Primary Amelanotic Melanoma of the Tongue (Case Report)

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Abstract
A case of a 41 years old male with a nodular lesion at the tip of the tongue is presented. Incisional biopsy showed malignant growth with nonspecific features. Although the lesion showed no pigmentation; positivity for Melan-A was detected leading to the diagnosis of Amelanotic melanoma. The patient was treated later with excision and neck dissection.

Key words: Amelanotic, Oral, Melanoma, Tongue

Introduction
The involvement of the oropaharyngeal mucosae with malignant melanoma is decidedly rare (Bouquotetal. 2009) representing less than 1% of all melanomas in hospital based studies. The condition has an annual incidence of only 1 per 2 million persons (Guet al. 2003, Bouquotet al. 2009).The palate and maxillary alveolar mucosa represent the most common sites of oral involvement, although other oral sites could be affected (Türkmenet al. 2011).Involvement of the tongue is rare, representing about 5% of reported oral cases (Aguaset al 2009). This report describes a case of amelanotic melanoma of the tongue.

Case Report
fortyone years old man presented to the maxillofacial surgery clinic at the specialized surgeries hospital in the Medical City Hospital in a 3-month duration nodular mass of approximately 4 cm in its greatest dimension on the tip of the tongue.

Figure 1: Nodular mass at the tip of the tongue

The nodule had a soft consistency and was pink in colour (fig.1).
The patient reported a history of smoking tobacco for two decades, and no family history of malignant disease. He had nonspecific oral discomfort and loss of appetite. The patient was given full clinical examination and investigated with computed tomography of the head and neck and magnetic resonance imaging of the head and abdomen; which did not show a related significant medical history or a region of occult primary tumor elsewhere.

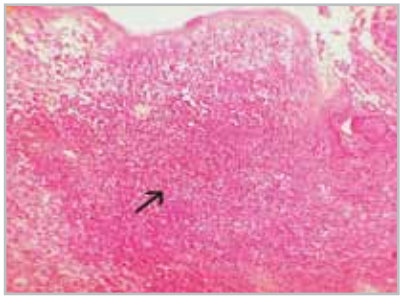

Figure 2: Low power photomicrograph showing hyperplastic surface epithelium with underlying mixture of round and spindle cells (arrow) (H&E X40)

On a clinical basis; a provisional differential diagnosis for the lump included lymphoma, salivary gland tumor, granular cell tumor and peripheral nerve sheath tumor

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An incisional biopsy was taken by a maxillofacial surgeon through simple incision. Histopatholgic examination of the haematoxylin and eosin stained biopsy slides showed sheets of round vacuolated cells with large nuclei, prominent nucleoli and scattered mitoses that infiltrates tongue tissue in a lobular pattern separated by connective tissue septae reaching to the surface epithelium which was hyperplastic and focally ulcerated (fig.2).

The deep part of the tumor showed atypical cellular proliferation with no pigmentation at all (fig. 3), mitotic figures (fig. 4) and prominent spindling (fig. 5) were seen throughout the tumor. The histological sections stained positive with Melan-A immunohistochemistry (fig. 6), leading to the diagnosis of amelanotic melanoma. The patient decided treatment abroad, upon his return; he attended a recall visit to our institution with his final reports. He was treated by partial glossectomy and neck dissection. Excisional biopsy results confirmed the diagnosis. Afterward, the patient failed to attend for further follow up.

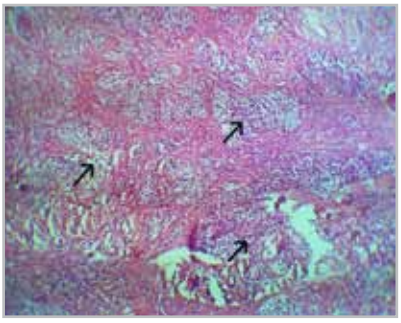

Figure 3: Deep part of the tumor consisting of round and spindle cells (arrows) and connective tissue septae (H&E X40

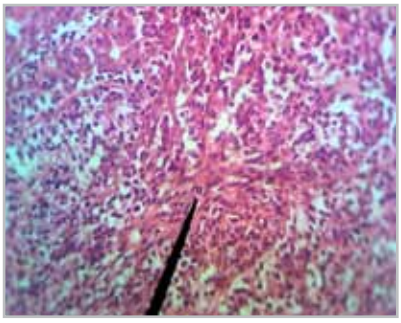

Figure 4: High power photomicrograph of the deep part of the tumor showing a mixture of round cells and atypical spindle cells with a pointer denoting a mitotic figure (H&E X 400)

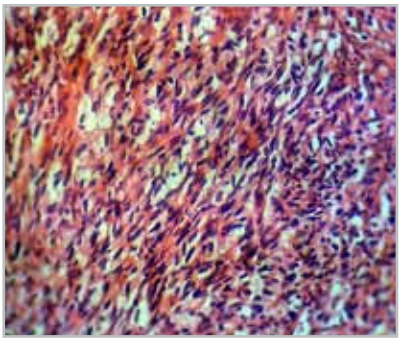

Figure 5: High power photomicrograph of the deep part of the tumor showing atypical spindle cells (H&E X400)

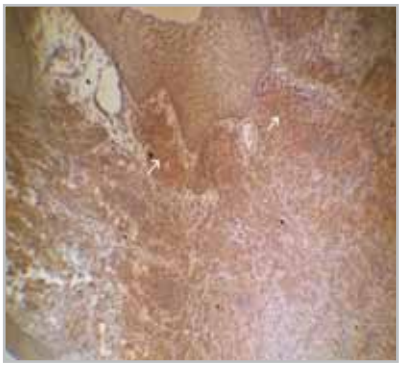

Figure 6: Positive Melan A immunostaining (arrows) (X100)

Discussion

Melanomas of the tongue uncommon and represent less than 2% of all oro-nasal melanoma cases (Chiu et al. 1996). Amelanotic melanomas are extremely rare lesions, comprising 2-8 % of all melanomas (Kao et al. 2001, Notaniet al. 2002). About thirty five cases of oral amelanotic reported in the oral cavity (Tanaka et al. 1994, Kao et al. 2001, Notaniet al. 2002, Kawasaki et al. 2011).Only two cases were found the tongue, the first was reported in a patient following autologous stem cell transplantation (Ben-Yosef et al. 1996), the other is of a spindle cell amelanotic melanoma in a 50 years old female (Kumar et al. 2012).

The 5 years survival rate of mucosal melanomas is only 5% (Notani et al. 2002), and in comparing the 3 years survival rates between melanotic and amelanotic melanomas; Nandaplanet al. (1998) found a significant difference indicating worse outcome in amelanotic melanomas which could be attributed to delay in diagnosis and the masquerading nature of amelanotic melanomas.

The histopathologic features of oral melanoma are identical to those of cutaneous melanoma. Atypical melanocytes are initially seen at the epithelial-connective tissue junction that proliferates toward the surface and laterally along the basal cell layer. Dysplastic melanocytes demonstrate increased cellular and nuclear size, pleomorphism, hyperchromatism, and scattered intracellular melanin deposits, which give the lesions their distinctive pigmentation. Melanoma has earned the reputation as the great masquerader; since sarcoma-like, epithelioid, or pleomorphic patterns may be seen(Bouquotet al. 2011). are composed of lesion cells that are poorly differentiated to the extent of no melanin pigment production, and lack of clinically evident mucosal discoloration (Tanaka et al. 1994, Kawasaki et al.2011).

The tumor is notorious for its ability to mimic a wide variety of other is difficult to differentiate from other undifferentiated lesions like lymphomas, spindle cell tumors or salivary gland tumors (Bouquotet al. 2011, Kawasaki et al. 2011), Therefore;immunohistochemical

staining is crucial definitive diagnosis and it was an invaluable adjunct in this case.Multiple available immunohistochemical markers concerning round and spindle cell tumors were employed to reach a diagnosis which was concluded once Melan –A positivity was detected. The standard melanoma immunohistochemical S-100 protein, HMB-45 and Melan-A/MART-1, the latter; Melan-A, is most valuablefor diagnosing melanocytic tumors, since it is more sensitive than HMB-45 (Busamet al. 1998, Wick et al. 2010, Kawasaki et al. 2011).

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References

Aguas SC, Quarracino MC, Lence AN, Tizeira HL. Primary melanoma of the oral cavity: Ten cases and review of 177 cases from literature. Med Oral Patol Oral Cir Bucal. 14 (6):265- 271, 2009.

Ben-Yosef R, Braverman I, Saah D, Nagler R, Shohat S, Or R, Nagler A. Mucosal melanoma following autologous stem cell transplantation for non-Hodgkin's lymphoma (NHL). Bone Marrow Transplant 18(5): 1017 1019, 1996.

Bouquot JE, Muller s, Niaks H. Lesions of the oral cavity. In: Gnep DR. Diagnostic surgical pathology of the head and neck. 2nd edition. Philadelphia: Saunders, 290 -292, 2009.

Busam KJ, Chen YT, Old LJ, et al. Expression of melan-A (MART1) in benign melanocytic nevi and primary cutaneous malignant melanoma. Am J SurgPathol 22: 976 -982, 1998.

Chiu NT, Weinstock MA. Melanoma of oronasal mucosa: population-based analysis of occurrence and mortality. Arch Otolaryngol Head Neck Surg. 122: 985 988, 1996.

Gu GM, Epstein JB, Morton TH Jr. Intraoral melanoma: Long-term follow-up and implication for dental clinicians. A case report and literature review. Oral Surg Oral Med Oral Pathol Oral RadiolEndod 96:404413, 2003.

Kao SY, Yang JC, Li WY, et al. Maxillary amelanotic melanoma: a case report. J Oral MaxillofacSurg 59: p 700–3, 2001.

Kawasaki G, Yanamoto S, Yoshitomi I, Mizuno A, Fujita S, Umeda M. Amelanotic melanoma of the mandible: A case report. Oral Sci Inter 8: 6063, 2011.

Kumar V, Shukla M, Goud U, Ravi DK, Kumar M, Pandey M: Spindle Cell Amelanotic Lesion of the Tongue: a Diagnostic and Therapeutic Challenge. Indian J Surj. DOI: 10.1007/s12262-012-0575-8, 2012.

Nandapalan V, Roland NJ, Helliwell TR, Williams EM, Hamilton JW, Jones AS. Mucosal melanoma of head and neck. ClinOtolaryngol Allied Sci 1998;23:107-16.

Notani K, Shindoh M, Yamazaki Y, Nakamura H, Watanabe M, Kogoh T, et al. Amelanotic malignant melanomas of the oral mucosa. Br J Oral Maxillofac Surg. 40(3): 195 -200, 2002.

Tanaka N, Amagasa T, Iwaki H, Shioda S, Takeda M, Ohashi K, et al. Oral malignant melanoma in Japan. Oral Surg Oral Med Oral Pathol 78:81 -90, 1994.

Türkmen A, Temel M, Bekerecioglu M. Primary mucosal malignant melanoma of the oral cavity, review. Eur J PlastSurg 34: 325 -329, 2011.

Wick MR. Immunohistology of Melanocytic Neoplasms. In: Dabbs DJ. Diagnostic immunohistochemistry. 3rd edition. Philadelphia: Saunders, 193 -195; 2010.

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