Case Report

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Malignant Melanoma: A Case Report with Three Years Survival Rate and Review of Literature

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ABSTRACT

Background: Mucosal melanoma, an entity of malignant melanoma is a rare disease among the head and neck cancers with poor prognosis and increased mortality rate. Definitive treatment from surgical to radiotherapy and chemotherapy has been a question of choice in this rare disease. Aggressive resection of the primary tumour with elective neck dissection and adjuvant therapy for prevention of local regional recurrence and metastasis has been a controversy till date.

Materials and Methods: The authors present a three year follow up report of a case of mucosal melanoma of the right side of palate. The paper also includes a review of literature of the currently available treatment options for the disease.

Results: In locally advanced mucosal melanoma, treatment with aggressive wide surgical resection, elective neck dissection of ipsilateral nodes, postoperative radiotherapy and chemotherapy offered good control of the disease.

Conclusion: Aggressive resection with adequate marginal clearance and elective neck dissection of ipsilateral nodes of N_0 neck along with adjuvant radiotherapy showed increased survival rate. Further, decreased late local regional recurrence and metastasis was observed.

Keywords: Mucosal Melanoma, Elective Neck Dissection, Aggressive Surgery, Postoperative radiation.

INTRODUCTION

Melanoma is a cancer arising from the malignant transformation of melanocytes. The pigment producing cells are embryologically derived from the pluripotent neural crest stem cells.Three subtypes of melanoma have been identified: cutaneous melanoma (the most common), mucosal melanoma and uveal melanoma. The primary function of melanocytes is pigmentation and protection of the skin and eyes against UV radiation. The presence of the cells in unexposed sites, such as mucous membranes, is not fully understood.However, the mucosal membrane melanocytes are susceptible to malignant transformation in a similar fashion to their cutaneous and uveal counterparts. Mucosal melanoma is the least common of the three melanoma subtypes, accounting for less than 1.5% of all melanomas. The incidence of mucosal melanoma varies with both gender and age. The

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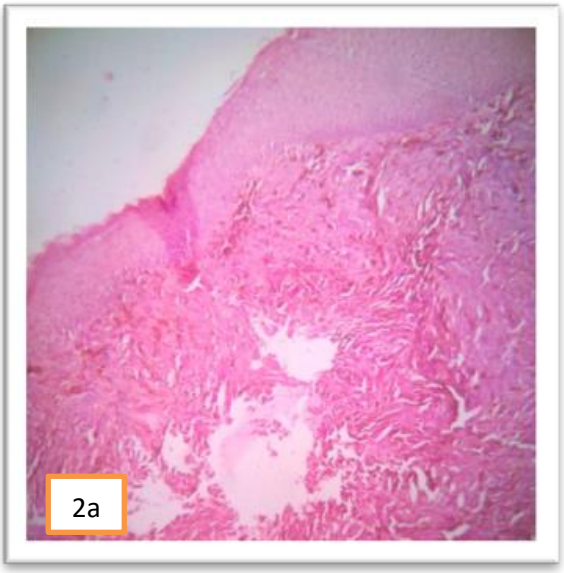
median age at diagnosis is 70, with the exception of oral cavity melanomas which tend to occur in younger patients.

Mucosal melanomas arise most often in the head and neck region, female genital tract and anorectal region. Risk factors for mucosal melanoma have not been clearly identified. Since the mucous membranes are not exposed to the sun, UV radiation has not been considered as an important aetiological factor. It has been reported that smoking is associated with a greater prevalence of pigmented oral lesions. Oral mucosal melanoma is thought to be preceded by oral melanosis in one third of the cases. However, a clear link to smoking has not been identified, particularly at other mucosal sites[1].

Head and neck mucosal melanomas account for 0.7% to 0.8% of all melanomas and less than 10% of head and neck melanomas. Although rare, the mucosal variant is more aggressive than the cutaneous and ocular variants. The knowledge regarding the head and neck mucosal melanomas have been mainly gained from the case series[2]

The authors report a case of the mucosal variant type with their three year survival rate, following a complex treatment.

Fig 1: Clinical picture of mucosal melanoma at the right side of posterior palate.



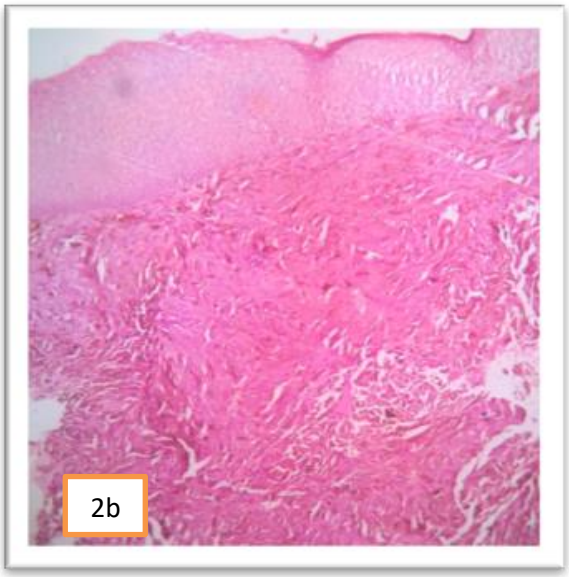


Fig 2a and b: Histopathological section showing stratified squamous epithelium and underlying connective tissue with numerous atypical melanocytes in the basilar portion of epithelium invading into the superficial lamina propria. atypical melanocytes appear as spindle shaped cells arranged in loosely aggregated cords with cytoplasm engaged with melanin pigment.

CASE REPORT

A 50 year old patient reported to the Department of Oral and Maxillofacial Surgery with a complaint of blackish discolouration over the right upper posterior teeth region with the history of pain and mild burning sensation, while taking hot and spicy

food for a duration of 2 months. The patient underwent incisional biopsy and was reported as Mucosal Melanoma.

CT Scan head and neck revealed the presence of the tumour involving the right posterior palate with mild erosion of the floor of maxillary sinus. Cervical lymph nodes were not found to be enlarged. As per the nodal staging, it was reported as Stage I Tumour confined to the primary site without positive cervical lymph nodes[3].

Surgical management for the patient comprised of aggressive partial maxillectomy with adequate marginal clearance, confirmation of margin free from tumour by frozen section and elective neck dissection of ipsilateral nodes. The patient developed a swelling on the left side of the neck one month after the procedure. Evaluation pointed towards metastatic contralateral neck lymph nodes and therefore, the second surgery was performed. The patient received external beam radiotherapy to total dose of 80Gy two months after the second surgery. Follow up after one year from the second surgery of contralateral neck dissection provided good control over the tumour spread and local regional metastases.

DISCUSSION

Observations from the present case report raised questions with regard to the role of aggressive surgical resection with an elective neck dissection on the control of tumour spread and local regional metastases. In the present report, the tumour was quite aggressive and in a duration of one month, the patient developed a painful neck swelling on the contralateral side without local relapse and distant metastases.

Taking support from the existing references, the patient was operated with elective neck dissection for N_0 neck. However, the occult tumour nature presented with lymph node metastases on the contralateral side. This situation presented the controversy of opting elective neck dissection with adequate marginal clearance of primary tumour for mucosal melanoma.Drainage patterns in the neck region were reported to be varied and a higher number of sentinel lymph nodes were observed by McMasters et al[4].

Preoperative lymphoscintigraphy could be considered for understanding the lymphatic drainage and predicting the occult metastases[5,6]. Nevertheless, elective neck dissection would improve the survival rate and prevent the occurence of local neck metastases.

Radiotherapy is usually not considered for mucosal melanoma since the tumour is Radioresistant[7,8]. In the present study, the patient received radiation after the contralateral neck dissection. Also,the contralateral node metastasis in one month aided the patient to go for adjuvant radiotherapy, thereby providing good tumour control and survival rate of the patient for more than three years. Literature review reported the improvement in loco regional control with post operative radiotherapy only for patients with early stage disease[9].

Local control was 57% and 71% with surgery and combination of surgery and adjuvant therapy, respectively[10]. In the present report, the patient had better survival rate with surgery and radiotherapy.

The authors recommend postoperative radiotherapy in case of advanced stage disease with positive surgical margins and pN1 with extracapsular extension[11]. Many investigators have recommended irradiation in the case of lymph nodes of 3cm in size or larger, recurrent disease or patient treated with elective neck dissection[8]. In comparison of malignant melanoma to other variant tumours, the authors suggested high dose per fractionation for macroscopic disease and standard fractionation for microscopic remnants. Tissues and organs targeted during irradiation were certain late complications[10,12]. With an approach of aggressive resection and elective neck dissection, in No neck with an adjuvant therapy warranted good tumour control. However, the conclusions have been based on one case reported and studying more cases would help the authors to declare the accepted modes of treatment.

CONCLUSIONS

Good tumour and locoregional metastases control was achieved after providing complex treatment (surgery and radiotherapy).

Proper preoperative diagnosis (Lymphnode Scintigraphy) Mucosal melanoma would be of help

in avoiding late local recurrence (In the present case – One month).

High incidence of lymph node metastases from literature studies warranted the elective neck dissection.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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