*International Journal of Health Sciences and Research*
*[Indexed, Peer-Reviewed Journal]*
*Volume 15; Issue: 5; May 2025*
*Website: www.ijhsr.org*
*Case Series* *ISSN: 2249-9571*

# A Case Series Study of Nasopharyngeal Carcinoma Cases with Uncommon Presentations

**Sayantan Rudrapal[1], Binay Debbarma[2], Sunmesh Gopani[3], Sreepathy PT[4]**

[1]Senior Resident, Department of Otorhinolaryngology,
[2]Assistant Professor, Department of Otorhinolaryngology,
[3]Junior Resident, Department of Otorhinolaryngology,
[4]Junior Resident, Department of Otorhinolaryngology
Agartala Government Medical College, Tripura University, Agartala, Tripura

Corresponding Author: Sayantan Rudrapal

**DOI: https://doi.org/10.52403/ijhsr.20250524**

## ABSTRACT

Nasopharyngeal carcinoma (NPC) is a malignancy of nasopharynx with a distinct geographical and epidemiological distribution mainly seen in Southeast Part of China and North Eastern region of India, commonly etiological factors of Epstein-Barr virus (EBV) infection and certain food habits also noted. patients presenting with atypical presentations which leads to delay and dilemma in diagnosis of patients of NPC. While typical presentations include bilateral jugular lymphadenopathy, nasal obstruction, and epistaxis leads to easy diagnose and rare and atypical manifestations can pose diagnostic challenges, leading to delays in diagnosis and treatment. This case series study highlights unusual presentations of NPC, including paraneoplastic syndromes, bilateral posterior triangle group of lymph nodes, cranial nerve palsies, and metastatic patterns, both local and distant, that deviate from the normal presentations. By examining these cases, we aim to raise awareness among clinicians about the diverse clinical spectrum of NPC, emphasizing the importance of maintaining a high index of suspicion in atypical scenarios. Early diagnosis and intervention are vital steps to improve outcomes in these rare presentations.

***Keywords:*** NPC, Nasopharynx, carcinoma, rare cases, diagnostic challenges, uncommon presentations, early diagnosis

## INTRODUCTION

Nasopharyngeal carcinoma (NPC) is a unique epithelial malignancy with a predilection for the nasopharynx, particularly the pharyngeal recess (fossa of Rosenmüller). It exhibits a striking geographical distribution, with high prevalence in Southeast Asia, North Africa, and the Arctic regions. The disease is strongly associated with EBV infection, genetic predisposition, and environmental factors such as salted fish consumption. Clinically, NPC often presents with symptoms related to local tumor invasion, including nasal obstruction, epistaxis, hearing loss, and cervical lymphadenopathy. However, in a subset of patients, the disease manifests in rare and atypical ways, complicating diagnosis and management.

These unusual presentations may include paraneoplastic syndromes, such as dermatomyositis or hypertrophic osteoarthropathy, isolated cranial nerve palsies, or distant metastases to uncommon

sites like the bone marrow or skin. Such cases often lead to diagnostic delays, as the initial symptoms may not immediately suggest NPC. This case series explores several instances of NPC with rare clinical features, underscoring the need for heightened clinical vigilance and a multidisciplinary approach to diagnosis. By shedding light on these atypical presentations, we aim to enhance early detection and improve patient outcomes in this challenging subset of NPC cases. This case series study includes five atypical cases of nasopharyngeal carcinoma with their descriptions are as follows.

## CASE SERIES

### CASE 1

A 20yr year old female (figure 1) presented with a right preauricular swelling for 7monthes with gradually increasing size that did not get cured with conservative management. FNAC was done from the swelling which was suggestive of " lymphoepithelial lesion of right parotid gland " which led as to confusion.

So the swelling was excised (figure 2) suspecting it as preauricular cyst with recurrent infection but which surprisingly on HPE it came out as metastatic undifferentiated squamous cell carcinoma with IHC marker positive for Cytokeratin.

Then CECT PNS (figure 3 & 4) was done that revealed a large nasopharyngeal mass (3.98×3.45×4.54) cm that extended to base of skull (at right) extending to temporal lobe destroying right medial pterygoid plate & right greater wing of sphenoid, downwards up to Right lateral pharyngeal wall. Despite such an extensive extension there was no relative symptoms. After the mass in the nasopharynx was seen on radiology then only Diagnostic nasal Endoscopy (DNE) was done and punch biopsy taken from the right nasopharyngeal mass that was reported on HPE finding as to be Squamous cell carcinoma

Patient was sent to for Chemotherapy and Radiotherapy Consideration. She is received neoadjuvant Chemoradiation therapy. She got 70 Gray of Radiotherapy and 6 cycles of Chemotherapy (5-FU & cisplatin). She has been followed up every 3-4 month at our ENT OPD and advised to perform CECT Neck every 6 month to rule out risk of recurrence. For the last 1year patient is disease free.

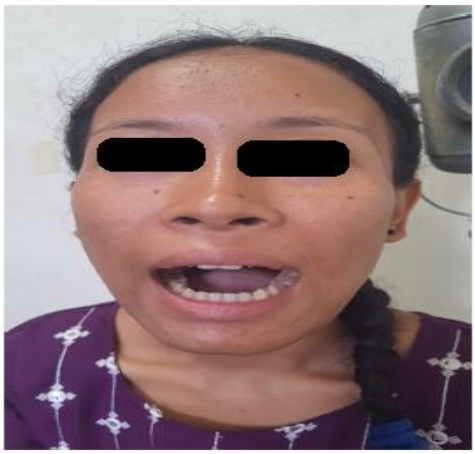

**figure 1: patient with mild trismus**

**figure 2: excised pre auricular swelling**

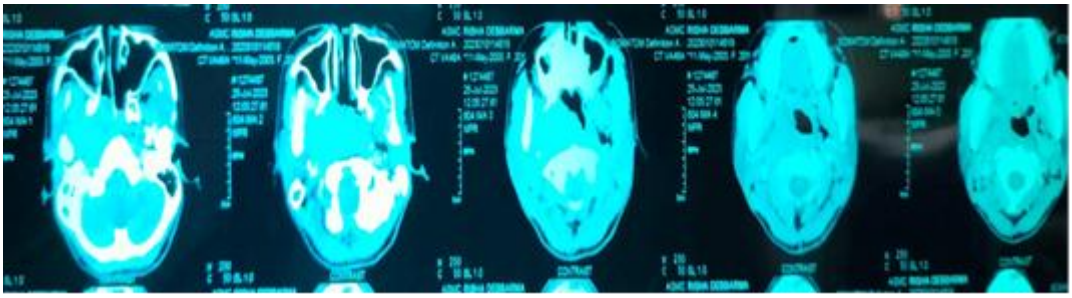

**figure 3: CECT PNS (axial view) of the patient**

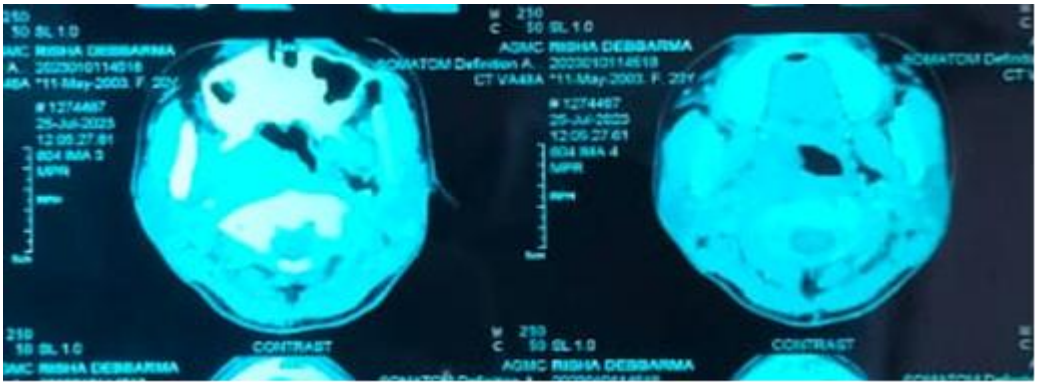

**figure 4: CECT PNS (axial view) showing right nasopharyngeal mass**

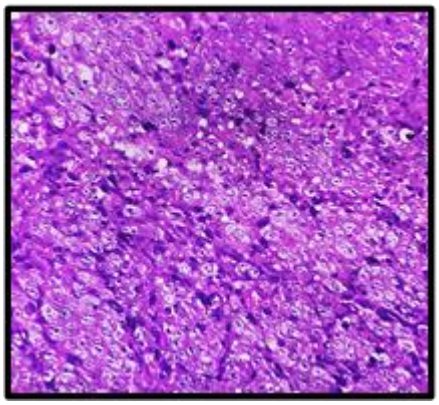

**Figure 5: pictomicrograph of HPE of excised mass**

**CASE 2**

A 42-year-old male presented with Bleeding from nose since 8-9month with associated nasal Block. There in associated history of nasal Blockage. Patient underwent a minor salivary gland excision 8-9 years back. On clinical examination a mass is seen behind the soft palate through oral cavity hanging from above. No neck nodes were palpable clinically.

DNE was done which revealed a mass in the Nasopharynx from where the Punch Biopsy was taken whose HPE was reported to be Clear cell type of carcinoma but for Confirmation deeper or excision biopsy was Suggested.

USG guided FNAC from the neck node at level 3 Suggestive of metastatic Adenocarcinoma.

CECT Neck Was done then that ill-defined soft tissue Attenuated mass in the nasopharynx (4.93x3.95x3.90) from the clivus to the soft palate extending Medially to apex, Laterally to Pharyngopalatic plate ant to Rt. post. nasal choana prox to Retropharyngeal space which may be a malignant mass.

Patient was posted for surgery, nasopharyngeal mass identified posterior septectomy done. Nasopharyngeal mass excised out from the Nasopharyngeal. Right Sided neck Dissection Done MRND with all

levels of Lymph nodes removed and tissue sent for HPE & immunohistochemistry (IHC).

Histopathology reports revealed low grade myoepithelial carcinoma of the nasopharynx with infiltrating margins and the presence of numerous sheets and cords of both spindle-shaped and epithelioid monomorphic neoplastic cells with clear cytoplasm and round nuclei with dense chromatin and pleomorphic nuclei. IHC markers positivity for P40 & ki-67.

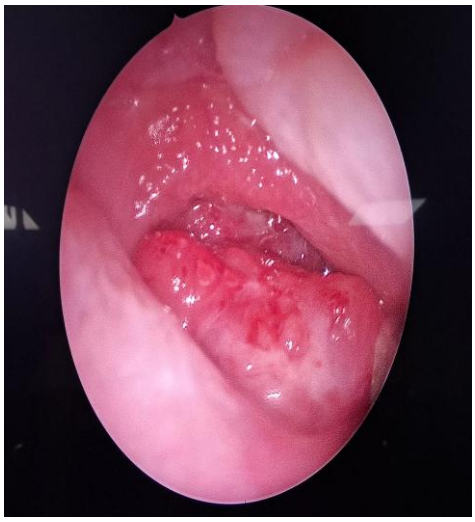

**figure 6: DNE showing nasopharyngeal mass**

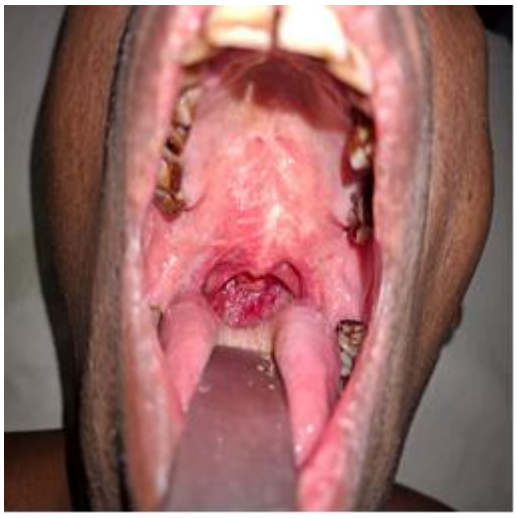

**figure 7: Mass coming in oral cavity**

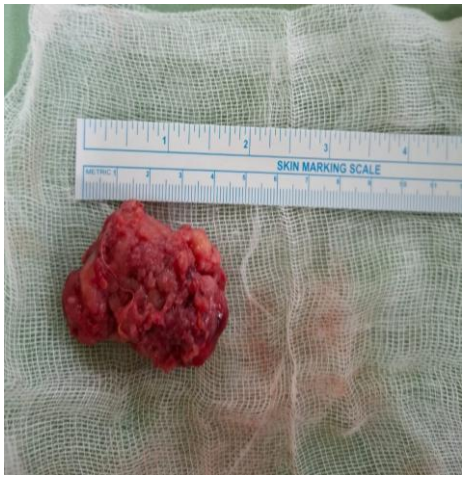


**figure 8: post op excised mass**

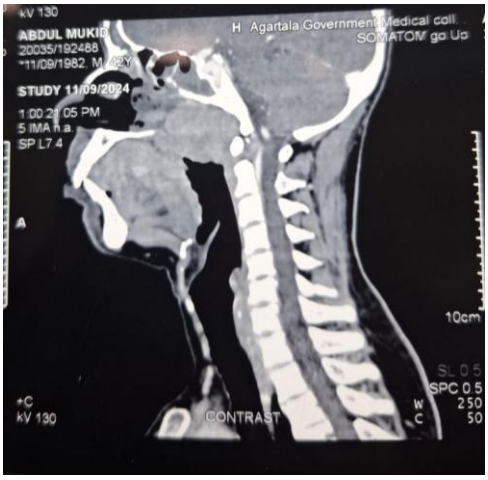


**figure 9: CECT NECK (Sagittal view) showing nasopharyngeal mass**

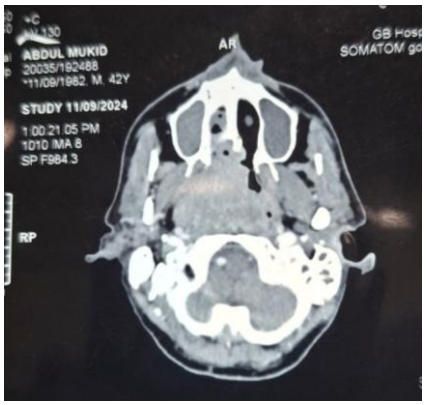


**figure 10: CECT PNS (CORONAL VIEW) showing right nasopharyngeal mass**

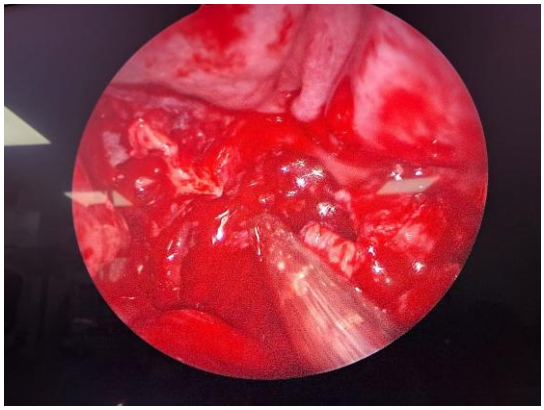

**figure 11: intraoperative endoscopic view**

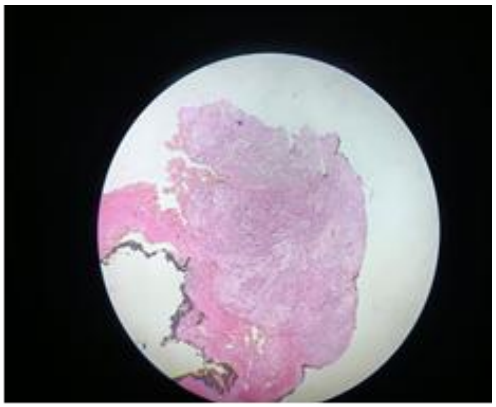

**figure 12: pictomicrograph**

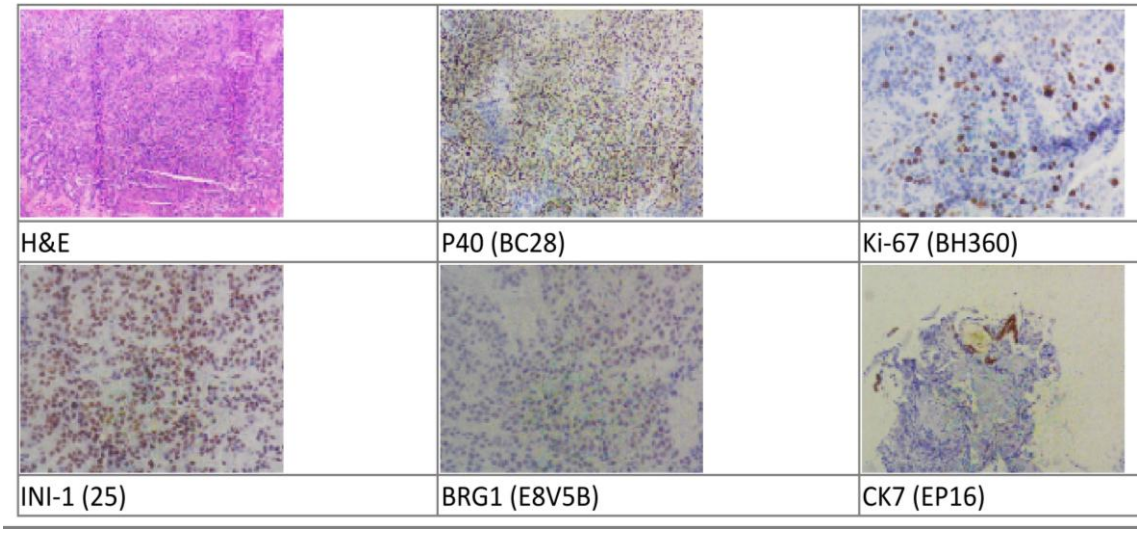


**figure 13: immunohistochemical markers done**

The postoperative period was uneventful and the patient received external beamradiotherapy to the primary site {70 gy/ 35 fractions} as well as to the neck {56 gy/ 28 fractions} which was started within three weeks of surgery. The patient is on regular follow-up since 9 months with no evidence of recurrence at the loco-regional level till date.

## CASE 3

A 59-year Male presented to the ENT OPD with Complaint of Hoarseness of voice and decreased appetite for 3-4 month. on repeated Questioning patient gave Ho Associated headache for 15-16 days, impaired hearing off & on for more than 2 month. Initially conservative management was given for some time but the symptoms did not subside rather it became persistent.

Fiberoptic laryngoscopy (FOL) was done initially that revealed a polypoidal mass left vocal cord, anterior commissure with phonatory gap with pooling of Saliva but along with that a mass was seen in nasopharynx that was detected incidentally so DNE was planned.

DNE was done Which revealed large exoplytic proliferating mass that had extensive extensions. Anteriorly it extended to bilateral Coana and inferiorly going to soft palate and oropharynx.

Subsequently CECT PNS was done that revealed a large ill-defined heterogeneously enhancing Soft tissue mass noted involving the posterior nasopharyngeal wall predominately on At side or approx. 4.1 cm x 6.27mx 5.7cm size, inferiorly it extending upto C2-3 IV disc level. Superiorly the mass extended to base of the skull with destruction of occipital condyle, Clives &

sphenoid sinus wall also involving Vidian canal, foramen ovale, foramen Spinosum Carotid canal & jugular bulb involving both pterygoid muscle, mass extending to the tonsillar fossa and posterior third of tongue., Laterally extending to the Carotid space encasing both the external and internal Carotid arteries with multiple Neck node. posteriorly it goes up to the base of occipital bone in the right side invading the right Cerebellar hemisphere.

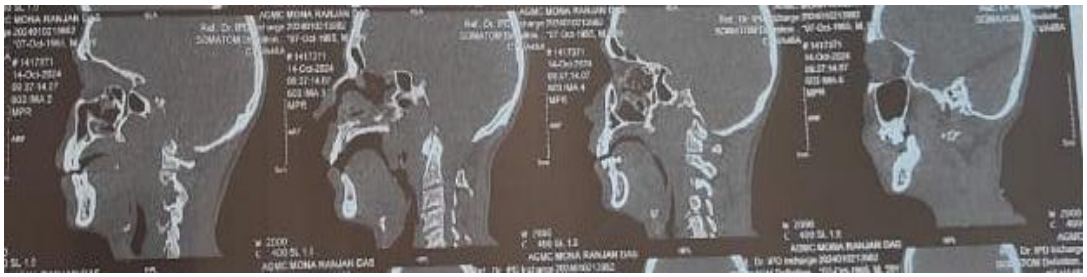

**figure 14 Sagittal view CECT PNS showing nasopharyngeal mass**


**figure 15: CECT PNS showing the mass**

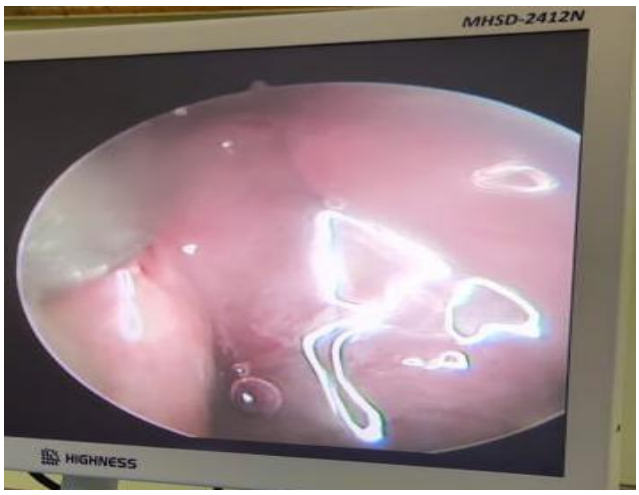


**figure 16: DNE view of the nasopharynx**

Punch biopsy was taken from the right nasopharyngeal mass that Came out to be poorly differentiated Squamous Cell Carcinoma.

Patient was referred to the RCC where patient was started on chemoradiation therapy but unfortunately patient did not survive after 2 cycles of chemoradiation.

Despite having Such extensive Spread of the nasopharyngeal mass, the patient did not present with the classical Symptoms of nasopharyngeal Carcinoma.

**CASE 4**

35year old female patient admitted in ENT ward with recurrent EAR discharge since childhood and pain on the Left EAR for 8-9

months. There was associated mild headache but not associated with fever, Convulsion, LOC, Neck stiffness, Vomiting. On clinical examination there was associated thick mucous profuse, foul smelling from Bilateral Ear canal that was Suction cleaned along with tenderness over the mastoid area. EUM done that revealed left Tympanic membrane perforation involving multiple Quadrants with unhealthy middle ear mucosa. No episode of nasal Blockage, Bleeding from nose, tinnitus etc. Also there was midline neck swelling and Complaint of feeling of Neck lump from inside the throat while swallowing but on clinical examination of neck no such palpable mass was felt on both the sides except the midline thyroid tissue.

USG Neck was done that suggested Diffuse thyroid nodular goitre of Left lobe of the thyroid (TIRADS 3). along with bilateral neck nodes. Since there were bilateral neck nodes found but clinically no nodes were palpable so an USG guided FNAC was done.

USG guided FNAC was done from one of the swellings at level II B was Suggestive of metastatic undifferentiated carcinoma.

Patient was initially diagnosed with Left CSOM with Central perforation with active discharge.

But when HRCT Temporal bone was done that reported soft tissue density mass In the Left mesotympanum, epitympanum, Sinus tympani, facial recess and Lift mastoid air cells. As a Routine Check-up DNE was done. Which revealed a mass in the Right nasopharynx with smooth Surface.

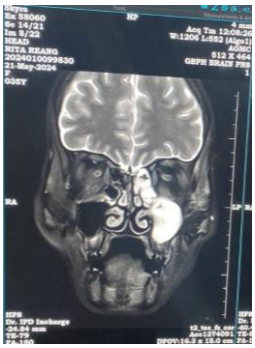

**figure 17 MRI PNS coronal**

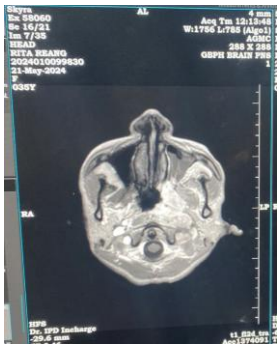

**figure 18 MRI PNS AXIAL VIEW**

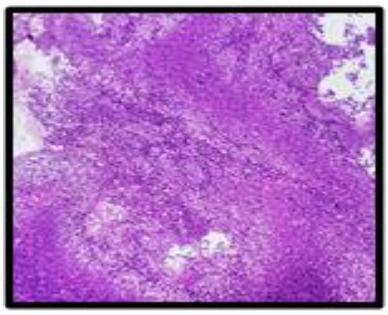

**figure 19 HPE pictomicrograph**

Then MRI of PNS was done that Suggested a soft tissue density mass with local extension & ill-defined Margins measuring (3.29 X 3.98) cm Which is iso-intense in T1 image, Hyper intense int T2WImage i, diffusion restricted on DW image Seen in his Left fossa of Rosenmüller from Which during DNE punch Biopsy was taken & sent for HPE that suggested Squamous Cell Carcinoma of Moderately differentiated Carcinoma.

Patient was then referred to RCC-ABV for Consideration of Radiotherapy / NACT /CCRT.

Patient unfortunately expired after getting 3 sittings of chemotherapy.

**CASE 5**

A 55yr female Patient presented with severe headache on the right side that was gradually increasing in intensity and not relieved by any medication for 1 months. She had associated Impairment of hearing on the Right ear with recurrent ear discharge and itching Bilateral ear Which is gradually progressive in nature and not relieved by any medication. Also there was history of difficulty in swallowing. EUM done which revealed a large CP (subtotal type) of the Right tympanic membrane with mucous discharge and small upon the left side tympanic membrane. No associated fever, cough, cold, headache, Epistaxis, vomiting. Reeling of head. on Local examination of oral Cavity revealed a sluggish palatal Reflex. Pure Tone Audiometry showed bilateral conductive hearing loss. There was a Small palpable Neck made at level III Came up after admission of the patient which was then evaluated with and FNAC.FNAC was inconclusive even after repeating 2 times

HRCT Temporal bone reported an ill-defined lytic lesion of 3.3×3.4 cm in the petrous apex part of the Right temporal bone with adjacent minimal Soff tissue swelling. So initially it was diagnosed as petrous apex Cholesteatoma / Granulation tissue.

MRI was done then that reported a well defined heterogenously enhancing mass located in the right nasopharyngeal region measuring approximately (2.93×2.51×2.39) cms. The mass showed hypointense signal on T1 weighted images and hyperintense signal on T2 weighted images. The mass extended into the right Eustachian tubeand abuts the lateral wall of oropharynx. It extends to petrous apex part of temporal bone with destruction of bone with cortical irregularity and marrow replacement, petrous bone being extensively involved and intracranial extension.

DNE was done which illustrated a smooth bulge over the right nasopharynx with smooth margin which never looked like a malignancy, from which Sample of punch Biopsy was taken and sent for HPE that reported Moderately differentiated Squamous Cell Carcinoma

The nasopharyngeal mass is being diagnosed as Stage 3 Nasopharyngeal carcinoma (Locally invasive type).

Patient was sent to regional cancer center (RCC) where she got Neoadjuvant Chemotherapy (3cycles) followed by Concurrent Chemoradiotherapy (CCRT). She is under regular follow up at our ENT OPD every 3-4 months and patient is stable now.

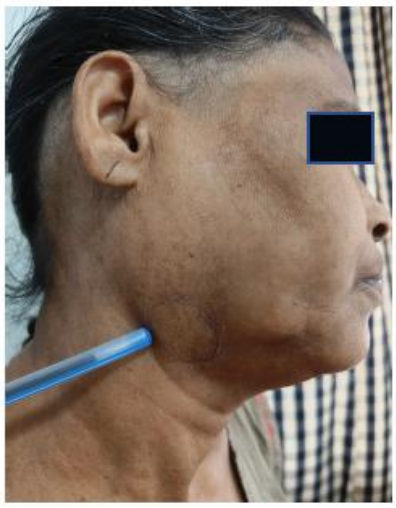

**Figure 20 patient right lateral side**

**Figure 21 patient front view**

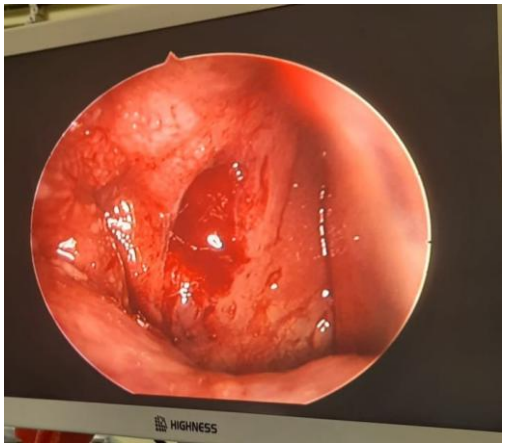

**Figure 22 DNE showing smooth bulge**

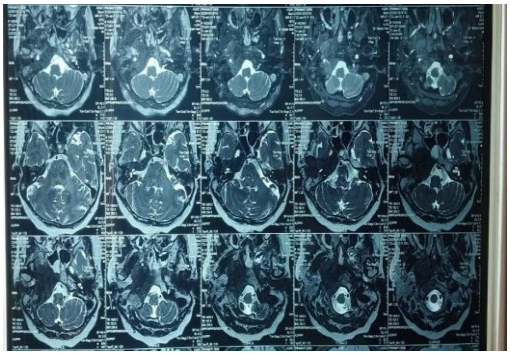

**Figure 23: MRI of Brain with temporal bone**

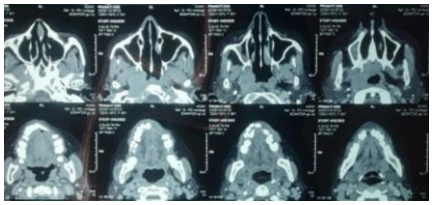

**Figure 24: CECT PNS showing mass**

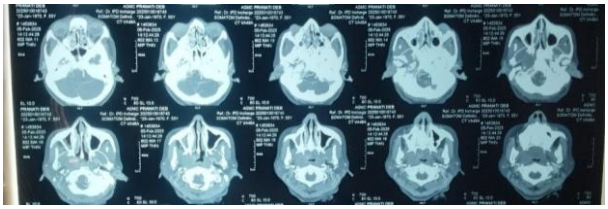

**Figure 25: CECT PNS showing the mass**

## DISCUSSION

Nasopharyngeal carcinoma (NPC) is a malignancy with a distinct geographical and epidemiological distribution, predominantly affecting populations in Southeast Asia, North Africa, and the Arctic regions (Bray et al., 2018). While the typical presentation of NPC includes symptoms such as cervical lymphadenopathy, nasal obstruction, epistaxis, and hearing loss, this case series highlights rare and atypical presentations that posed significant diagnostic challenges. These unusual manifestations underscore the importance of maintaining a high index of suspicion for NPC, even in non-endemic regions or when clinical features deviate from the classic presentation.

The cases presented in this series demonstrate the diverse clinical spectrum of NPC, which can mimic other benign or malignant conditions. For instance, one patient presented with isolated cranial nerve palsies in the absence of other nasopharyngeal symptoms, initially suggesting a neurological disorder (Lee et al., 2020). Another case featured a paraneoplastic syndrome, with dermatomyositis as the initial manifestation, diverting attention away from the underlying malignancy (Zhang et al., 2019). Such presentations can lead to delays in diagnosis, as clinicians may not immediately consider NPC in the differential diagnosis, particularly in regions where the disease is less prevalent.

The diagnostic dilemma in these cases was further compounded by the nonspecific nature of initial imaging findings and the overlap of symptoms with more common conditions. For example, one patient was initially evaluated for chronic sinusitis due to persistent nasal congestion and headache, while another was investigated for tuberculosis due to cervical lymphadenopathy and constitutional symptoms (Wei & Sham, 2005). These diagnostic pitfalls highlight the need for a comprehensive approach, including detailed history-taking, thorough physical examination, and appropriate imaging studies, such as contrast-enhanced MRI or CT of the nasopharynx, to identify subtle abnormalities (King et al., 2012).

Biopsy remains the gold standard for confirming the diagnosis of NPC, but the cases in this series emphasize the importance of considering NPC even when biopsy results are initially inconclusive or

when the clinical picture is ambiguous. In one case, multiple biopsies were required before a definitive diagnosis was established, underscoring the challenges posed by the anatomical location and the potential for sampling error (Chan et al., 2017). Additionally, the role of Epstein-Barr virus (EBV) serology and plasma EBV DNA levels as adjunctive diagnostic tools cannot be overstated, particularly in cases where histopathological confirmation is delayed or difficult to obtain (Lo et al., 2004).

The management of NPC with atypical presentations also presents unique challenges. Early detection is critical, as advanced disease is associated with poorer outcomes. The cases in this series highlight the importance of a multidisciplinary approach, involving otolaryngologists, oncologists, radiologists, and pathologists, to ensure timely diagnosis and appropriate treatment (Lee et al., 2019). Radiotherapy remains the cornerstone of treatment for non-metastatic NPC, often combined with chemotherapy for advanced stages. However, the presence of rare presentations may necessitate individualized treatment strategies, particularly in cases with paraneoplastic syndromes or extensive cranial nerve involvement (Chen et al., 2019).

This case series serves as a reminder of the protean nature of NPC and its potential to present in ways that defy conventional diagnostic paradigms. Clinicians should remain vigilant for atypical presentations, particularly in patients with risk factors such as EBV infection, family history of NPC, or residence in endemic regions (Tang et al., 2016). Increased awareness of these rare manifestations, coupled with a systematic diagnostic approach, can help reduce delays in diagnosis and improve patient outcomes.

In conclusion, NPC with rare presentations represents a diagnostic challenge that requires a high index of suspicion and a multidisciplinary approach. These cases underscore the need for continued education and awareness among clinicians regarding the diverse clinical spectrum of NPC. Future research should focus on identifying biomarkers or imaging features that can aid in the early detection of atypical NPC, as well as optimizing treatment strategies for these complex cases.

## *Declaration by Authors*

**Acknowledgement:** None

**Source of Funding:** None

**Conflict of Interest:** The authors declare no conflict of interest.

## REFERENCES

1. Bray, F., Ferlay, J., Soerjomataram, I., Siegel, R. L., Torre, L. A., & Jemal, A. (2018). Global cancer statistics 2018: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. CA: A Cancer Journal for Clinicians, 68 (6), 394-424. https://doi.org/10.3322/caac.21492
2. Chan, A. T., Gregoire, V., Lefebvre, J. L., Licitra, L., Hui, E. P., Leung, S. F., & Felip, E. (2017). Nasopharyngeal cancer: EHNS-ESMO-ESTRO Clinical Practice Guidelines for diagnosis, treatment and follow-up. Annals of Oncology, 28 (Suppl 4), iv22-iv26. https://doi.org/10.1093/annonc/mdx266
3. Chen, Y. P., Chan, A. T. C., Le, Q. T., Blanchard, P., Sun, Y., & Ma, J. (2019). Nasopharyngeal carcinoma. The Lancet, 394 (10192), 64-80. https://doi.org/10.1016/S0140-6736(19)30956-0
4. King, A. D., Vlantis, A. C., Tsang, R. K., Gary, T. M., Au, A. K., Chan, C. Y., ... & Ahuja, A. T. (2012). Magnetic resonance imaging for the detection of nasopharyngeal carcinoma. American Journal of Neuroradiology, 33 (6), 1173-1179. https://doi.org/10.3174/ajnr.A2915
5. Lee, A. W., Ma, B. B., Ng, W. T., & Chan, A. T. (2019). Management of nasopharyngeal carcinoma: Current practice and future perspective. Journal of Clinical Oncology, 37 (7), 602-611. https://doi.org/10.1200/JCO.18.01177
6. Lee, C. C., Huang, T. T., Lee, M. S., Hsiao, S. H., Lin, H. Y., Su, Y. C., & Hung, S. K. (2020). Clinical features of nasopharyngeal carcinoma with cranial nerve palsy: A

review of 1,007 cases. Head & Neck, 42 (1), 38-45. https://doi.org/10.1002/hed.25953

7. Lo, Y. M., Chan, L. Y., Lo, K. W., Leung, S. F., Zhang, J., Chan, A. T., & Johnson, P. J. (2004). Quantitative analysis of cell-free Epstein-Barr virus DNA in plasma of patients with nasopharyngeal carcinoma. Cancer Research, 64 (1), 61-65. https://doi.org/10.1158/0008-5472.CAN-03-1867
8. Tang, L. L., Chen, W. Q., Xue, W. Q., He, Y. Q., Zheng, R. S., Zeng, Y. X., & Jia, W. H. (2016). Global trends in incidence and mortality of nasopharyngeal carcinoma. Cancer Letters, 374 (1), 22-30. https://doi.org/10.1016/j.canlet.2016.01.040
9. Wei, W. I., & Sham, J. S. (2005). Nasopharyngeal carcinoma. The Lancet, 365 (9476), 2041-2054. https://doi.org/10.1016/S0140-6736(05)66698-6
10. Zhang, L., Chen, Q. Y., Liu, H., Tang, L. Q., & Mai, H. Q. (2019). Emerging treatment options for nasopharyngeal carcinoma. Drug Design, Development and Therapy, 13, 741-752. https://doi.org/10.2147/DDDT.S184637

How to cite this article: Sayantan Rudrapal, Binay Debbarma, Sunmesh Gopani, Sreepathy PT. A case series study of nasopharyngeal carcinoma cases with uncommon presentations. *Int J Health Sci Res.* 2025; 15(5):207-217. DOI: *https://doi.org/10.52403/ijhsr.20250524*

******