Malignant melanoma of the nasal mucosa

Nishtha Anand, Santosh Kumar Swain*

Department of Otorhinolaryngology, IMS and SUM Hospital, Siksha “O” Anusandhan University, K8, Kalinganagar, Bhubaneswar-751003, Odisha, India

Article History:
Received on: 29 Sep 2020
Revised on: 24 Oct 2020
Accepted on: 29 Oct 2020

Keywords:
Malignant Melanoma, Nasal Cavity, Neuroectodermal Cells

ABSTRACT

Nose’s Paranasal sinus & malignant melanoma are rarely seen, bold tumor with a prevalence rates of 0.68 percent across every malignant tumor. The neuroectodermal cells which are termed as Melanomas are found in skin’s base layer, iris’s vascular intraocular coat, skin adnexa, & infrequently into outer covering of mucous. Blockage feeling of nose & bleeding from the nose are the symptoms which are most commonly reported, however patient may have symptoms that are nonspecific, leading to a delay in diagnosis which results in appropriate prediction of treatment’s outcome. This study defines a 70 years female with the history of nose blockage feeling. Physicians suggest performing Nose’s CT scan, in which they came to know that large polypoidal portion in right nostril, extending to the nasopharynx, and eroded part of the sinus wall, septum and right medial pterygoid plate. Immunochemical study done revealed positive results for S100, vimentin, & HMB-45, which made the outcome suitable for tumor. An individual suffering from this will have no recurrence.

*Corresponding Author
Name: Santosh Kumar Swain
Phone: +91-9556524887
Email: santoshvoltaire@yahoo.co.in

ISSN: 0975-7538
DOI: https://doi.org/10.26452/ijrps.v11iSPL4.4240

INTRODUCTION

Melanocytes produces tumors which are known as Melanomas are neuroectodermal related cells found in skin adnexes, base layers of skin, iris’s vascular intraocular coat & sometimes membranes of oral mucosa. Specific melanomalous locations are eyes, neck zone & lower limbs because such portions were subjected to sunlight, that is among predisposing aspects. Mucous membrane nail fields, conjunctive, ring, esophagus, vagina, respiratory tract & leptomeninges are less common sites. Cases of sinonasal tumors (First described by Lucke in 1869) account for less than 1% of all melanomas (Mendenhall et al., 2005) and less than 5% of all sinonasal tract neoplasm. The prevalence of tumors of neck & head ranges 0.5% - 5%, & Malena typically impact persons around 60 & 80 years of age; males are slightly favored, but neither age nor gender determine prediction of treatment’s outcome (Snow and van der Waal, 1986). Much prominent mucous tumor locations in respiratory tract situated at upper side are the mucous membrane, nostrils and sinuses of paired nasals, in this range of frequencies (Perales et al., 1992).

All basic nose’s mucous & sinus tumor contribute to only few percentages of melanoma. The commonest site affected mid line support structure of nose followed along with its small interior structure of nose that cleans & humidify air which are further passed into lungs. Most clinical manifestations corresponds to the same that are found in other tumors, blockage feeling of nose, bleeding (Perales et al., 1992) and enlargement of the nasal volume (Rosales et al., 1992). The most specific characteristic feature of the melanomas is that its course cannot
be predicted. In some cases melanoma can have rapid dissemination; in several different instances a catastrophic recurrence can occur after 6 yrs or 10 yrs of basic stage of treatment (Holdcraft and Gallagher, 1969; Pérez et al., 1997). In the last three decades some risk factors have been identified for skin melanoma such as long exposure to sunlight, the type and number of melanocytic nevi and history of melanoma in family. To cure the tumor, major metastatic neck & head (primary skin) tumor should be regarded as quite rarely.

Metastasized to mucous membranes of the aerosoidal top passage, just 0.7 to 9.4 percent of patients having tumor in nostrils passage as well as lower portion of the tongue are the most often metastasized locations. Such tumors typically occur between 3 & 8 years following an original skin lesion, & generally, individual has already spread metastases before they emerge in the mucosa of neck & head (6). Large radiation surgery gives the strongest proclamation (6). Approximately 42% of the clinical relapse in nostril’s passage, 33% in the pharynx & 26% in mouth is the most common care relapse. Survival rates are relatively less, with only six to 16% of persons diagnosed for six years. Despite a seemingly appropriate basic treatment, local recurrence’s higher rate requires much radical ablation in localized & specific portions (3).

The case report

A 70 years old female presented at IMS and SUM hospital in January 2020 with blockage feeling of nose (right nostril > left nostril) associated with watery discharge from right eye. Physicians suggest performing Nose’s CT scan, in which they came to know that large polyposidal portion in right nostril extending to the nasopharynx and abutting posterior end of contralateral inferior turbinate Figure 1.

The lesion is causing patchy erosion of medial wall of maxillary sinus and nasal septum, extending to contralateral nasal cavity abutting left middle turbinate. Thinning of ipsilateral side of hard palate and eroding part of right medial pterygoid plate. Gross dimension measures 2.7x6.9x4.2 cm. The neck’s computered tomography scan revealed that there was absence of lymph node. An individual was in phase cT5aN0M1. General condition of the patient was good, with no history of weakness, loss of appetite or weight loss. Broad surgical excision of the mass was done and was sent for histopathological assessment. The histopathological report revealed pseudostratified ciliated columnar epithelium, metaplastic squamous epithelium with extensive ulceration covered with necrotic inflammatory exudates Figure 2.

![Figure 1: Paranasal sinus's CT scan which shows radiopaque mass in the right side.](image1)

![Figure 2: Histopathological picture of the malignant melanoma.](image2)

There is presence of neoplastic components of polygonal to spindle shaped cells arranged in sheets and filled with melanin pigments. Immunohistochemistry Figure 3 showed positive results for, HMB45, S100, & vimentin which were compatible with malignant melanoma.

![Figure 3: Immunohistochemistry showing positivity with S-100.](image3)

Staging of TNM in Sinonasal Melanoma Cases

**Basic Tumour (T)**

1. **T-x**: evaluation of basic tumor not possible.
2. **T-3**: disease associated with mucous tumour is Limited.
3. T-4a: Changed disease: cartilage, the tumor contains profoundly soft tissue, bone or the skin excessively.

4. T-4b: Extremely severe disease: brain tumor, strong mother, brain foundation, nerves of cranium (9, 10, 11, & 12), Room of masticator, spinal cord, vertebral canal or structure of mediastine.

Local Lymph Nodes (N)

1. N-x: evaluation of local lymph nodes not possible.
2. N-0: absence of metastases of nodes metastases.
3. N-1: signs metastases of nodes metastases.

Distant Metastases (M)

1. M-0: absence of distant metastases.
2. M-1: signs of distant metastases.

RESULTS AND DISCUSSION

Primary melanomas located within neck & head region considered for 25-30% of every tumor. Melanomas are tumors that do not have a certain etiology or any risk factors (3). Due to their intracavitary location these tumors are difficult to diagnose. The initial symptoms of blockage feeling of nose is subjective and makes it difficult to be assessed by the practitioner. A plain x-ray of the paranasal sinuses might show some blurring or opacity which can be misdiagnosed as sinusitis (Goldsmith, 1979). Sinonasal malignant melanoma is an exceptionally unusual & violent tumor rather than its dermal equivalent. Nose malignant mucous tumor is neural crest’s tumor variant (Tiwari et al., 2005).

In the nostril’s passages, suspicious sinuses are more prominent than those affected, & the maxillary mesentery more often than the ethmoid sinuses are concerned. Mental, vaginal, vaginal, ring, circle, oesophagus, mucosa, & leptomeninge are less popular places. Bridger et al., reported that The nostrils passage begins with 80 per cent melanomas & the neck & head area with 20 per cent of paranasal sinuses. The prevalence of the disorder of both genders is nearly similar. The disorder impacts mostly the 70-year age group (Sanderson and Gaylis, 2007). Clinical presentation depends on the site and size of abrasion. Nasal blockages, epistaxis, inflammation of the face, vestibule mass, epiphoras, proptosis & diplopia are all causing signs. (Sanderson and Gaylis, 2007). Nose bleeding & blockage are 2 signs of this disease that are found in majority of the patients (Dwivedi et al., 2008; Dauer et al., 2008).

A clinically evident mucosal malignant melanoma is based on its location & remote metastases are common if metastasis of the lymphatic node in neck occurs close later. (Carretero et al., 2001) Paranasal sinus & Nostril’s passage tumor are uncommon & incorrectly expected (Huang et al., 2007). For metastasis, Bone, lung, brain & lever were common locations. (Sanderson and Gaylis, 2007) 6 yr rate of survival for patient having mucous tumor was found between 20% and 46% (Liétin et al., 2010).

For making diagnosis incisional biopsy and CT scan are required. Although a certain histological trend occurs, amelanotic tumors are a typical form of mucosa, so HMB45 & S-100 immunohistochemistry is important in these cases. Amelanotic mucous tumors also exists, and abrasion inside nostrils is presumed, whether blistered or not. “Treatment was the foundation of treatment although it is challenging to obtain large free resection margins. Unresectable mass cases or others who may not respond to anesthesia should be treated as definitive diagnosis with radiation therapy alone, although for those with chronic illness treatment must be allocated. Researchers showed utility of concurrent chemoradiotherapy in squamboid tumors in neck & head, suggesting the potential utilization in mucous tumor with specifically concurrent radiotherapy. Primary mucous tumor in nostrils is aggressive and very rarely occurring tumor of poor prognosis.

Melanomas present as a bluish black, mass of pale yellow color &, sometimes for translucent polyloid masses of amelanotic tumors when NSE examination is done via anterior rhinoscopy and fibre optic nasolaryngoscopy. Metastasis involving neck nodes occurs in 10-50% of patients. Treatment depend upon only immunohistochemistry. Primary treatment comprise resection of the tumor surgically. Due to low incidence of neck nodal metastasis dissection prophylactically (N0) was usually not recommended. Despite aggressive surgery the chances of local recurrences are 29-79%. As per some authors, for controlling locally, radiotherapy has been suggested. Most commonly used chemotherapeutic agents are actinomycin D, interferon and cisplatin, which are reserved for the cases in which surgery is contraindicated or in cases of palliative therapy (Cheng et al., 2007). Other possible options for immunotherapy are interferon, interleukin 2 and bacillus Calmette-Guérin. Some patient also showed improvement after chemotherapy and neoadjuvant radiotherapy. Sinonasal melanoma because of its aggressive nature and delayed diag-
nosis has a poorer prognosis. The average life span of majority of patients ranges from few months to 3 years, despite surgical treatment because of the rapid dissemination of the disease (Guimarães et al., 2003). However, in this case report the patient presented with advanced disease; but the CNS framework aren’t involved. Confuting statistical data, individual suffering from this disease still stays in good health, by absence of recurrence/metastasis till date.

CONCLUSIONS

Malignant melanoma of nasal mucosa has been most commonly recognized with nasal obstruction, epistaxis and back drip. The disorder cause nasal obstruction leading to swelling, headache and nose deformity, ultimately affecting patients quality of life. The neoplastic paranasal sinuses can remain asymptomatic until other body tissues such as brain, arteries and orbits are affected. The practice of taking histological biopsy can cause dissemination of tumor cells making biopsy as the only method for accurate identification of melanomas. The present case study discusses pathological manifestations of the disorder, explaining characteristic observations that can help in diagnosis. The disorder is extremely rare and it is need of the hour to develop diagnosis methods helpful in differentiating malignant melanomas of nose and paranasal sinuses. The study strengthens the idea that diagnosis of malignant melanoma should be borne in mind by pathologist, to be aware of this unusual entity in the nasal cavity to arrive at an accurate diagnosis.

ACKNOWLEDGEMENT

The authors would like to acknowledge authorities of Department of Otorhinolaryngology, IMS and SUM hospital, Siksha “O” Anusandhan University for providing facilities required for the research. The patients consent as written and signed format has been obtained for publication of the case.

Funding Support

The authors declare that they have no funding support for this study.

Conflict of Interest

The authors declare that they have no conflict of interest for this study.

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