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RESEARCH ARTICLE

TONGUE MALIGNANT MELANOMA

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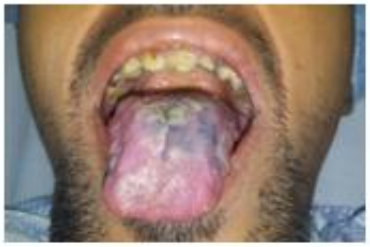
Abstract

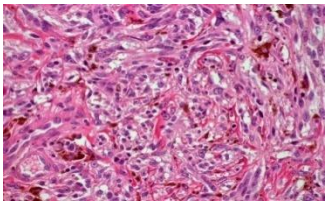
Case Report:-

A 30-year-old man presented with a 2-month history of numerous, flat to slightly raised, ill defined, non-tender, painless and purple lesions involving the dorsum of the tongue with scattered islands of leukoplakia.



A: Gross picture of the tongue showing multiple, flat to slightly elevated, non-tender, ill-defined, and whitish-purple lesions.

Patient had no other lesions within the oral cavity. Biopsy of the lesions showed malignant melanoma. Full oncological workup showed no evidence of regional or distant metastasis. Patient was managed with subtotal glossectomy, bilateral supraomohyoid neck dissections and reconstruction with a revascularized radial forearm free flap. Histopathological examination showed sheets of epithelioid and spindle-shaped malignant melanocytes.



B: Histopathological examination of tongue biopsy showing sheets of epithelioid and spindle-shaped malignant melanocytes (H&E stain, magnification power: 40x).

Immunohistochemical examination showed positive reactivity to S-100 and HMB-45 proteins (Figure 1D). The bilateral supraomohyoid neck dissections were negative for malignancy. Final histopathological diagnosis was

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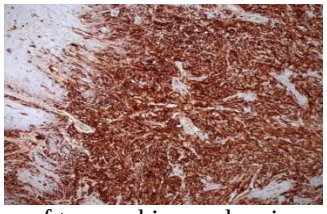
compatible with primary malignant melanoma of the tongue. Postoperatively, no adjuvant therapy was administered and patient had an uneventful recovery course. No recurrence was detected during a 12-month follow-up.



C: Immunohistochemical staining of tongue biopsy showing positivreactivity to S-100 protein (Magnification power: 40x).

Oral malignant melanoma (OMM) is an exceedingly uncommon neoplasm. Its reported incidence is approximately 1-2 cases per 10 million individuals per year.[1] Hard palate and maxillary gingiva are the two most frequent sites of involvement in primary OMM.[1]Primary malignant melanoma of tongue is exceptionally rare. As of 2012, less than 30 cases of primary malignant melanoma of the tongue have been reported in English literature.

D: Immunohistochemical staining of tongue showing positive. reactivity to HMB-45 protein.

Discussion:-

Primary OMM can originate from pre-existing melanocytic (pigmented) lesions or de novo (mostly) from malignant transformation and uncontrolled proliferation of neural crest-derived melanocytes that are normally situated in the basal layer of oral mucosa.[1]

Risk factors for development of OMM are poorly understood.[2]Poor oral hygiene, cigarette smoking, tobacco chewing, alcohol intake, sun exposure, dentures and other oral apparatuses have been assumed as potential etiological factors in the past. However, there has been no strong evidence to validate these assumptions, and etiology of oral melanoma remains largely unknown.[2] At present, almost all primary oral cavity (mucosal) melanomas are believed to originate in a de novo fashion.[1]

Clinical symptoms of malignant melanoma of tongue include: bleeding (most common presenting symptom), pain (occurs late in the course of disease) and melanotic pigmentation (present in almost one-third of patients).[2] Other oral symptoms may include: gingival discoloration/disfiguration, tooth mobility, tooth erosion, numbness, ulceration, irritation, dysphagia, dysphonia and breathing difficulty.

Histopathological and immunohistochemical examination provide the definitive diagnosis of OMM. Immunohistochemically, melanocytes typically stain positive for HMB-45, S-100 and Melan-A.[3] HMB-45 is more specific than S-100 protein. Melan-A is positive in nearly 80% of melanomas.

Surgical resection with at least 1.5 cm tumor-free margins, whenever technically feasible, is the gold standard of management in patients with OMM.[4] As lymph node metastasis is present in roughly 25% of patients at time of clinical diagnosis,[5] neck dissection is highly recommended.

Surgery can be utilized in conjunction with radiotherapy, chemotherapy or immunotherapy — although effectiveness of such therapeutic modalities is largely unclear.[6]

Prognosis of OMM, despite aggressive management, is extremely graving with an estimated 5-year survival rate of roughly 15%.[1] Plausible reasons include: (1) absent clinical signs and symptoms early in the course of disease, (2) delayed diagnosis, (3) anatomic restrictions to achieve radical surgical resection with tumor-negative margins, (4)

rich vascularity of oral cavity mucosal membranes and hence facilitating rapid hematogenous metastasis, and (5) increased propensity to recur locally (within 10-15 years), invade regional lymph nodes (25%) and metastasize distally (10%).[5,6] Long-term follow-up is highly recommended.

Conclusion:-

In conclusion, OMM of the tongue is an exceedingly uncommon, yet, highly aggressive neoplasm with an extremely graving prognosis. Diagnosis is often delayed and most patients present with advanced disease and regional lymph node invasions and/or distant metastases. Careful history taking, meticulous physical examination and early biopsy of pigmented and non-pigmented lesions suspicious for malignant melanoma of tongue are highly recommended. Immunohistochemical examination provides the definitive diagnosis of OMM. Early diagnosis and prompt appropriate management yield better prognosis

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