

**Case Report / Vaka Sunusu**

**Management of breast cancer metastasis to parotid gland**

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**ABSTRACT**

**Objective:** We report a case of metastatic cancer to the parotid gland seen quite rarely.

**Method:** Case report and literature review.

**Results:** Our case was a sixty-one years old female patient who had diagnosis of advanced breast cancer. She had a regional metastasis to the axillary area, and a distant metastasis to the right parotid gland and the left surrenal gland at the time of diagnosis. Right radical mastectomy and axillary lymph node dissection were performed after six cures of neoadjuvant chemotherapy,. Then, she underwent a resection of deep parotid lobe and tumoral mass, which was followed by surrenal gland excision. She is now 12 months beyond her surgery and completely free of disease.

**Conclusion:** We consider that with the increased number of parotidectomy for metastatic breast cancer, more dependable knowledge will be obtained in the future.

**Key words:** Parotid gland, breast cancer, metastasis.

## INTRODUCTION

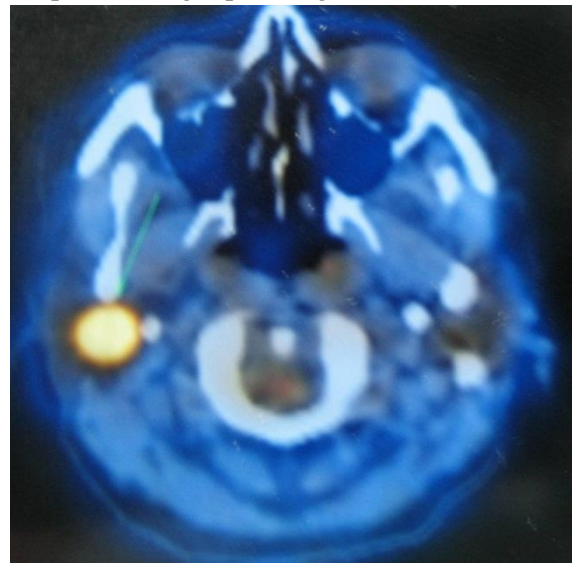
Metastatic parotid gland tumors that seen rarely account for 8% of all malignant parotid tumors. Head and neck skin cancers, especially squamous cell cancer and malign melanoma can metastasize to parotid lymph nodes and parenchyma<sup>1</sup>. In addition to these tumor; malignant neoplasm of breast , gastrointestinal tract, kidney and prostate can very rarely metastasize to the parotid gland<sup>2</sup>. Metastasis to the parotid gland occurs mostly via lymphatic system and direct invasion and rarely by way of hematogenous spreading.

## CASE REPORT

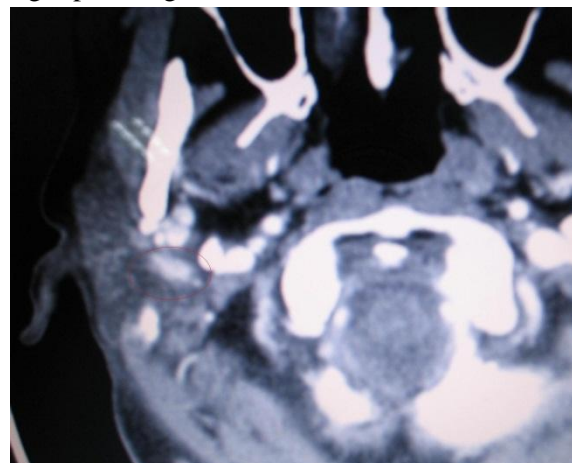
Our case was a sixty-one year-old female patient applied to the Surgery Department with a breast mass. The patient underwent a segmental mastectomy that final histopathologic examination revealed an invasive ductal carcinoma. On positron emission tomography (PET) examination, there were pathologic activities in the right breast, the right axillary area, the deep lobe of the right parotid gland (Figure 1-2) and left surrenal gland. A fine needle aspiration cytology of the parotid mass revealed malign epithelial cells seemed stemming from breast cancer metastasis. The patient subsequently underwent five courses of CAF (cyclophosphamid 900 mg, adriamycin 90 mg, 5-flourouracil 90 mg) protocol. After she underwent right radical mastectomy and axillary lymph node dissection in the Surgery Department, the patient was admitted to the Otolaryngology Department for excision of metastatic foci in the right parotid gland. The patient was operated under general anesthesia with orotracheal intubation. The parotid gland was explored following a modified Blair incision . The facial nerve main truncus was identified, upper and lower branches were dissected (Figure 3). Deep parotid tissue was explored after the superficial lob was raised like a flap. A 1x1,5 cm mass was determined under the main truncus of facial nerve. A

tumoral mass was totally resected together with the deep lobe of the parotid gland. Postoperative histopathologic examination revealed an invasive ductal carcinoma metastasis. The patient was underwent the right surrenal gland excision, which was also consistent with breast cancer metastasis. She is now 12 months beyond the surgery and free of disease.

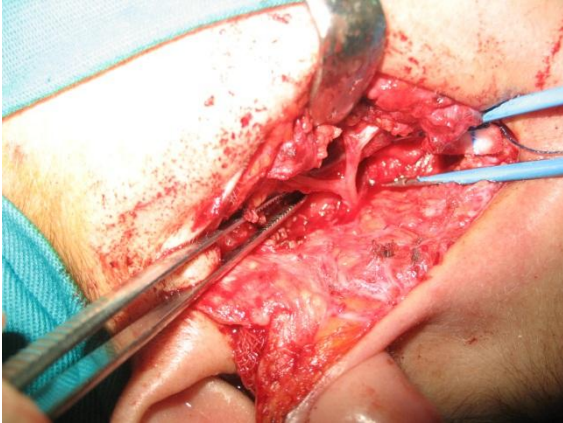
**Figure 1:** There was pathologic activity in the deep lobe of right parotid gland



**Figure 2:** There is a mass in the deep lobe of right parotid gland



**Figure 3:** The facial nerve main truncus was identified, upper and lower branches were dissected



## DISCUSSION

A squamous cell carcinoma of head and neck's skin and a cutaneous malignant melanoma are the most common metastasizing tumors to the parotid gland. Breast cancer most frequently metastasizes to lung and bone. Parotid gland metastasis is extremely rare in the literature. Abrams et al. reported 167 patients with metastatic breast cancer and in only one case had parotid gland metastases<sup>3</sup>. Siefert et al. retrospectively studied 10,944 patients with parotid tumors, of these seventy five were metastases from other primary cancers. Of these only two were breast cancer<sup>4</sup>. Michel et al.<sup>2</sup> retrospectively studied 520 parotid masses, 171 of them were malignant, of which 120 were primary parotid gland malignancies, ten were lymphoma and seven were direct invasion from surrounding tissues. Metastasis from distant

tumors was found in thirty four cases, and only two of them were metastasis of ductal breast carcinoma. Both of these patients had total parotidectomy, ipsilateral level 2-3 neck dissection, and underwent adjuvant radiotherapy. In another presentation of Perez et al., they performed total parotidectomy, plus local radiotherapy and 6 cycles of docetaxel 100 mg/m<sup>2</sup> for metastatic breast cancer<sup>5</sup>. As the number of metastatic breast cancer to parotid gland is extremely low, it is not possible to extract dependable data from the literature. In locally and regionally controlled breast cancers, it is believed that metastatectomy may be beneficial for survival. Metastatectomy also performed for a palliative purpose. In our case as the mass of metastasis was small, we only performed a resection of the deep lobe of parotid gland.

In conclusion, we consider that with the increased number of parotidectomy for metastatic breast cancer, more dependable knowledge will be obtained in the future.

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