A Notorious Mimicker Nasal Melanoma: A Case Report

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ABSTRACT

Melanomas arising in the nasal cavity or paranasal sinus are rare and have a poor prognosis and is more aggressive than cutaneous counter part. The incidence rate reaches its peak when the patients are in the 5th to 8th decades of life, and the disease is slightly more common in males than females; age and sex do not affect the prognosis. We present a case with histologically deceiving features which was proven Malignant Melanoma by application of Immunohistochemistry. On sinoscopic examination, a mass noted of which incisional biopsy was obtained. Histologically, poorly differentiated Sinonasal carcinoma and Malignant Vascular Neoplasm was differential diagnosis.

On immunohistochemistry, strong expression of SOX-10, Melan-A, HMB-45 was observed and p63, CK-7, CK20, Synaptophysin, CD56, CD138, CD45, S100, Desmin, Myogenin were all non-immunoreactive. Thus Malignant Melanoma was final diagnosis.Awareness of melanoma mimickers is very important for clinicians in general, and pathologists in particular. Further immunohistochemistry should be utilized whenever neoplasm with grey zone histomorphology is encountered.

Keywords: Nasal melanoma; Immunohistochemistry; Tumor.

INTRODUCTION

Tumors arising from melanocytes, which are neuro-ectodermal derived cells located in the basal layers of the skin, skin adnexa, and some mucosal membranesare melanomas. Its regular occurrence sites are the head, neck, and lower extremities. They are common in these locations as these are areas exposed to daylight, which is one of the inclining factors.[1] A rare case of melanomas occurs in the nasal cavity or paranasal sinus. Such uncommon cases have underprivileged prognosis and are more aggressive than cutaneous counterpart. It is established that nasal cavity is more usually affected than paranasal sinuses, and maxillary antrum is more frequently involved than ethmoid sinuses.[2,3,4]

Mucosal melanomas are rare when it is compared to squamous cell carcinomas among the cancers that arise in nasal cavity and paranasal sinuses.[3] A single known risk factor is occupational exposure to formaldehyde. And, the malignant melanoma of the skin is caused mainly by repetitive exposure to sunlight.[5] When the patients are in the 5th to 8th decades of life, the rate of occurrence reaches to highest chance, with probability of incidence being slightly more common in males compared to females. Moreover it is found that age and sex of cases do not affect the prognosis.[4] This study presents a case with histologically deceiving features which was proven Malignant Melanoma by application of Immunohistochemistry.

CASE REPORT

A case of 43 year old gentleman of Mongolian ethnicity presented with nasal blockade and on and off epitaxis. CT Scan evaluation shows a heterogeneously enhancing soft tissue mass involving both nasal cavity measuring 76x57mm, including turbinates and choana. The mass is extended bilateral maxillary, sphenoid, ethmoidsinues along with left infraorbital and intracranialextension. CT Chest and abdomen were unremarkable. Onsinoscopic examination, a mass noted of which incisional biopsy was obtained.

On sinoscopic examination, a mass noted of which incisional biopsy was obtained. On histopathology examination, tumor cells arranged in nests, cords, dyscohesive small sheets. Individual cells have high nucleocytoplasmi ratio with round to oval, vesicular chromation, prominent nucleoli, scant to moderate eosinophilic cytoplasm. Few mitotic figures and patchy lymphocyte infiltration are seen. There was no evidence of melanin pigmentation and spindled cells. Histologically, poorly differentiated Sinonasal carcinoma and Malignant Vascular Neoplasm was differential diagnosis. On immunohistochemistry, strong expression of SOX-10, Melan-A, HMB-45 was observed and p63,CK-7,CK-20, Synaptophysin, CD56, CD138, CD45, S100,Desmin,Myogenin were all non-immunoreactive. Thus Malignant Melanoma was final diagnosis.

As the tumor was wide spread surgery was avoided and chemotherapy comprising Cisplatin, Vinblastin ,Dacarbazine and Thalidomide was introduced along with Radiotherapy.

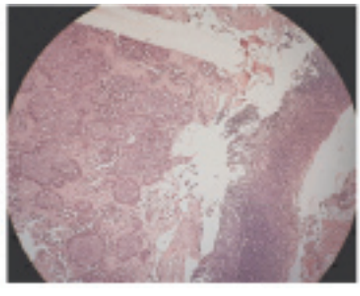

Fig 1: Low Power View of Nasal tissue with respiratory lining with underneath lymphoid aggregated, deeper nests, lobules, loose dyscohesive nests of tumor cells (H&E,10x)

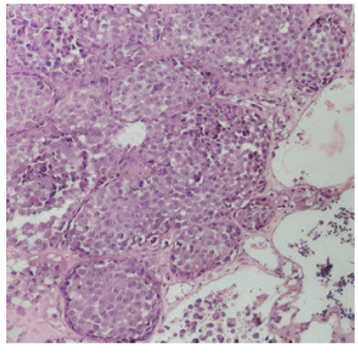

Fig 2: Tumor cells in nest, lobules with round to oval cells, fine chromatin, distinct prominent nucleoli, and scant cytoplasm. Dyscohesion noted.(H&E, 40x)

The rate of occurrence for Primary Head and Neck Melanoma is not much and settles for 0.8–3.7% of all melanomas and 0.03% of all cancers. Furthermore, Head and NecK Mucosal Melanomas (HNMM) accounts for 4% of head and neck melanomas and other 4% for nasopharyngeal neoplasms. Published literature suggests that the annual incidence of Nasal Melanoma was about 0.3/1,000,000.6. Nasal obstruction, epistaxis, swelling of the nose, and proptosis are presenting indications of Melanoma.[7] Other symptoms include mass at the vestibule, epiphora and diplopia. And, normal age at which it is diagnosed differs between 5th to 8th decade of life and for the case of our consideration age was only 43 years.

It is notable to pathologists that melanoma is "the great mimicker" and can appear as though anything. Absence of melanin add more trouble in making the diagnosis of malignant melanoma in spite of displaying histological variety. Besides,melanomas can display immunophenotypic abnormalities, for example, epithelial and neuro endocrine markers, is now established through various published works which may cause further challenges in diagnosis.[8] Differential findings from investigation resembles olfactory neuroblastoma, lymphoma and plasmocytoma,. Other result oriented investigations also resembles rhabdomyosarcoma, small cell undifferentiated carcinoma and other small cell neoplasms.[9]

Immunohistochemical stains (S-100 protein, monoclonal antibody HMB- 45) greatly facilitate the diagnosis, especially in amelanotic melanoma as in our case. These tumor don't show staining for epithelial membrane antigen and cytokeratin.[9] Genetically, BRAF, C-KIT and NRAS are found in skin Melanoma. However, BRAF and C-KIT mutations were exceptionally uncommon in mucosal melanoma, while NRAS mutations were fundamentally more frequent.[10] Not with standing aggressive treatment, including medical procedures like surgery, radiation & adjuvant therapy, the 5-year survival rate is 20–30%. Also, it is notable here that generally amelanotic melanoma is related with dismal prognosis.[11]

CONCLUSION

Awareness of melanoma mimickers is very important for clinicians in general, and pathologists in particular. Further immunohistochemistry should be utilized whenever neoplasm with grey zone histomorphology is encountered.

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