

Nasopharyngeal Carcinoma

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Introduction:

It is a malignant tumour of nasopharynx; squamous cell variety is the commonest. This is common in yellow races, but incidence in India is also quite high. It commonly occurs in elderly persons between 50-60 years of age. In Afro-Asian countries incidence below 30 years of age is rather more common.

Aetiology:

The exact aetiology is not known. The factors responsible are:

1. **Genetic**- Chinese have a higher genetic susceptibility to nasopharyngeal cancer. Even after migration to other countries, they continue to have higher incidence.
2. **Viral**- Epstein- Barr (EB) virus is closely associated with nasopharyngeal cancer. Specific viral markers are being developed to screen people in high incidence areas. EB virus has two important

antigens - Viral Capsid Protein (VCP) and early antigen (EA). IgA antibodies to EA are highly specific for nasopharyngeal cancer but have sensitivity of only 70-80% while IgA antibodies to VCP are more sensitive but less specific.

3. **Environmental**- Pollution, smoking of tobacco and opium, nitrosamines from dry salted fish, burning of incense and wood has been incriminated as probable cause of nasopharyngeal cancer.

Pathology-

Grossly, the tumour occurs in three forms:

- Proliferative growth causing nasal obstruction
- Infiltrative which causes cranial nerve involvement

Microscopy (Brade's Grading)

Grade I: Well differentiated (cells show keratinization and obvious differentiation

with more than 25% cells lacking differentiation)

Grade II: Moderately differentiated (25 - 49% cells undifferentiated)

Grade III: Poorly differentiated (50- 74% undifferentiated cells)

Grade IV: Anaplastic / undifferentiated (less than 25% cells are undifferentiated with marked anaplasia and mitotic figures)

Clinical features:

Symptomatology is divided into four main groups

1. Nasal- nasal obstruction, nasal discharge and epistaxis.
2. Otolgic: due to obstruction of Eustachian tube, there is conductive loss, serous or suppurative otitis media. Tinnitus and dizziness may occur.
3. Ophthalmoneurologic: Squint, diplopia, ophthalmoplegia, facial pain and reduced corneal reflex may occur. Tumour may directly invade the orbit leading to exophthalmos and blindness.

Jugular foramen syndrome may occur due to pressure of enlarged lateral retropharyngeal lymph nodes on the nerves of neck. Horner syndrome may occur due to involvement of cervical sympathetic chain.

Nasopharyngeal cancer can cause conductive deafness (Eustachian tube blockage), ipsilateral temporoparietal neuralgia (involvement of CNV)

and palatal paralysis (CNX) collectively called Tratters triad.

4. Distant metastasis: it involves lung, liver, bone and other sites.

Presenting symptoms and signs of nasopharyngeal cancer in order of frequency are:

- Cranial lymphadenopathy
- Hearing loss
- Nasal obstruction
- Epistaxis
- Cranial nerve paralysis
- Headache
- Earache
- Neck pain
- Weight loss

Investigation:

- Diagnostic nasal endoscopy (DNE)
- Inspection of nasal the nasopharynx space
- Localization and extent of tumour
- Biopsy under vision
- Fine needle aspiration cytology of the neck lymph node
- CT scan
Extent of tumour
Neck node involvement
- Bone scan
- Skeletal metastasis- thoraco-lumber region
- MRI gives better soft tissue delineation
- Chest X-ray for lung metastasis

Treatment:

1. Radiotherapy – It is the treatment of choice for nasopharyngeal cancer.

External beam radiation of 6000- 7000 cGy can be delivered by linear accelerator to the primary and both sides of neck. More advanced techniques are 3-dimensional conformal radiotherapy and intensity Modulated Radiotherapy (IMRT) are used more now a days.

2. Chemotherapy: Some stage III and IV cancers of nasopharynx can be cured by radiotherapy alone but cure rate is doubled when chemotherapy is combined with radio isotope Cisplatin or Cisplatin with 5- FU are used.

3. Recurrent / Residual NPC treatment

I. Brachytherapy or 2nd course of external radiation

II. Surgery

- Fisch type C approach
- Billers approach
- Maxillary swing approach

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3. Textbook of Ear, Nose Throat and Head and Neck surgery by P. Hazarika, D.R. Nayak and R. Balakrishnam