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Case Report

Malignant melanoma of the nasal cavity - A case report

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ABSTRACT

Malignant melanoma is a tumour of melanocytes and it rarely develops in the mucous membranes. Rhinosinusal mucosal melanoma is reported in less than 1 percent of all melanic tumors and in 2–8 percent of all cancers developed in the nasal fossae and sinuses. Due to non-specific symptoms and a high degree of metastasis, patients come for a medical expertise in advanced stages of the disease, which is leading to a poor prognosis. The average five-year survival is 20–30percent. We report a case of malignant melanoma in the nasal cavity in a 40 year old male. Histopathological & immunohistochemical studies confirmed the diagnosis of malignant melanoma.

KEYWORDS: Malignant melanoma, nasal cavity, rhinosinusal mucosa, immunohistochemistry.

INTRODUCTION

The first case of melanoma in the rhinosinusal mucosa was reported by Lucke in 1869 and has since been reported in less than 1 percent of the total melanic tumors and in 2 -8 percent of all neoplasms developed in the nasal fossae and sinuses [1]. Melanomas developing in the nasal cavity or paranasal sinuses are rare and have a poor prognosis [2].Primary melanoma of the head and neck represents 25–30 percent of all melanomas [3].

Nasal cavity is more frequently affected than the paranasal sinuses and the maxillary sinuses are more frequently involved than the ethmoid sinuses. Peak incidence is between the fifth and eighth decade and is slightly more common in men than in women. Age and sex do not affect prognosis. Its clinical features are nonspecific, which frequently cause delays in diagnosis. Prognosis is always poor due to local recurrence, local nodal involvement, and distant organ metastasis occurring months or years after the initial diagnosis[4 &5].

CASE REPORT

We report the case of a 40 -year-old patient who presented with growth in the right nasal cavity since 3 months with a complaints of epistaxis, pain & difficulty in breathing. On examination, anterior rhinoscopy revealed a grey white intranasal polypoidal mass along the whole length of the right nasal cavity (septum, turbinates, floor, ceiling). Computer-tomography examination (CT-contrast) **:** Revealed a tissue mass in the right nasal fossa of 31.5/13 mm axially, with heterogeneous contrast capture that deformed the nasal fossa and produced its obstruction, without osteolysis and excluded the presence of any processes of replacement of space at the cerebral level.

Histopathology report *(Figure no 1)*: Several section studied from excision biopsy showed tumour cells predominantly of epitheliod variety arranged in nests & sheets. These tumor cells were pleomorphic with increased N:C ratio, vesicular to pleomorphic nuclei with prominent eosinophilic nucleoli. Also seen were binucleated & bizarre forms of tumour cells. There was heavy melanin pigment deposition inside & outside these tumour cells. **Immunohistochemistry report (*Figure no 2,3,4*):** Showing moderate intensity positivity for immune markers-HMB-45, S-100 and Melan-A within the tumor.

Figure 1: Rhinosinusal mucosa with pleomorphic epithelioid cells (H &E 400X)

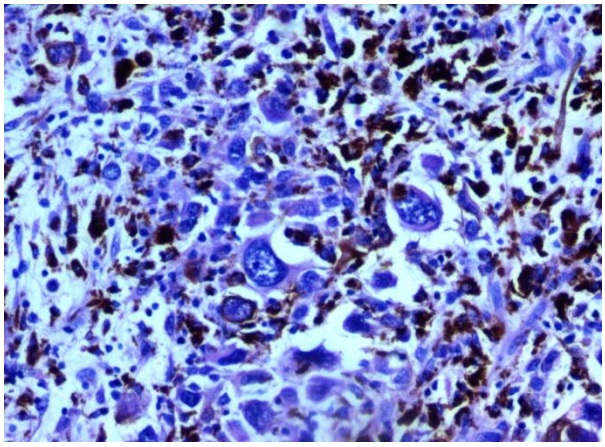


Figure 2 : Moderate –intensity positive immunostaining within the tumor for HMB-45

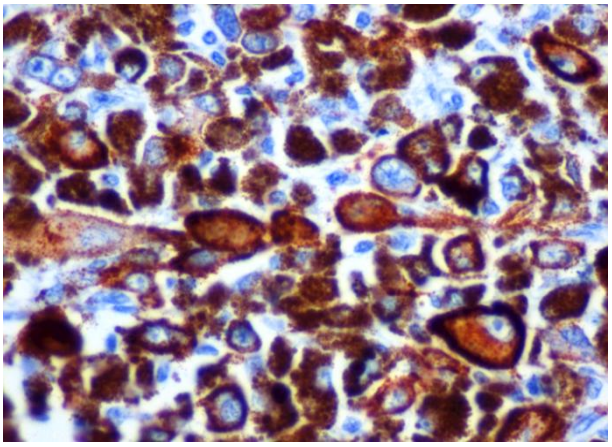


Figure 3: Moderate –intensity positive immunos within the tumor for S-100

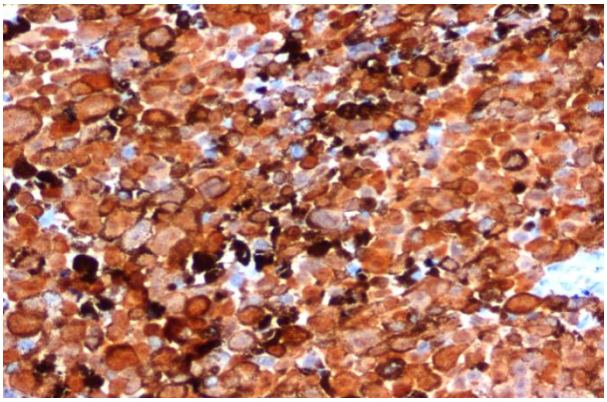
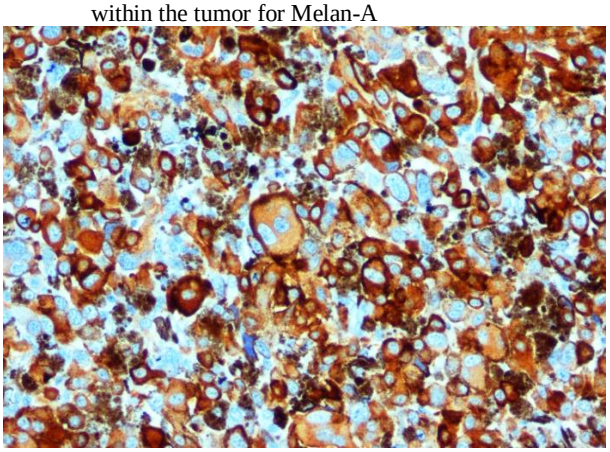


Figure 4 : Moderate –intensity positive immunostaining within the tumor for Melan-A



DISCUSSION

Melanomas are tumors arising from melanocytes which are neuroectodermally-derived cells located in the basal layers of skin & skin adnexas and some of the mucosal membrane. Common sites for melanomas are the head, neck and lower extremities as they are exposed to sunlight, which is one of the predisposing factors. Less frequent sites are the oral and genital mucosa, nail bed, conjunctiva, orbit, esophagus, nasal or nasopharyngeal mucosa and leptomeninges [6].

Mucosal melanoma of the nasal cavity and paranasal sinuses is rarely encountered in routine ENT practice -1.3 percent of all malignant melanomas [7]. Histological diagnosis of melanoma presents several challenges. A study published in 2002 showed that the analysis of sections stained with Hematoxylin–Eosin (H&E) had a specificity of 100 percent and a sensitivity of 59 percent [8]. The cytomorphological features of mucosal malignant melanoma includes epithelioid & spindle cells. Tumors with mixed epithelioid & spindle cells are frequently seen. Because of this cytological variation & limited biopsy obscured by necrosis, H&E stained sections is not sufficient for differential diagnosis, the immunohistochemical examination being necessary in these cases to determine the phenotype of proliferate tumor cells.

Malignant melanoma show strong cytoplasmic positivity for HMB-45 in the majority of cases (65–95 percent),with the proportion of positive tumor cells ranging from a few to 100percent [9]. The positivity for HMB-45 is seen in almost all types of primary and metastatic melanoma including amelanotic melanoma, spindle cell melanoma and acral lentiginous melanoma. S-100 is a sensitive protein in melanomas, but nonspecific, while HMB-45, monoclonal antibody derived from extracts of melanoma, is more specific, but can occasionally be detected in carcinoma cells[10]. For cases in which staining for these two markers give ambiguous results, specific melanoma markers, known as Melan-A is usually used. Melan-A has proven to be very specific in differentiating melanoma from other malignancies such as sarcomas, plasmacytomas and carcinomas[11].

CONCLUSION

A high index of suspicion has been considered in evaluating a rhinosinusal tumor, especially when it was associated with epistaxis or unilateral nasal obstruction. ENT examination, completed with endoscopic examination and CT scan explore raised the suspicion of malignant melanoma of the nasal cavity. Correct diagnosis can be made by histopathology and immunohistochemistry examinations.

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