] Recurrences occurred between 14 and 29 months after the initial diagnosis.[3–5] There were other sites of metastatic involvement in all cases. Patients were treated with surgical excision,[2,4] external beam radiotherapy[3–5] and chemotherapy with thiotepa (1 case).[2] Two of the patients died within 4 months of presentation,[2,5] the outcome in 1 patient was not reported,[4] and the remaining patient was alive and disease free 6 months after the diagnosis.[3]

Competing interests: None declared.

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