NASOPHARYNGEAL CARCINOMA

Otolaryngology Lecture delivered at the Royal College of Surgeons of England under the auspices of the Institute of Laryngology and Otology*

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by

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GEOGRAPHICAL DISTRIBUTION OF DISEASE

THE PATTERN OF disease varies in different parts of the world. This is due, of course, to changes in climate and environment and to the inborn hereditary characteristics of the inhabitants and to their particular customs and habits.

During 37 years of surgical experience in Hong Kong one was constantly being reminded that the incidence of various diseases differed in many respects from that seen in England or in North America. Apart from the occurrence of various tropical diseases, which are of more concern to the physician, one may mention in passing the terrible prevalence of all forms of tuberculosis—bones, joints and glands (in spite of the fact that Chinese do not normally drink milk); the commonness of carcinoma of the liver, and of intrahepatic stone formation with its special train of symptoms and problems; the rarity of injuries of the medial meniscus of the knee joint in spite of association football being such a popular pastime amongst the Chinese in Hong Kong; and there are also other, if less distinctive, changes in the pattern.

But the most striking feature of all is the great prevalence of nasopharyngeal carcinoma. Here in England and in North America it is a rare affection forming only a small fraction of one per cent. of all cases of malignant disease. In Hong Kong it is the second commonest variety of malignant disease, of which it forms 18 per cent. of the cases. This was shown in an eight years' survey of malignant disease in the University clinics.

During a particular eight years period there were 620 cases of malignant disease in the surgical and gynaecological units. Of these—

174 (27·6 per cent.) were carcinoma of the cervix uteri

114 (18 per cent.) were nasopharyngeal carcinoma

74 (27·6 per cent.) were carcinoma of the female breast.

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* The lecture was illustrated by twenty-four lantern slides depicting the various clinical manifestations of the disease and its pathological and histological features as described; and also by eight post-mortem specimens. These comprised the half-heads from six nasopharyngeal carcinoma patients and a lung from one of these cases showing secondary deposits. These were brought by Dr. T. Balasingham from the Singapore University to St. Thomas's Hospital Medical School where they are now part of the Collection in the Shattock Museum. The present writer was indebted to Dr. A. Tait Smith for his kind permission to show them at the lecture.

In point of numbers carcinoma of the cervix comes first, nasopharyngeal carcinoma second and breast carcinoma third. So it happens that the author has seen several hundreds of cases of this disease, whereas an Ear, Nose and Throat Specialist in this country meets but a few.

HISTORICAL

Some cases in England, perhaps, are not recognised for what they are. Trotter[1] described a number of cases of nasopharyngeal malignant disease in England in 1911 ; and New[2] at the Mayo Clinic in 1922 recorded a still larger number of cases in North America. The first description of the extreme frequency of this disease in Hong Kong was published by the present writer, Dr. G. H. Thomas and Dr. Hsiu Shih Tse in 1930[3], though the frequency of enlarged glands in the neck in Canton had been reported earlier by Dr. Oscar Thomson[4], but incorrectly as lympho-sarcoma of the neck. Many later reports from Hong Kong and China have been published.

RACE, SEX AND AGE

It must be borne in mind that Hong Kong draws its patients not only from its two million inhabitants but from all the provinces of China, from all the East Indian Islands, from the Philippines, from the Malay Peninsula, from Ceylon and from India. And all these areas contribute sufferers from the disease which we are considering. But the Chinese are far and away the principal sufferers outside as well as inside China. It is also interesting to note that cases of the disease developing in Chinese, long resident in New York and in Canada, are known. I have seen only a few stray instances of the disease in Javanese, Indians*, Portuguese and Filipinos and some of these may have had a Chinese strain in their ancestry. Nasopharyngeal carcinoma is for the most part a disease of middle life, the peak incidence being from 31 to 40 as shown in Table I. But it occurs from adolescence upwards, and would doubtless be more frequent in the advanced age groups were the expectation of life of the poorer Chinese longer than it is.

CAUSE OF FREQUENCY OF OCCURRENCE IN THE CHINESE RACE

What are the factors at work to produce this amazing discrepancy in the incidence of this form of carcinoma as between the Chinese and other races? Many of the suggestions that have been put forward are too fantastic for serious consideration.

That the Chinese take their food very hot and that the men eat before the women folk has been advanced and might have some meaning if the food

* In a personal communication received after giving this lecture, Dr. V. R. Khanolkar of the Tata Memorial Hospital, Bombay writes :—
" The incidence of nasopharyngeal carcinoma to all carcinomas at the Tata Memorial Hospital, Bombay is 1·7 per cent."
This would suggest that the disease is commoner in India than in Europe, but much less common than in Kong Hong.

TABLE I

The Ages of 206 Consecutive Cases of Nasopharyngeal Carcinoma Seen in Hong Kong[5]

Quinquennial Periods	Males	Females	Combined
11—15	4	0	4
16—20	9	3	12
21—25	6	7	13
26—30	12	7	19
31—35	27	11	38
36—40	29	8	37
41—45	25	7	32
46—50	21	2	23
51—55	10	4	14
56—60	9	0	9
61—65	4	1	5
	156	50	206

were taken by the nose instead of the mouth. But no food ever reaches the starting point of nasopharyngeal carcinoma.

The excessive hawking of phlegm from the back of the throat habitual among the coolie class has been pointed to as evidence of a predisposing nasopharyngeal catarrh. But, in point of fact, the nasal passages of the average Chinese peasant are broader and probably less subject to catarrh and sinusitis than those of the average European.

One enthusiastic Ear, Nose and Throat Specialist in Canton urged routine adenoidectomy for all Chinese children as a prophylactic against the disease later on. But he presented no evidence; and in other parts of the world preservation of adenoid tissue does not appear to predispose to nasopharyngeal carcinoma.

The poorer Chinese live in overcrowded rooms, poorly ventilated, and with the soot from Kerosine oil lamps, the fumes from cooking chatties, burning wood or charcoal and the fumes of low grade tobacco polluting the air. Dobson[6] of Yeung Kong put this forward as a likely predisposing cause.

Dr. Balasingham of the Medical School in Singapore University recently told me that he was now investigating the hypothesis that the chief predisposing cause is some carcinogenic substance produced by the combustion of opium smoked in the bowls of the pipes of those addicted to the habit. Opium smokers do certainly inhale and expel the smoke through their nostrils, and the theory would largely interpret the geographical and racial distribution of the complaint. It also comes into line with the recent work of Doll and Hill[7] on the correlation of cigarette smoking and bronchial carcinoma of the lung. But many of the cases in the wide experience of my friend, Dr. Shi Man Wai, and in my own observation, have not appeared to be opium smokers. However, investigation of the products of burning opium for carcinogenic substances, and

of the question of opium smoking in nasopharyngeal carcinoma cases is sufficiently called for.

If we accept that carcinoma is due to an intra-cellular virus, then the nasopharyngeal variety, especially when occurring in persons living in badly ventilated living quarters, is one where we might reasonably suspect the possibility of transmission by droplet infection. But I can only remember one instance where nasopharyngeal carcinoma occurred in two members of the same household within a period of two or three years.

PATHOLOGY

The neoplasm begins (1) in the posterior part of the lateral wall of the nasopharynx—the fossa of Rosenmuller—behind the orifice of the tuba auditiva ; (2) in the posterior wall to one side of the middle line ; (3) in the roof to one side of the middle line. It may begin close to the line of junction of ciliated columnar epithelium of nasopharynx with the stratified epithelium of oropharynx. The cancer cells of the primary growth tend to ramify in the subjacent tissues in closely packed columns or plaques the central parts of which not infrequently show areas of necrosis. The cells are spheroidal in shape with deeply staining nuclei and frequent mitoses. Keratinisation and cell nests are hardly ever seen, but Nos. 2 and 2*a* of Dr. Tait Smith's specimens do show this in the primary growth and in the secondary in the lung, and I have had one or two cases also. Nor is there any appearance of the lumen-like spaces seen in columnar-celled carcinoma. Nor has colloid degeneration been observed. In the lymphatic glands the secondary deposits are sometimes less clear, the cancer cells being more or less isolated or in small groups interspersed with lymphoid tissue. And this has led some surgeons into the error of supposing the condition to be a lymphosarcoma, and some pathologists at the Peking Union Medical College into naming the condition lympho-epithelioma[8]. The entire absence of lymphoid elements in metastases (other than those in lymphatic glands) proves how false this view must be. Nor is the " epithelioma " part of the term lymphoepithelioma free from objection.

The malignant process probably starts in the ciliated low columnar epithelium lining the nasopharynx.

Nevertheless an investigation by serial sections of all the walls of the nasopharynx, both in Chinese and in Europeans, to determine the exact line of demarcation between the ciliated columnar and stratified epithelium, and to look for glandular elements which might be a possible starting point for the carcinoma is desirable.

SPREAD OF GROWTH

This cancer, starting in the very centre of the head, spreads in the usual ways :—(1) by direct growth into the surrounding tissues ; (2) by cells breaking away and being carried by the lymph stream as emboli into the lymph glands draining the area and also probably by growth along the lymphatic channels—a process first described by Sampson Handley, in cases of carcinoma of the breast, as permeation ; (3) by cells breaking

away into the blood stream and being carried as emboli to distant parts of the body.

Let us consider (1) the DIRECT centrifugal spread.

Upwards the growth may infiltrate the bone and destroy much of the base of the skull. This is not shown in our lantern slides, but the great extent to which it takes place is clearly seen in the post-mortem specimens kindly lent by Dr. Tait Smith.*

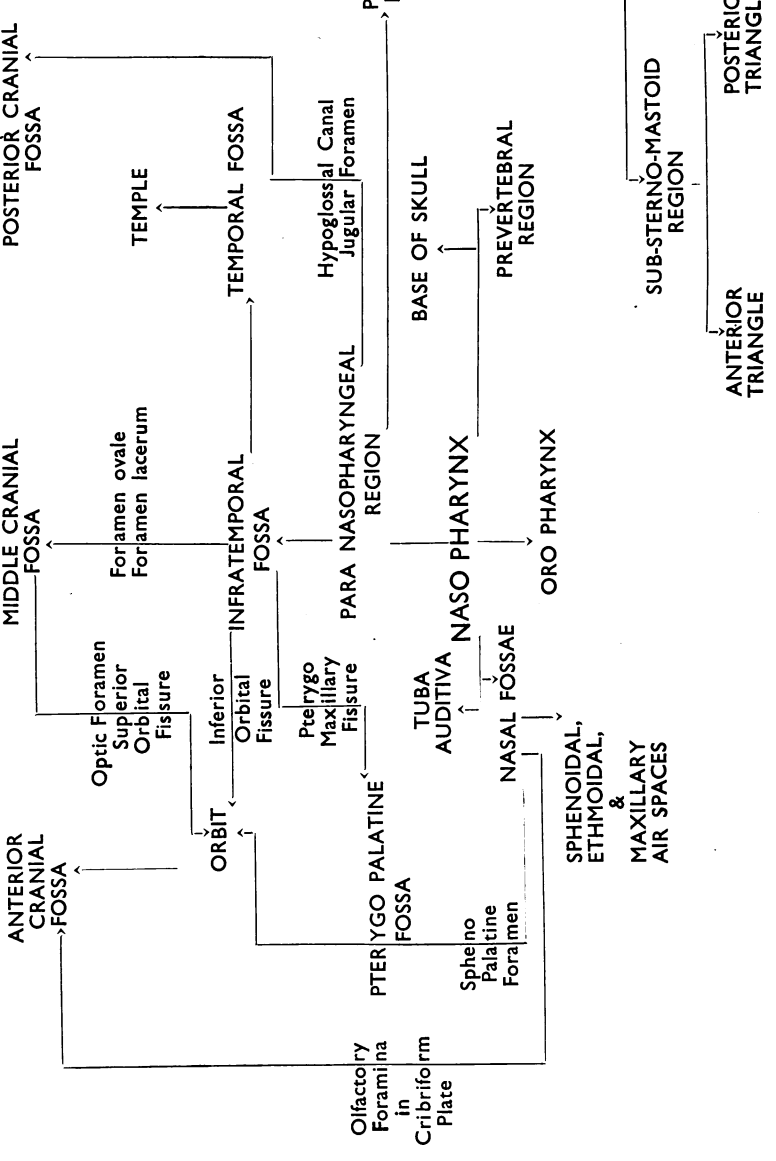
Creeping *forwards* through the posterior nares along the mucous membrane it will gradually block the nasal fossae and may eventually present at the anterior naris as a polypus. The soft parts of the nose may be distended, but not the bony parts. So that there is no separation of the orbits producing the so-called " frog-face " seen with the slower growing fibroma or fibro-angioma occurring in youths from 15 to 25. Through their ostia the neoplasm will come to fill the maxillary and other air sinuses. Through the olfactory foramina in the cribriform plate the anterior cranial fossa will be invaded. Through the spheno-palatine foramen and via the pterygo-palatine fossa and the inferior orbital fissure the orbit will become choked with growth. Through the floor of the nasal fossae the process may penetrate the hard palate and present in the mouth. Further back the soft palate will be depressed, often infiltrated and even perforated, and behind the uvula the tumour enters the oropharynx, and eventually oro- and nasopharynx may be blocked to the extent of preventing deglutition and respiration.

Posteriorly the prevertebral fascia may be eroded and the prevertebral muscles infiltrated.

Laterally the new growth soon reaches the *para*-nasopharyngeal region at the base of the skull. This region is sufficiently important, in this connection at least, to merit special attention from the anatomists and to become a named region for description. Here lie the tuba auditiva and the tensor palati and the levator veli palatini muscles. Here, too, the glossopharyngeal, vagus and accessory and the internal jugular vein pass downwards from the jugular foramen, and the internal carotid artery passes upwards to enter the carotid canal. Here also is the superior cervical ganglion of the sympathetic with its branches, and the hypoglossal nerve from the hypoglossal canal coursing downwards and forwards. The nerves lie almost in contact with the lateral wall of the

* These were—(1) and (1) two halves of the same head showing great blocking of the nasopharynx by carcinoma and spread into the posterior cranial fossa.
(2) half a skull showing epothelioma of the nasopharynx.
(2*a*) a lung from the same patient as (2) showing secondary deposits.
(3) half a head showing carcinoma blocking the naso- and oro-pharynx.
(4) half a head showing carcinoma completely eroding the basi-sphenoid and basi-occipital and bulging also into the anterior and into the middle cranial fossae.
(5) half a head showing carcinoma filling the naso- and oro-pharynx and posterior ethmoidal cells.
(6) half a head showing carcinoma spreading through the hypoglossal canal into the posterior cranial fossa and infiltrating the medulla oblongata.
In one of the specimens where there was a considerable degree of anaplasia the possibility of a reticular sarcoma was excluded by the use of a silver stain which failed to show any intercellular fibrils.

TABLE II.


MEDULLA OBLONGATA
POSTERIOR CRANIAL FOSSA
CHEEK
DEEP PAROTID REGION
MIDDLE CRANIAL FOSSA
TEMPLE
TEMPORAL FOSSA
Hypoglossal Canal
Jugular Foramen
ANTERIOR CRANIAL FOSSA
Optic Foramen
Superior Orbital Fissure
Foramen ovale
Foramen lacerum
BASE OF SKULL
SUB-STERNO-MASTOID REGION
POSTERIOR TRIANGLE
ORBIT
Inferior Orbital Fissure
INFRATEMPORAL FOSSA
PARA NASOPHARYNGEAL REGION
PREVERTEBRAL REGION
ANTERIOR TRIANGLE
Pterygo Maxillary Fissure
TUBA AUDITIVA
NASO PHARYNX
ORO PHARYNX
PTERYGO PALATINE FOSSA
NASAL FOSSAE
SPHENOIDAL, ETHMOIDAL, & MAXILLARY AIR SPACES
Sphenopalatine Foramen
Olfactory Foramina in Cribriform Plate

nasopharynx and every one of them may be infiltrated with growth singly, or with others, producing the characteristic effects. More laterally the facial nerve runs downwards lateralwards and forwards from the stylomastoid foramen.

Through the hypoglossal canal the posterior cranial fossa may be reached and even as in one of these post-mortem specimens the medulla oblongata may be directly invaded. Through the jugular foramen a little further forwards the posterior cranial fossa may also be reached and most of the cranial nerves here lie open to attack. Posteriorly the neoplasm may pass deep to the parotid gland to grow downwards beneath the upper part of the sterno-mastoid muscle and thence to both anterior and posterior triangles of the neck. Or through the parotid region laterally and superficially the disease may spread to form a tumour on the face below the zygomatic arch.

From the para, nasopharyngeal region the growth rapidly reaches the infratemporal fossa more laterally, where it infiltrates the muscles of mastication and the mandibular division of the trigeminal nerve.

Thence directly by the inferior orbital fissure the orbital contents are reached. Through the foramen ovale and the foramen lacerum the middle fossa is frequently involved (Post-Mortem specimen 4) and then through the superior orbital fissure and the optic foramen alternative routes to the orbit are provided. And through the roof of the orbit (as in No. 4) as well as through the cribriform plate, the anterior cranial fossa may be entered. Deep to the zygomatic arch the temporal fossa and so the temporal region of the face and scalp are reached.

(2) LYMPHATIC spread is to the deep cervical lymph glands beneath the upper part of the sterno mastoid and in the anterior and posterior triangles of the neck, many of the contents of which are liable to be implicated. The glands in the axilla may ultimately enlarge and nerves in the axilla become paralysed. The opinion has already been expressed that lymphatic spread may be by embolism or by permeation. This is not merely an academic point. If embolism be the sole method the primary growth and the secondary glands could be removed separately with but a small risk of cells being left behind. But, as it is felt that permeation also takes place, the whole intervening tract, from the primary growth in the lateral wall of the nasopharynx, with the para-nasopharyngeal region and its important contents, to the upper deep cervical glands, requires extirpation together with bilateral block dissection of the neck, a formidable and mutilating operation.

(3) BLOOD spread takes place to the liver, lung, spine, shoulder, pubis, spinal theca, cranial bones and probably elsewhere.

CLINICAL DIAGNOSIS

When the amazing commonness of nasopharyngeal carcinoma is alleged, you may doubt whether the diagnosis has always been correctly made. Of course, microscopic section of the primary growth usually

provides conclusive evidence but a biopsy is not always taken, and not many of the patients have actually died in hospital. Biopsy of the enlarged cervical glands was much more practised. Care then has to be taken to exclude primary carcinoma or epithelioma elsewhere, e.g., nose, oro-pharynx, laryngo pharynx, larynx and thyroid.

Many of our cases were diagnosed on clinical grounds alone, and it is here necessary to exercise considerable caution before a case can be admitted for statistical purposes. In order to secure a satisfactory standard, we have employed a system of marking, up to a certain fixed maximum, for each symptom or physical sign, and then of selecting a figure, for the sum to which they add up, above which the diagnosis can be taken as reasonably certain.

In this system up to 25 *marks* are given for the presence of a *firm, hard nasopharyngeal tumour* visible or palpable from the mouth. There may be (1) deviation of the uvula (the commonest), (2) a bulging downwards of the soft palate, (3) blood-stained ulceration and (4) the lower part of a rounded mass projecting below the uvula. A lateral X-ray examination may show a filling defect in the nasopharyngeal space.

Another maximum of 25 *marks* are allotted for *bilateral enlarged glands* in the neck which are *asymmetrical and asynchronous*, that is those on one side have appeared first and remain larger throughout. The glands may become enormous. The upper part of the neck is first involved, but eventually the glands of the whole of the neck and even of the axilla may become affected. Sometimes on the other hand no enlargement of the glands can be detected for many months after the onset of other symptoms.

Nose signs are allotted 15 *marks*. These are (1) epistaxis and (2) nasal obstruction both of which are at first unilateral. When bilateral and complete, the speech is much affected, all nasal tones being suppressed, M and N become B and D, thus " bad man " sounds like " bad bad." Rarely where obstruction is incomplete the patient owing to paralysis of the palate may be unable to shut off naso- from oropharynx and the converse happens so that " bad man " becomes " hman man." Excessive discharge of mucus is usual, and there is a disagreeable odour in the expired air. As the tumour enlarges the sense of smell may be lost. With a nasal speculum a polypus may be seen, or it may even protrude from an expanded nostril. X-ray examination will show blocking of the nasal fossae and of the maxillary and other sinuses.

Five marks are allotted for characteristic ear signs. Unilateral deafness of middle ear type, with tinnitus from the onset, is frequent. Retraction of the membrane accompanies these signs. In late cases there may be a thin discharge from a small perforation.

Five marks are also given for a characteristic *nerve involvement*. Each of the 12 so-called cranial nerves, the cervical sympathetic system, and the upper three cervical spinal nerves have been affected in different cases. The olfactory nerves, bulb and tract *may* be infiltrated, nevertheless most

cases of anosmia are due to blockage of the nasal cavities. The optic nerve may be implicated with resulting optic atrophy, blindness and loss of pupilary reflex to light on one or both sides. Or the optic disc in late cases with intracranial spread may show severe papilloedema.

The oculo-motor, trochlear and abducent nerves may be involved causing ophthalmoplegia or the abducent may be the first or the only one to be paralysed giving a convergent squint. This may occur on one or both sides. Unilateral ptosis is not uncommon.

When the trigeminal nerve is defective the maxillary and mandibular branches may be affected separately or together and numbness and tactile anaesthesia of the face or severe neuralgia of the upper or lower jaw result. When the motor part of the mandibular division is put out of action there is wasting of the temporal region and of the cheek, and deviation of the mandible to the affected side on the opening of the mouth. Palpation will show that the masseter fails to harden when the patient tries forcibly to clench his teeth.

The commonly observed trismus is due to involvement of the pterygoid muscles, just as inability to rotate the neck comes on when the prevertebral muscles are caught up. The facial nerve is paralysed at times and this can be seen by the inability of the patient completely to close the palpebral fissure and by deviation of the angle of the mouth to the sound side on whistling or smiling.

Infiltration of the acoustic nerve (in the posterior fossa) was seen in one case only.

Paralysis of the glossopharyngeal nerve is seen by insensivity to touch with a bent probe to the posterior third of the tongue (and, less easily, by the loss of the sense of taste when sugar or quinine are there applied). The anterior two-thirds of the tongue is usually paralysed at the same time.

Paralysis of the vagus causes abducent or complete paralysis of one vocal cord with some hoarseness of the voice and brassy cough. Syncopal attacks something of the Stokes Adams type have been observed when the vagus is involved, but they may very well have been due to an accompanying heart condition. The accessory nerve which may be surrounded in the posterior cranial fossa, in the jugular foramen, in the para-nasopharyngeal region, or perhaps most commonly by enlarged glands in the neck, is often affected. This is indicated by inability to shrug the shoulders, wasting of the upper border of the trapezius and failure of the left sternomastoid to stand out in relief when the patient looks upwards and to the opposite side.

The posterior belly of the omo hyoid muscle then stands out to an unusual degree. Paralysis of the soft palate on one side with deviation of the uvula to the opposite side probably signifies failure of accessory fibres running through the pharyngeal plexus.

Destruction of one hypoglossal nerve is shown in the usual way by tremor and wasting of the same side of the tongue with inability to protrude it to the opposite side, so that when the patient is asked to put out the

tongue the tip curls towards the paralysed side. When the cervical sympathetic is caught up in the growth there are of course enophthalmos, small pupil and narrowed palpebral fissure. Sweating may also be affected and the lachrymal secretion inhibited so that the unhappy patient cannot even weep tears or only on one side.

The ansa hypoglossi (fibres of the upper three cervical nerves) may be affected by enlarged cervical glands so that the supra- and infra-hyoid muscles cannot be made to stand out.

The clavicular part of the pectoralis major may be paralysed from axillary gland involvement.

TABLE III

Clinical Criteria of Nasopharyngeal Carcinoma for Statistical Purposes

		Marks
(1)	A firm, hard tumour seen or felt in the nasopharynx	25
(2)	Enlarged cervical glands, bilateral but asynchronous and asymmetrical	25
(3)	Characteristic nose signs	15
(4)	Characteristic ear signs	5
(5)	One or more characteristic nerve paralyses	5
(6)	Headache, unilateral to begin with	5
(7)	Unilateral exophthalmos and/or swelling of cheek and/or of temple	5

Deduct 10 if patient under 15 years.
Deduct 10 if patient between 15 and 25 years with " frog face."
A total marking of *over* 50 justifies Diagnosis.

N.B.—The marking does not represent the frequency of occurrence of any sign but its *diagnostic* value.

Headache, which is unilateral to begin with, scores 5 *marks*. It comes from erosion of the base of the skull, and of nerves and of muscles and later from increased intracranial pressure. The pain can be really terrible and, combined with nasal obstruction and in late cases with threatened suffocation and severe dysphagia, makes continued existence almost unendurable. The author used sometimes to ask visitors to his wards to pick out the three or four most miserable-looking patients without looking at the diagnoses, and they would almost always choose nasopharyngeal carcinoma cases.

Proptosis of the eyeball and/or *swelling in the temple* and/or *in the cheek* score a further 5 *marks*. The commonest cause of unilateral exophthalmos in the Far East was nasopharyngeal carcinoma.

These marks add up to 85. Under 15 years of age we would deduct 10 marks and from 15 to 25 years in a patient with frog-face we would also deduct 10 marks.

If the total then adds up to over 50 a diagnosis of nasopharyngeal carcinoma was considered to be justified.

Even the above list does not cover all the symptoms and physical signs. Anaemia for example has not been mentioned, as not being of great diagnostic value.

TREATMENT

While the above are useful for fixing a diagnosis, most of them occur too late for permanent cures to be obtained at such a stage. For in regard to treatment of this disease, two lessons have been learned from a long experience.

(1) The first principle of treatment is that *early diagnosis* is essential. It is no good waiting till a certain diagnosis can be made on clinical grounds alone. The presence of any one *suspicious* sign that there is even a remote possibility of nasopharyngeal carcinoma demands (at least in China and Hong Kong where the disease is rife), a thorough visual inspection of the naso-pharynx with biopsy of any doubtful tissue.

What are these suspicious signs? Any one of the following standing alone :—

(1) Epistaxis
(2) Unilateral nasal obstruction
(3) Unilateral tinnitus and deafness
(4) A single slightly enlarged gland in the neck
(5) Neuralgia of upper or lower jaw
(6) Unilateral headache
(7) Any characteristic nerve paralysis
(8) Slight unilateral exophthalmos.

The ordinary post-nasal mirror is not adequate for the visual examination required here. The posterior wall and fossa of Rosenmuller are not well seen. The same is to a less extent true of the cystoscopic type of nasopharyngoscope, for example Wolf's or Holmes'. These latter require and are susceptible of great improvement. The writer was working on this problem many years ago. The models then made were however destroyed in the War.

We must be able to see every part of every surface of the nasopharynx at right angles to the surface with good illumination and in correct focus. And all this in comfort and ease for both surgeon and patient. For the initial lesion may be a mere crack of a slight induration. A biopsy specimen must be able to be taken whilst looking through the telescope and the site of removal must be similarly sealed by diathermy to check haemorrhage and infection. There is no such instrument on the market so far as I know.

(2) The second principle of treatment is that *Radiotherapy* is the weapon of choice in fighting this disease. The cells of the growth are very radiosensitive. Surgery can only play a small part—removal of an enlarged gland or biopsy of the primary growth as aids to diagnosis, and very occasionally the removal of large masses in the neck to reduce the total

dose of gamma rays required and to lessen the mass of broken down necrotic tissue left to be absorbed.

The writer has attempted the most extensive and varied operations, in common with other surgeons. The mortality of such operations is low, but the patients' disabilities are increased and recurrence is prompt. Some form of chemotherapy may eventually solve the problem. Stock has demonstrated very great diminution in size in some cases of naso-pharyngeal carcinoma as a result of high dosage of urethane intravenously[9]. Even with radiotherapy, the middle and later cases are only relieved. Even within a few days, the agonising headache, face-ache, or nose-ache subside, the tumours begin to go down and cranial nerve paralyses lessen. These may indeed soon disappear altogether and the patient is overjoyed at the apparent reprieve. Alas, within six months signs of recurrence have made their appearance.

But if patients came at the earliest symptom, if the disease was promptly recognised and treated with radiotherapy, they could nearly all be cured.

It may be asked how long does the patient normally live after the first sign of the disease. Apart from radiotherapy the duration is usually six months to two years. One patient died at the end of three months; a very few have dragged on for five years. Radiotherapy even in middle and late cases increases the period of survival. Just occasionally however where large masses of growth were treated, radiation was followed a few weeks after the initial treatment with pyrexia, metastases in the liver and early death.

Our earlier cases were treated with two six mgm. needles tied in the middle of each of two soft rubber catheters (each introduced through one nostril and brought out at the corner of the same side of the mouth) for four days and nights and with radium plaques to the neck. This was no mean ordeal for the patient. Moreover the radium lay close to the soft palate and distant 1 or 2 cm. from the starting-point of the growth. Latterly improved methods were in use. Both ends of each of the rubber catheters (containing the 6 mgm. tubes) were brought out of the same nostril, and the parts *not* containing the radium needles were filled with thick, slightly flexible copper wire. By adjusting the two copper rods ensheathed in the catheter ends, the two 6 mgm. needles could be adjusted to lie at any angle against the growth and away from the soft palate; and the ends outside the nostril could be bent down over the cheek and secured by strapping. The position was checked by a lateral X-ray film. The dose could be reinforced by deep X-rays through both temporal and infra-temporal regions avoiding the hairy scalp (save in cases of intracranial spread where loss of hair has to be accepted). Both sides of the neck, from the border of the mandible, lower border of the zygoma and superior curved line of the occipital bone—above, to the level of the clavicles below, received full X-ray dosage. As all this was too much to be given at once, the nasopharyngeal radium was first applied and the X-rays as soon as possible afterwards.

To sum up: Nasopharyngeal carcinoma is very common amongst the Chinese race, much less common and perhaps sometimes overlooked in Europeans and North Americans. Its successful treatment calls for early diagnosis (with an improved type of nasopharyngoscope which requires further experimental development), and early thorough treatment by radiotherapy.

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MONTHLY DINNERS

Monthly dinners are held in the College on the Wednesday before the second Thursday of each month. The following are entitled to attend with their guests; all Diplomates and students of the College and Members of the Associations linked to the College through the Joint Secretariat. It is not necessarily intended that guests should be members of the medical profession.

The dinners will be at 7 p.m. on the following Wednesdays: November 7, and December 12, 1951; January 9, February 13, March 12, April 2, May 7, June 11, and July 9, 1952.

The cost is £1 10s. 0d., which includes cocktails before dinner and wine at the table. Applications for tickets, accompanied by a cheque for the appropriate amount, must be sent to the Deputy Secretary at least a week before the date of the dinner. Cheques should be made payable to "Royal College of Surgeons of England." The dress is Lounge Suit.