

### Case Report

## A CHILD WITH NECK LUMP AND HEMICRANIAL PAIN: A RARE CASE OF METASTATIC NASOPHARYNGEAL CARCINOMA

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### ABSTRACT

Although Nasopharyngeal carcinoma is a common tumour of head and neck region, its incidence is quite low in younger age group. It shows variable presentation depending on stage at which the diagnosis is made. Growth of the lesion in nasopharynx usually present with nasal obstruction, epistaxis and nasal discharge. Extension of the primary lesion may lead to ear symptoms, cranial nerve palsy and headache. In advanced stage cervical and systemic metastasis may be the sole presenting feature. This article reports case of NCP in young patient presenting with cervical mass and unilateral headache.

**Key Words:** *Nasopharyngeal Carcinoma (NPC), Child and Neck*

### INTRODUCTION

Nasopharyngeal carcinoma (NPC) is a malignancy arising from epithelium of nasopharynx. It is rare in developing countries; however the reported incidence of NPC is higher in south-east Asian population. It is more common in adults than in children. In United States, the annual incidence of NPC is 1-2 per million under the age of 30 (Jenkin *et al.*, 1981). The diagnosis of NPC is often delayed due to late reporting of the symptoms by the patient or the hidden anatomical location of the primary lesion. This article reports a rare case of metastatic nasopharyngeal carcinoma presenting as neck mass.

### CASES

A 10 yr old child patient was referred to Oral & maxillofacial surgery clinic with complaint of swelling in the right side of neck for last 15 days. The clinical examination revealed a 2cm X 2cm swelling in the right Jugulo-diagastic region which was firm and extremely tender on palpation (Figure 1).



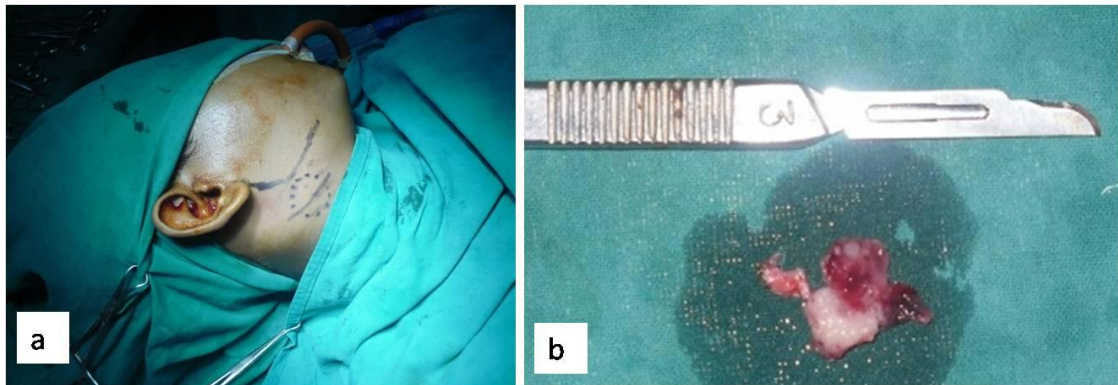
**Figure 1: Neck swelling**

On detail history it was found out that patient had been suffering from hemicranial pain for last 6 months which was diagnosed as migraine by a Neuro-physician and was under treatment for the same. The patient also complained of an episode of epistaxis from Rt. nostril 3 days before reporting to the clinic. The physical examination revealed several enlarged and tender deep jugular chain of lymph nodes along the posterior border of sternocleidomastoid muscle on both Rt. as well as left Side of the neck. The patient

### **Case Report**

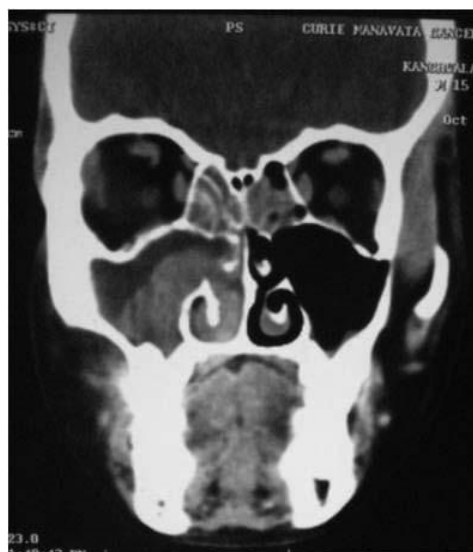
was started on a course of antibiotics and was advised USG of neck. The USG revealed around 22 nodes on the left side of the neck and around 24 nodes on the right side. The mantoux test for tuberculosis was performed which was negative.

The patient was immediately planned for a FNAC which was negative thus excisional biopsy of the neck node was performed under general anaesthesia and specimen was sent for histopathological examination (Figure 2).



**Figure 2: Biopsy of neck node (a) Incision marking (b) Excised nodes.**

The histopathological examination revealed a spindle cell tumour with multiple areas of nuclear atypia and pleomorphism. The specimen was sent for Immunohistochemical examination to confirm diagnosis which reported it to be metastatic nasopharyngeal carcinoma. A CT scan of the brain and face was done which revealed a huge radio-opaque mass in right Side nose and paranasal sinuses region extending till the base of the skull measuring approx. 8cm X 5cm in dimension (Figure 3).



**Figure 3: CT scan showing mass lesion involving almost entire of Right maxillary sinus and nasal cavity along with other paranasal sinuses and extending till the base of the skull**

The patient was referred to a local cancer hospital for the further management and was closely followed up. The patient was treated with 35 cycles of radiation and 6 cycles of chemotherapy. A follow up CT scan was done after 2 months which showed more than 95% reduction in the size of the primary tumour however patient still had some enlarged nodes in the neck on both the sides. Patient was given 10 more

### Case Report

cycles of radiotherapy and 3 more cycles of chemotherapy which led to complete regress of the neck nodes and the primary tumour. The patient continues to be symptom free for last 14 months follow up.

### DISCUSSION

Nasopharyngeal carcinoma (NPC) is a carcinoma that arises from the epithelial lining of the nasopharynx. NPC varies significantly from other head and neck malignancies in terms of its etiology, epidemiology, pathology, clinical presentation, and response to treatment (Agulnik and Epstein 2008).

NPC is rare, occurring in less than 1/1,000,000 people (Fandi *et al.*, 1994). However it is more endemic in China and Southeast Asian population, suggesting that genetic as well as environmental factors play a role in the cause of the disease (Wei and Sham 2005).

It occurs more frequently in adult patients as compared to young patients. Our case reports NPC in a young Indian male patient.

The cause of NPC is multifactorial. Etiopathogenesis involves interaction between chronic infection with oncogenic gamma herpes virus Epstein-Barr virus (EBV) and environmental and genetic factors, involving a multistep carcinogenic process (Zhou *et al.*, 2007). Chang and Adami (2006) reported a unique association between salt-preserved food consumption, which is traditional staple food in NPC-endemic areas and occurrence of NPC (Chang and Adami 2006).

The presentation of NPC is variable and depends on the stage of presentation of disease.

Wei and Sham<sup>4</sup> divided symptoms presented by NPC patients into four categories: (1) Symptoms caused by the presence of a tumor mass in the nasopharynx (epistaxis, nasal obstruction, and discharge), (2) Symptoms associated with dysfunction of the Eustachian tube (hearing loss), (3) Symptoms associated with the superior extension of the tumor (headache, diplopia, facial pain, and numbness), and (4) Neck masses. Various other investigation modalities including endoscopy, CT scan, MRI play an important role in early detection and extent of primary lesion. Neck ultrasound or CT neck is often required to rule out any cervical metastasis. Histopathology and immune-histochemical study of the biopsy tissue helps to reach final diagnosis before formulation of treatment plan.

Radiotherapy is the mainstay of treatment for NPC. Recent studies have suggested that addition of chemotherapy to radiotherapy improves the treatment results in patients with nasopharyngeal carcinoma (Al-Sarraf *et al.*, 1998). Baujat *et al.*, (2006) reported a definite improvement of the 5-year survival rate due to the addition of chemotherapy (56% with radiotherapy alone versus 62% with chemoradiotherapy).

In conclusion, NPC in children is rare. High index of suspicion is required to detect early disease in children. On suspicion of NPC in children careful clinical and radiological examination of neck nodes and paranasal cavities must be done. Biopsy of suspicious neck node is often helpful in diagnosis of such lesions.

### REFERENCES

- Jenkin RD, Anderson JR, Jereb B, *et al.*, (1981). Nasopharyngeal carcinoma- a retrospective review of patients less than thirty years of age: areport of Children's Cancer Study Group. *Cancer* **47**(2) 360-6.
- Agulnik M. and J. B. Epstein (2008). Nasopharyngeal carcinoma: current management, future directions and dental implications. *Oral Oncology* **44**(7) 617–627.
- Fandi, M. Altun, N. Azli, J. P. Armand, and E. Cvitkovic (1994). Nasopharyngeal cancer: epidemiology, staging, and treatment. *Seminars in Oncology*. **21**(3) 382–397.
- Wei W. I. and J. S. T. Sham (2005). Nasopharyngeal carcinoma. *The Lancet* **365** (9476) 2041–2054.
- Zhou X., J. Cui, A. A. Kajdacsy-Balla, H. Ye, J. Wang and P. N. Rao (2007). The progress on genetic analysis of nasopharyngeal carcinoma. *Comparative and Functional Genomics*.
- Chang E. T. and H. O. Adami (2006). The enigmatic epidemiology of nasopharyngeal carcinoma,” *Cancer Epidemiology Biomarkers and Prevention*. **15**(10) 1765–1777.

**Case Report**

**Al-Sarraf M., M. LeBlanc and P. G. S. Giri et al., (1998).** Chemoradiotherapy versus radiotherapy in patients with advanced nasopharyngeal cancer: phase III randomized Intergroup study 0099,” *Journal of Clinical Oncology* **16**(4) 1310–1317.

**Baujat B., H. Audry, J. Bourhis et al., (2006).** Chemotherapy as an adjunct to radiotherapy in locally advanced nasopharyngeal carcinoma. *Cochrane Database of Systematic Reviews* 4.