

# Sino-nasal Tumours

## Introduction

These are rare and make up less than 1% of malignancies. Men are twice as likely to have one than women and they generally occur over the age of 50.

There are a few well known risk factors: hard wood dust, nickel, chromium, hydrocarbons and snuff.

Sinus tumours are more common than nasal ones. About 75% arise in the maxillary sinus.

Tumours may be benign or malignant.

## Benign tumours

The commoner tumours are as follows:

1. Osteoma (commonest benign tumour)
2. Inverted Papilloma (Transitional cell)
3. Fibrous dysplasia
4. Juvenile nasopharyngeal angiofibroma

## Inverted Papilloma

These present with unilateral nasal obstruction usually but there may be epistaxis, rhinorrhoea or a visible polyp.

They have a malignant potential and about 10% of them give rise to squamous carcinoma.

CT scanning is used to demonstrate extent. They are treated by endoscopic removal with medial maxillectomy. Open procedures can be performed but have a greater relapse rate.

## Juvenile nasopharyngeal angiofibroma

This benign tumour is almost exclusively found in male teenagers. It arises at the sphenopalatine foramen and presents with unilateral nasal obstruction, epistaxis, and headaches.

CT/MRI are used to assess extent. They are treated with surgery. The patient has an embolization procedure in the 24 hours before surgery to de-vascularise the growth. Both endoscopic and open approaches can be used for removal depending on the size of the tumour.

## Malignant tumours

The commoner tumours are as follows:

1. Squamous carcinoma
2. Adenocarcinoma
3. Malignant melanoma
4. Olfactory neuroblastoma

### Squamous Carcinoma

This is the most common sinonasal malignancy and occurs at peak frequency in the 60 – 70-year age group. Men are twice as susceptible than women.

They are commonest in the maxillary sinus and, if they are posterior or superior to Ohngren's line they have a poorer prognosis.

They are treated by excision and radiotherapy

### Adenocarcinoma

This is triggered by inhalation of hard wood dust, chromium salts and propyl alcohol. Men are affected more than women and they arise in the ethmoids sinuses.

### Olfactory neuroblastoma

These have a bimodal frequency being commoner in the second and 6<sup>th</sup> decade of life. Men and women are equally affected. They are treated with surgery and postop radiotherapy.

## Clinical features suggesting malignancy

The following symptoms suggest that the unilateral polyp is malignant:

<b>Symptoms</b>	<b>Signs</b>
1. Epistaxis	1. Numbness of cheek and swelling in cheek
2. Obstruction	2. Proptosis or ophthalmoplegia
3. Infra-orbital anaesthesia	3. Evidence of tumour in mouth or postnasal space
4. Toothache	4. Loose teeth or ill-fitting dentures
5. Facial swelling or pain	5. Oroantral fistula that doesn't heal
6. Trismus	6. Numbness of hard palate
7. Proptosis or diplopia	7. IX and X palsies
	8. CSF leak
	9. Regional lymph nodes



Extensive malignant sinonasal tumour.

Note the bloody mass in the right nostril, the lateral displacement of the orbit and the skin change over the right cheek.

These signs arise due to extension of the malignant process out of the sinus into adjacent structures.



Tumour eroding through the hard palate from the nose



Destruction of the nasal bridge and skin changes in nasal malignancy

Tumours are investigated using CT and MRI scans and biopsy.

Surgery and chemoradiotherapy are used to treat the problem.