



Primary Malignant Melanoma of the Parotid Gland: An Unusual Primary Site

Parotis Bezinin Primer Malign Melanomu: Alışılmadık Primer Alan

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ABSTRACT

Malignant melanoma (MM) of the parotid gland arising at such an unusual location is an exceptional and rare case only occasionally mentioned in the literature. Due to the different treatments and prognosis, a distinction between primary parotid gland MM and metastasis of MM is crucial.

We report on a 57-year-old woman who presented with right parotid swelling.

She underwent right total parotidectomy. Immunohistochemically, the tumor cells were positive staining for S-100, HMB-45, and Melan A. Since no other focus was detected, the patient was diagnosed with primary malignant melanoma of the parotid gland.

Although malignant melanoma of the parotid gland is a rare diagnosis, clinicians should be aware of this presentation in the differential diagnosis of parotid tumors.

Key Words: Malignant melanoma, Parotid gland, Metastasis

ÖZ

Parotis bezinin malign melanomu alışılmadık bir lokalizasyon olup literatürde nadiren bildirilen istisnai bir durumdur. Farklı tedavi ve prognozlarından dolayı parotis bezinin primer malign melanomu ile malign melanomun parotise metastazının ayırımı kritiktir.

Biz sağ parotiste şişlik ile başvuran 57 yaşındaki bir kadın hastayı sunduk.

Hastaya sağ parotidektomi yapıldı. İmmünohistokimyasal olarak tümör hücreleri S-100, HMB-45 ve Melan A ile pozitif boyanıyordu. Değerlendirmede primer olabilecek başka bir odak bulunmadığından hastaya parotis bezinin primer malign melanomu teşhisi konuldu.

Parotis bezinin malign melanomu nadir bir teşhis olmakla birlikte, klinisyenler parotis tümörlerinin farklı teşhisinde bu prezentasyonun farkında olmalıdır.

Anahtar Sözcükler: Malign melanom, Parotis bezi, Metastaz

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INTRODUCTION

Malignant melanoma (MM) is a neoplasm of melanocytes. Melanocytes originate from the neural crest, and they migrate during development to the skin, eyes, oral cavity, and the leptomeninges. Although melanomas are most frequent in sun-exposed areas of the skin, these tumors may arise from ocular or mucosal sites including the respiratory, alimentary, and genitourinary tracts (1).

MM is the most frequently fatal form of skin cancer (2). Most cases of MM are diagnosed at an early stage. Surgical resection of localized MM can be curative for early stages of

melanoma, but many patients eventually show recurrence. However, some patients have metastatic disease at the time of diagnosis. The primary systemic therapy for patients with advanced or metastatic melanoma is based upon the extent of disease, the presence or absence of a driver mutation at KIT and the V600 site in BRAF (3,4). Immunotherapy is the primary systemic treatment modality for metastatic melanoma that does not contain a driver mutation (5). Molecularly targeted therapy with BRAF inhibitors is indicated in patients with BRAF-mutant melanoma (6). The prognosis for patients with advanced or metastatic melanoma remains poor.

In this case report, we describe a patient with primary MM arising from the parotid gland.

CASE

A 57-year-old woman presented with a mass in the right parotid gland area in April 2015. She had no history of any systemic disease. On admission, she did not use any medication. On the physical examination, she also had peripheral facial paralysis on the right side of her face. Neck computed tomography (CT) scan revealed 2x1 centimeter mass in the right parotid gland. Results of fine-needle aspiration cytology were interpreted as consistent with pleomorphic adenoma. In May 2015, the patient underwent right total parotidectomy. The histopathological examination revealed 2x2x1.8 centimeter atypical melanocytes in the parotid gland (Figure 1-3). By immunohistochemistry, the tumor in parotid gland showed diffuse staining for S-100, human melanin black-45 (HMB-45), and antimelanosomal antibody MART-1 (Melan A) (Figure 4, 5). The patient had no family history of melanoma or atypical melanocytic nevus. The final diagnosis was consistent with malignant melanoma of the parotid gland. Two parotid lymph nodes were consistent with malignant melanoma metastasis and 4 parotid lymph nodes were reactive. On F-fluorodeoxyglucose (F-FDG) positron emission tomography/computed tomography (PET/CT), there were no other primary or metastatic areas. Dermatological examination was normal. The lesion was therefore considered primary malignant melanoma of the parotid gland. Because of a surgical margin less than 1 millimeter, radiotherapy and adjuvant high-dose interferon alpha (IFN) (induction therapy; 20 million units/m², 5 days a week for 4 weeks IV infusion, maintenance treatment; 10 million units/m², subcutaneous, 3 days a week) were planned.

DISCUSSION

Melanocytes are embryologically derived from neural crest tissue, and are not a component of the salivary glands. The parotid gland is an unusual site for MM. Primary melanoma of the parotid gland is extremely rare. In most

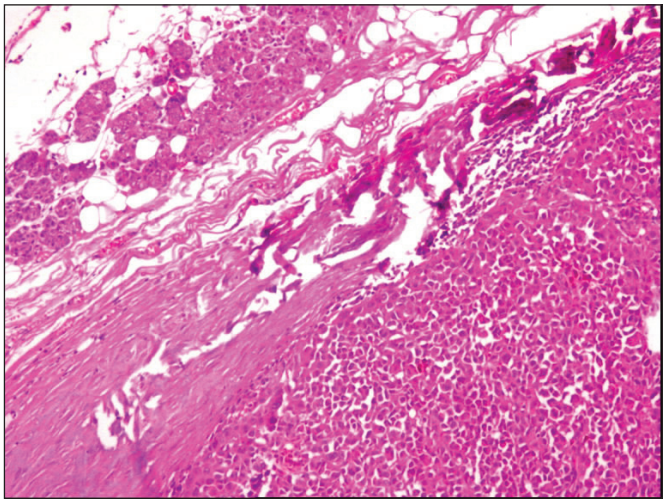


Figure 1: There is a tumoral lesion composed of atypical melanocytes in the salivary gland parenchyma. (H&E; x100).

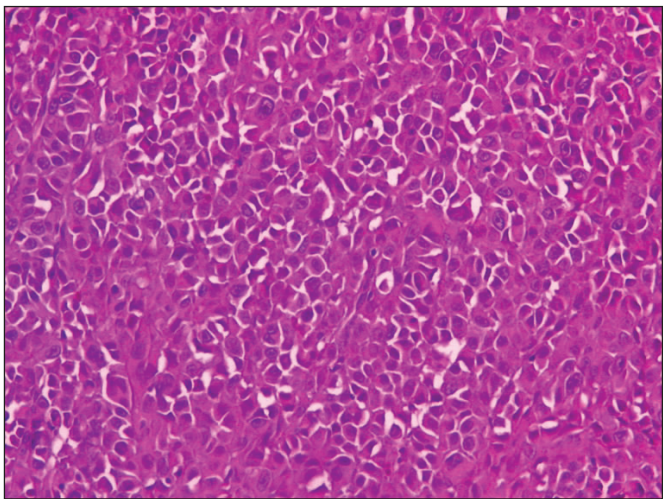


Figure 2: Melanocytic nests without maturation, with a high ratio of atypical mitoses. (H&E, x200).

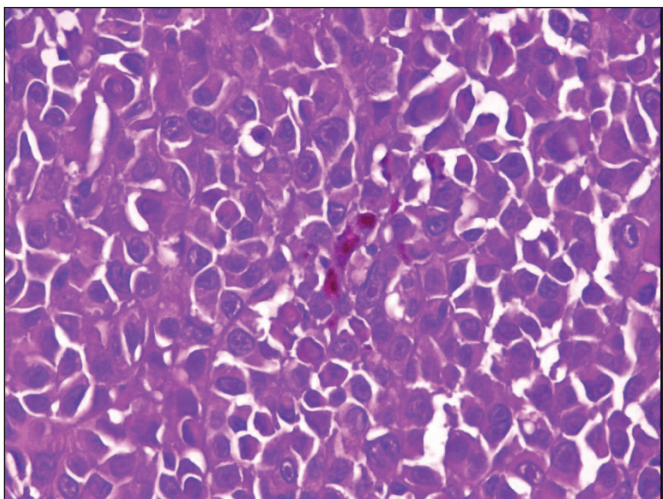


Figure 3: Deep brown pigment (melanin pigment) in the malignant melanocytic nest. (H&E, x400).

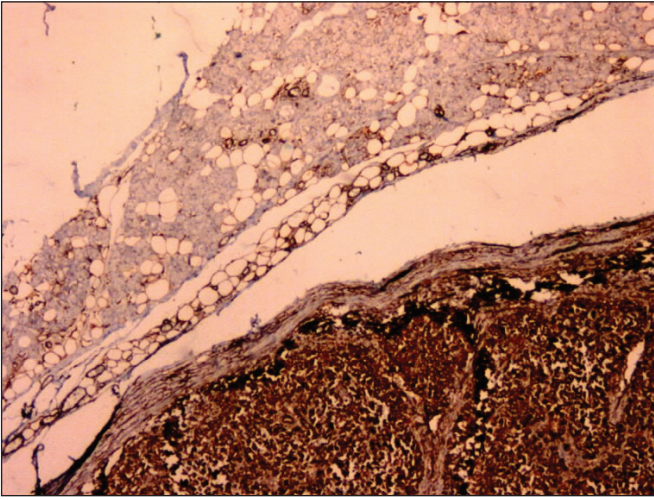


Figure 4: Vimentin positivity in melanocytic cells. (Vimentin, x50).

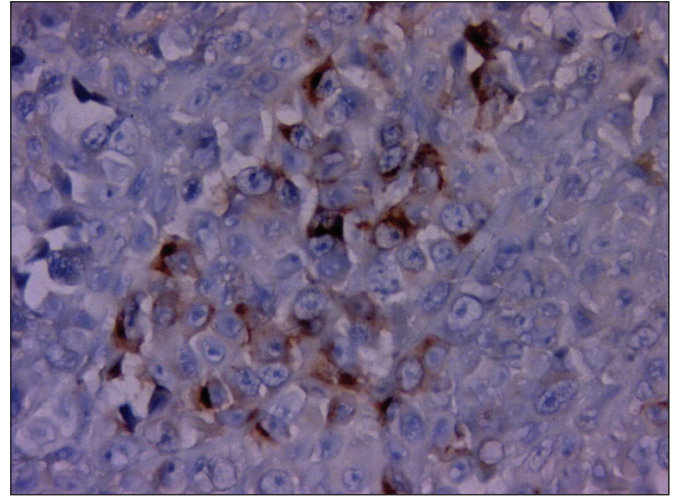


Figure 5: Patchy, cytoplasmic HMB45 positivity. (HMB45, x400).

instances, melanomas within the parotid are considered as metastases either to the parotid lymph nodes or to the parotid gland of cutaneous melanomas in the head and neck. As MM spontaneously regresses as an immunogenic tumor, the primary lesion cannot always be identified (7). The definition of primary melanomas of the salivary glands therefore remains controversial. On the other hand, during the autopsy of a Japanese male, the existence of melanocytes in the interlobular duct epithelial cells of the parotid gland was observed. This is the first report showing the presence of melanocytes in the human parotid gland (8). A primary melanoma of the parotid gland can only be diagnosed in the absence of any cutaneous melanoma. Patients present with a progressively enlarging mass in the parotid gland. The evaluation of a parotid mass requires distinction of metastatic cancer from a primary parotid malignant melanoma. Complete screening for other primary tumor sites and dermatologic examination should therefore be performed. Total parotidectomy is the mainstay

treatment. As the rarity of these melanomas has precluded large randomized trials, the benefit of radiotherapy, chemotherapy, and immunotherapy remains unclear. The prognosis for patients with melanoma depends upon the stage of the disease at the time of diagnosis. Early diagnosis has improved survival for patients with these unusual variants. Noncutaneous melanomas tend to present at an older age and to be diagnosed at a more advanced stage. Melanomas of these unusual sites generally appear to have a worse prognosis than cutaneous melanomas (9). Patients who developed primary malignant melanoma in a parotid gland with no other primary lesion detectable have been rarely described in the literature (10-12).

In conclusion, primary malignant melanoma of the parotid gland is a controversial entity and has not been well documented. Primary malignant melanoma should be considered in the differential diagnosis of parotid tumors, and immunohistochemical analysis should be performed.

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