

NOSE CANCER

- *The Chinese Dilemma*

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What is 'Nose Cancer'?

The strange thing is that nose cancers do not arise from the

nose - It actually arises from the nasopharynx. This is the area situated behind the nose, above the level of the soft palate. The brain lies in very close proximity, being separated from the nasopharynx by the bone of the skull base. The Eustachian tubes which drain the middle ears open into the side wall of the nasopharynx. Because of its position behind the nose, it is also referred to as the post-nasal space. For this reason, the correct name for these cancers is nasopharyngeal carcinoma or NPC.

NPC is a cancer that arises from the mucosa or lining of the nasopharynx. There are many types of tumours that can arise in the nasopharynx, but NPC accounts for more than 90 per cent of them.

Why NPC is so unique?

NPC is a disease that has a very high incidence in the Chinese population. The highest incidence is found in those who originate from the Southern Chinese provinces, especially Kwang Tung. The incidence is lower in Northern Chinese, Koreans, Malays, and Japanese. It is ten to fifty times less common in the Indians, and Caucasians. The incidence among Chinese Singaporeans, who originated from different provinces of China, is lower than Hongkongers who are predominantly Cantonese.

Another unique feature of NPC is that the cancer afflicts younger people. Unlike other cancers of the head and neck, the frequency of NPC plateaus at an earlier age. This makes the cancer particularly devastating as it affects people who are at the prime of their lives in their late 20's to early 40's, and who may have children or parents to support.

What causes NPC?

NPC behaves differently from other cancers. It is therefore not surprising to note that other factors are at play in causing the disease. Three factors have been observed to be strongly associated with the development and progress of the disease.

They are

- 1) certain genetic types
- 2) salted fish and vegetables, and
- 3) a virus called the Epstein Barr Virus (EBV).

What are the symptoms produced by NPC?

These can be divided into

those related to the nose, ears, neck, and others. The disease may manifest as a bloody discharge in its early stages, or a blocked nose if the tumour grows to such a size that it obstructs the passage of air through the nasopharynx.

Ear symptoms are caused by obstruction to the Eustachian tube which results in an accumulation of fluid in the middle ear.

The presence of fluid in the middle ear results in a condition called otitis media with effusion, or OME. It gives rise to mild or moderate deafness by preventing the ear-drum from vibrating normally. Occasionally, the fluid build up under pressure, or may become infected with resulting pain in the ear.

Neck symptoms are the most frequent manifestation of NPC. Sixty percent of NPC cases present initially as a neck lump. There are lymph nodes in the neck which act like filters, trapping inflammatory or cancerous cells arising in the head, and neck area.

NPC cells lack the cohesive properties of normal tissue. They break off easily from their source in the nasopharynx to travel in channels called lymphatic ducts. These ducts drain into the lymph nodes found on both sides of the neck.

The most unfortunate aspect of NPC is that sometimes there may not be any symptoms. The disease progresses undetected and grows relentlessly to a large size before it manifests itself. Diagnosis of the cancer is delayed, making it more likely for subsequent treatment to fail.

How do we diagnose NPC?

Patients with suspicious symptoms, for example, bloody nose discharge, OME, neck swelling will have to undergo an examination of the nasopharynx using special scopes for visualisation.

Any suspicious areas noted during examination is biopsied in the clinic under local anaesthesia, and examined under a microscope by a

pathologist. Occasionally, the nasopharynx may appear normal on visualisation, and other

test that measures the level of antibodies against Epstein-Barr Virus.

cancer spread to the neck (N stage), and the presence of spread and metastasis to other parts of the body (M stage). This culminates in the determination of a combined TNM stage.

A CT scan is used to appraise the extent of the local tumour, and neck. Assessment of spread to the other parts of the body is directed at the three most common systems - the lungs, liver and bone (especially the vertebral column).

After detecting the presence of NPC, the next thing to do is to stage it.

Staging is a process where the extent of the cancer is determined. The purpose is to ascertain whether the cancer is localised to the nasopharynx, or has spread and metastasised to other parts of the body. It will help the doctors decide on the appropriate treatment strategy. It also enables the doctors to estimate the

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What types of treatment are available?

NPCs are described as radiosensitive as they respond very well to radiotherapy. It is not surprising for even large tumours of the neck and nasopharynx to 'melt', and disappear with a course of high dose radiotherapy. Each course of radiotherapy with curative intent consists of daily exposures to 200 units of

methods of detecting its presence have to be performed. These include specialised X-ray investigations like Computed Tomography (CT) scan of the nasopharynx, or a blood

likely chances of curing the disease.

Staging takes into consideration three parameters, namely, the size of the local tumour (T stage), the degree of

day, for six weeks. The total dose of radiotherapy adds up to about 6000 units. Tumours which are confined to the nasopharynx and neck, and which have not gone to other parts of the body may be treated with only radiotherapy to the head and neck area.

Occasionally, large tumours of the neck need preliminary treatment with chemotherapy to shrink it down in size. This will allow the subsequent use of radiotherapy a better chance to effect a cure. Tumours which have spread out of the head and neck to involve other sites such as the lungs, liver and bones will require chemotherapy as radiotherapy does not cover these areas.

The Ear Nose and Throat Surgeon is involved in the surgical aspects of NPC management. This involves taking biopsies from the nasopharynx to establish a diagnosis or to detect a recurrence. The surgeon also manages some of the complications of treatment with radiotherapy and

chemotherapy such as middle ear infections and sinusitis. In cases where a neck swelling does not fully respond to chemotherapy or radiotherapy, cancerous tissue will need to be surgically removed with a neck dissection operation.

What is the survival rate from NPC?

NPC in stage one, which refers to a small tumour confined to the nasopharynx without spread to lymph nodes in the neck, has a 95 per cent five-year survival rate after radiotherapy. This means that 95 per cent of patients in stage one will survive for at least five years. The chance of tumour recurrence after a patient has been disease free for five years is minimal, and the patient can be considered to have been 'cured' of their disease.

Cancer in stages two, three, and four are those that have varying degrees of involvement of the nasopharynx and neck but without spread outside of the neck. These have a

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five-year survival rate that ranges from 40 per cent to 90 per cent.

Stage five refers to those where there is evidence of spread outside of the head and neck. The survival in these cases are dismal and drop dramatically to 10 per cent survival in one year, and less than five per cent survival in three years.

It is therefore of crucial importance that NPC is detected early. The earlier NPC gets picked up, the better are the chances of cure and long-term disease-free survival.

So if you think that you have symptoms that may be an indicator of NPC, do not delay. Get a medical