



## A case of Esthesioneuroblastoma in a 22 years old male patient

<b>Subhadip Das</b>	DNB PGT, Department of Radiation Oncology, Chittaranjan National Cancer Institute, Kolkata
<b>Saptarshi Banerjee</b>	Senior Resident, Department of Radiation Oncology, Chittaranjan National Cancer Institute, Kolkata
<b>Sanjoy Roy</b>	Specialist, Department of Radiation Oncology, Chittaranjan National Cancer Institute, Kolkata
<b>Debarshi Lahiri</b>	Specialist, Department of Radiation Oncology, Chittaranjan National Cancer Institute, Kolkata

### ABSTRACT

*Olfactory neuroblastoma is an uncommon malignant tumor of sinonasal tract arising from the olfactory neuroepithelium. Based on the reports in the literature, approximately 1,200 cases of esthesioneuroblastoma (ENB) have been identified since 1924. ENB has an estimated incidence of 4 cases per 10 million individuals and accounts for approximately 5% of all sinonasal tumors. In our case, a 22 years old male patient presented with symptoms of nasal blockage, epiphora etc. On imaging of paranasal sinuses it turned out a case of tumor arising from right nasal cavity and maxillary sinus. It was resected totally and on histopathological examination, it was diagnosed as a case of olfactory neuroblastoma or esthesioneuroblastoma. Afterwards, the patient was treated with adjuvant external beam radiotherapy.*

**KEYWORDS :** esthesioneuroblastoma, sinonasal mass, rosette formation

### INTRODUCTION

Based on the reports in the literature, approximately 1,200 cases of esthesioneuroblastoma (ENB) have been identified since 1924. Interestingly, 80% of these have been identified in the last 25 years. However, the current data set cannot distinguish between a rising incidence and better recognition of the disease. ENB has an estimated incidence of 4 cases per 10 million individuals.<sup>1</sup> Olfactory neuroblastoma is an uncommon malignant neoplasm, representing 2-3 % of sinonasal tract malignancies.<sup>2</sup> It is a malignant neuroectodermal neoplasm arising from the olfactory neuroepithelium found in the upper 1/3 to 1/2 of the nasal septum, the cribriform plate and the superior medial surface of the superior turbinate.<sup>3</sup>

### CASE STUDY

A 22 years old male patient presented with history of nasal blockage, epiphora, anosmia and frequent headache. On CT scan of paranasal sinuses, it turned out a case of tumor arising from right nasal cavity and maxillary sinus.

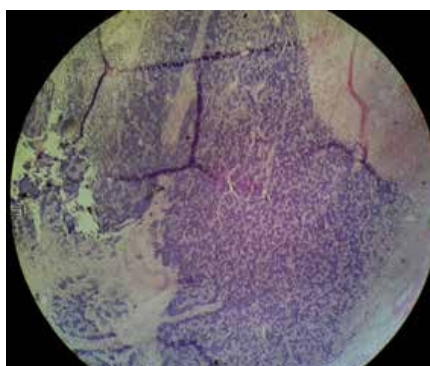


**Fig 2: Coronal view of CT PNS showing right maxillary cavity mass lesion**

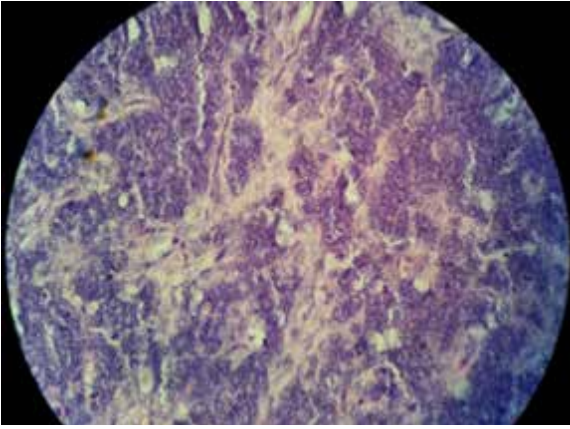
It was resected totally and sent for histopathological examination. HPE revealed section proliferation of small round cell, rosette formation in a fibrovascular stromal back-up.



**Fig 1: Axial View of CT PNS showing right maxillary cavity mass lesion**



**Fig 3: Microscopic view (10X ) of Resected mass**



**Fig 4: Microscopic view (40X ) of Resected mass**

It was diagnosed as a case of olfactory neuroblastoma or esthesioneuroblastoma. Afterwards, the patient was treated with adjuvant external beam radiotherapy.

#### **DISCUSSION:**

Olfactory neuroblastoma is an uncommon malignant neoplasm, representing 2-3 % of sinonasal tract tumors.<sup>1</sup> These tumors arise from the olfactory neuroepithelium. Which extends from the roof of the nose to the area of the superior turbinate and portion of the nasal septum.<sup>4</sup> There is no gender predilection.<sup>3</sup> Some authors report a male to female ratio of 2:1.<sup>5</sup> It occurs in all age groups with a bimodal peak in the 2<sup>nd</sup> and 6<sup>th</sup> decade.<sup>6</sup>

The usual clinical symptoms are unilateral nasal obstruction, epistaxis, anosmia, headache, pain and ocular disturbances.<sup>3</sup> ENB has a tendency to spread submucosally to involve the paranasal sinuses, nasal cavity and other structures like oral cavity, orbits and the brain.<sup>5</sup> In our case, a 22 years old male patient presented with history of nasal blockage, epiphora, anosmia, and frequent headache. CT scan of paranasal sinuses revealed a tumor, arising from right nasal cavity and maxillary sinus. It was resected totally and sent for histopathological examination. It was diagnosed as a case of olfactory neuroblastoma or esthesioneuroblastoma. Afterwards, the patient was treated with adjuvant external beam radiotherapy.

#### **REFERENCES**

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