ORIGINAL ARTICLE

DIAGNOSIS OF "SILENT" NASOPHARYNGEAL CARCINOMA

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Abstract

In an attempt to diagnose Nasopharyngeal Carainoma while the tumor is still silent and confined to the nasopharynx, a prospective study was carried out to examine under general anaesthesia the nasopharynx of all patients undergoing elective nasal *surgery. Of total 218 patients examined in this study, two cases of "'silent" NPC were diagnosed. In addition, other unexpected abnormalities of the nasopharynx were revealed. Routine examination of nasopharynx under anaesthesia, is rewarding to diagnose silent NPC in endemic areas; and could be utilized to screen* selected *section of population i.e. those patients undergoing surgery under general anaesthesia.*

Key Words = Nasopharyngeal Carainoma — Examination of Nasopharynx.

Introduction

Nasopharyngeal Carcinoma (NPC) continues to be the focus of attention for the otolaryngologist all over the world because of the difficult)- in making an early diagnosis and therefore achieving a satisfactory cure rate. In Saudi Arabia the problem is enchanced by the high incidence of the disease and the very late diagnosis of most of the cases[1, 2].

NPC has distinctive racial and goegraphic distirbution. It is the commonest malignant tumor in people born is southern China — 18 cases per 100,000 population — whether they live in Hong Kong or in the United States[3] In Caucasian people it is a rare tumour with an incidence of l-2 per 100,000 in males and approximately 0.4 in females[4]. In Saudi Arabia the absolute incidence of NPC cannot be defined because there is no cancer registry. However, there are evidences that the incidence of NPC is moderately elevated. In a study based on 7251 new cancer patients seen in 6 year period at King Faisal Specialist Hospital which is the principle center for cancer therapy in Saudi Arabia the crude relative frequency of NPC was found to be 3.6% (4.7% males and 2.3% females) of all cancers'. This is compared to 0.25% (0.3% males 0.2% females) of all cancers in populations of European origin and with 56.9% of all cancers occuring in men in the city of Canton in South China[5]. Also NPC was found to account for 30% of the total number of patient: with head and neck cancer in Saudi Arabia This is considerably higher than the 2% found in the Western World[6]

The majority of Saudi NPC patients present at an advanced stage of the disease. Analysis of 345 patients seen at King Faisal Specialist Hospital, Riyadh, showed on presentation only one patient (0.29%) was in stage I, 2 (0.58%) in stage II, 11 (4.9%) in stage III and 325 (94%) were in stage IV'.

NPC is known to have a higher incidence of distant metastases compared with other head and neck cancer. About one third of all patients with NPC ultimately develop distant metastases.[7, 8, 9, 11]

However, on initial diagnosis the incidence of distant metastases was found in many pa's of the world to be less than 4%[8, 9, 10]. This is contrasted to the very high incidence of 11% in patients seen in Riyadh, Saudi Arabia'. This is particularly disturbing statistic since the disease could not be cured once distant metastases occur whether present initially or eventually. In fact 90% of patients die within a year of diagnosis of the first metastasis'[1].

Better outcome can only be achieved

by early effective treatment based on early accurate diagnosis. This can be accomplished if more nasopharynges were subjected to examination. Examination by posterior rhinocospy in the outpatient clinic is a difficult procedure even by physician experienced in diagnosis and examination of this region. This is because of the small dimensions of the nasopharynx, the small size mirror used, the gaging reflex and the inability of many patients to co-operate. Examination of the nasopharynx under general anaesthesia overcomes these difficulties and allows diagnosis of postnasal space conditions including NPC at an early stage.

Materials and Methods

All patients admitted for elective nasal surgery had undergone complete general and ENT examination. Standard plain X rays of the nasopharynx and paranasal sinuses were taken. Patients with reasonable clinical or radiological suspecion of nasopharyngeal pathology were excluded from the study. Consents for examination of nasopharynx and possible biopsy were obtained.

After giving general anesthesia the patient was placed in tonsillectomy position and the nasopharynx visulaized by using large warm laryngeal mirror while retracting the soft palate. If the nasopharynx looked and felt to be normal, nothing more was done. Lesion seen have been dealt with. according to pathology e.g. antro-choanal polyp removed nasally, adenoid curetted, cyst marsupilized and ulcers or other masses biopsied. All *removed* materials were sent for histological examination.

Results

The total number of patients examined were 218 seen over 20 months period. The patients ranged in age from 12 to 72 years with a mean of 42 years: 142 were male and 76 were female; all patients were Saudi. The pre-operative diagnosis of the patients were as follows: 106 deviated nasal septum, 53 chronic rhinitis, 24 nasal polypi, 19 chronic sinusitis and 16 with other nasal conditions.

The results of nasopharyngeal examination clinical and histological are shown in Table 1.

Illustrative Case: A 45 year old man admitted for routine nasal polypectomy. He met the criteria of inclusion in the study because there was no suspecion of NPC. However, examination of the nasopharynx under general anaesthesia showed a small nodular firm mass in the left postero-superior wall. Biopsy confirmed undifferentiated carcinoma (WHO Type 3). The tumor was staged as T. NoMo C.T. Sean of this patient is shown in Figure 2.

Finding	Number	Percentage
Normal	201	92.2
Adenoid	12	5.5
Cysts	2	0.9
Carcinoma	2	0.9
Antor-choanal polyp	1	0.4
Total	218	100.00

Table 1: Pathological findings in routine Nasopharyngealexamination.

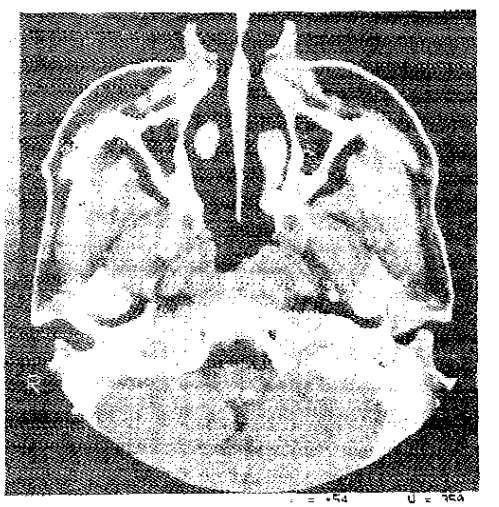

Fig 2: Axial C.T. of the Nasopharynx showing assymetry of the posterior aspect due to small soft tissue mass

Discussion

The following factors were reported to have adverse effect on the prognosis of NPC: long lapse of time from the first symptom. cranial nerve involvement. advanced TNM staging, lower neck mass, and distant metastases[7, 8, 9, 10, 12]. Most of these adverse factors are directly related to delayed diagnosis. This is because NPC usually gives

subtle symptoms **and** signs that are **confu**sing to the primary care physician, otorhinolaryngologist, neurologist. ophthamologist and other specialist until the disease has reached an advanced stage. Also the delayed diagnosis is due to the relatively concealed site of the tumor and due to the difficulty of routine examination of the nasopharynx. Examination by flexible fibreoptic *nasopharyngoscopy* gives a good view but it cannot be applied to anxious patients with active gaging reflex and is costly. Examination of **the** nasopharynx under general anesthesia allows adequate exposure and performing biopsy if it becomes necessary. It is a short procedure and does not need expensive sophisticated *equipment*,

This study was carried out on selected and limited patients i.e. those only having nasal surgery under general anaesthesia. Consequently, no attempt has been made to reach statistically significant conclusion about the prevalence of SPC in **Saudi** Arabia. Nevertheless, the results of this study showed that examination of the nasopharynx under anaesthesia could be utilized for "screening'" patients submitted to surgery under general anaesthesia. By adopting this measure some cases of "silent" SPC could be diagnosed at an early stage. Also this may allow diagnosis of tumors producing symptoms which are masked or overlaped by presence of concurrent disease e.g. nasal polyps. In addition. other conditions like cysts, adenoid or choanal polyp may be revealed by using the same procedure.

The other possible screeing method of nasopharynx like the association of Epstein Barr Virus (EBV) with certain types of NPC. This association is well documented' [3, 16]. The EBV anti-bodies titer has some clinical application like directing attention to the nasopharynx in patients with occult tumors, [13, 16] determination of the prognosis at the time of diagnosis' and predicting recurrence before it becomes *clinically* **apparent'** [3]. Also the titer of the viral capsid antigen (IgA/VCA) has been used for screening programme. to identify high risk individuals for futher clinical and immunohistological evaluation of the nasopharynx[17].

However, since the antibody spectrum and titer reflect to large extent the total tumor burden, survey for IgA/VCA will undoubtedly miss some of those who are in the initial stage of the disease Type 1 WHO tumor (differentiated squamous cell carcinoma) also will be missed because it is not associated with EBV[19]. It should also be remembered that tumor at other sites might occasionally be associated with EBV e.g. salivary glands, thymus, lung and other sites [8]. Finally various cancers and their therapies have immuno suppressive effects and thus activate persistent latent EEV infections resulting in enhanced antibody titer[20].

'The various uncertainties referred to underline the limitation of serological tests and the importance of clinical evaluation. High index of suspection and practical method of "screening" the nasopharynx are required to improve the *outcome* of WC.

Acknowledgement

I like to express my thanks to all Residents and Registrars of ORL Department of King Abdul Aziz University Hospital for their participation in this study. My thanks also to Miss Carole Tirona for her secretarial work.

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