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The Clinical Manifestations Of Nasopharyngeal Cancer In Libya–A Comparative Study

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ABSTRACT

Objective: To describe clinical manifestations of nasopharyngeal cancer. **Methods**: Study performed on 100 patients who had been histologically diagnosed as having nasopharyngeal cancer between October 2005 and September 2009 in Tripoli Teaching Hospital, Libya. A detailed medical history, clinical examination, biopsy and histopathological study were performed. **Results**: One hundred diagnosed nasopharyngeal cancer patients were included in this study, 70 males 30 and females. Their age ranged from 10-59 years, the high incidence was in age group 40-49 years (32%). The least cases were in age group 10-19 years (14%). The most presenting symptoms of nasopharyngeal cancer were in the order of frequency: painless neck mass 60%, nasal obstruction 50%, headache, 34%, hearing loss 32%, epistaxis, 10%, trismus 4%, loss of vision 2%, diplopia and squint 2%. **Conclusion**: The majority of nasopharyngeal cancer were presented with painless cervical lymph node either unilateral or bilateral. Nasal obstruction and hearing loss associated with headache were found in high percentage of patients. Cranial nerve palsies and trismus found in the late stages.

Key words: Nasopharyngeal cancer, NPC, PNS

Introduction

The nasopharyngeal or post nasal space (PNS) lies behind the nasal cavities and above the soft palate. On each lateral wall of the nasopharynx is the pharyngeal opening of the pharyngo-tympanic tube (Beasley, 1997). Behind and above the posterior margin of the tube, between it and the posterior pharyngeal wall, lies the lateral pharyngeal recess (fossa of Rosenmüller) (Chuan, 1997). This is the most complex of all walls because of its close association with the contents of the parapharyngeal space and the lymphatics (Beasley, 1997). The nasopharynx is a clinical blind spot in the middle of the skull base. It is a difficult area to see or feel, and being situated in a relativity big and inert space where, only air and mucus are in transit (Chuan, 1997).

Nasopharyngeal cancer (NPC) originates most frequently in the lateral and or posterior walls of the nasopharynx around the fossa of Rosenmüller. The position of this tumor allows for infiltration of the skull base (Horsinger and Myers, 2003). Nasopharyngeal cancer can remain silent for a long time causing few primary symptoms (Chew, 1990). It is a condition which usually has an insidious onset and nonspecific features in the initial stages, so it is difficult to make an early diagnosis (Penas-Prado *et al*., 2001). It has an early tendency to local spread to the parapharyngeal space. Bulky nodal involvement is a common presentation regardless of the size of the primary (Chiesa and De paoli 2001 and Sun *et al.*, 2004).

Lymph node metastases to the neck are present in 70-90% of cases and are unilateral in 50% of cases. In small percentage of cases extension of lymph node metastases to the mediastinum and hilar areas are encountered (Weber *et al*., 2003).

The aim of this study was to describe the clinical presentation of NPC.

Materials And Methods

This study conducted on 100 patients who had been histopathologically diagnosed as having nasopharyngeal cancer between October 2005 and September 2009 in Tripoli Teaching Hospital, Libya. A detailed medical history and clinical examination were performed. The diagnosis was based on local examination, nasopharyngeal endoscopy and biopsy under local anesthesia, with histopathological study. CT scanning of the paranasal sinuses and nasopharynx was taken in some cases.

Results:

100 patients presented with NPC, there were 70 males (70%) and females 30 (30%) with male to female ratio 2.33 : 1. The age of patients ranged from 10-59 with a mean age 36.8 years (Table 1). Cases were in age group 40-49 of life, while 14 were aged 10-19 years.

The most common presenting symptoms of nasopharyngeal cancer were in the order of frequency: painless neck mass (60%), unilateral (44%) and bilateral (16%). Nasal obstruction (50%).Headache (34%), Hearing loss

(32%), epistaxis (10%). Trismus (4%), Loss of vision (2%). Diminution of vision (2%), diplopia (2%), squint (2%), Table 2. The signs encountered in those patients in the order of frequency were: cervical lymph nodes (60), unilateral (44%), bilateral (16%). Nasal mass (50%), bilateral (38%), unilateral (12%). Nasopharyngeal mass 30%. Unilateral secretory otitis media (29%). Oropharyngeal mass (8%). Trismus (4%) and squint (2%) Table 3.

Table 1: Age distribution of cases with NPC. N=100

Age group	*No. of case(%)*
10-19 year	14 (14%)
20-29 year	20 (20%)
30-39 year	16 (16%)
40-49 year	32 (32%)
50-59 year	18 (18%)

Table 2: Presenting symptoms of nasopharyngeal cancer.

Symptoms	*No. of cases(%)*
Painless neck mass	60 (60%)
Nasal obstruction (Unilaterl & bilateral)	50 (50%)
Headache	34 (34%)
Hearing loss	32 (32%)
Epistaxis	10 (10%)
Trismus	4 (4%)
Vision loss	2 (2%)
Diminution of vision	2 (2%)
Diplopia	2 (2%)
Squint	2 (2%)

Table 3: Presenting signs of nasopharyngeal cancer.

Signs	*No. of cases(%)*
Cervical lymph nodes	60 (60%)
Nasal mass	50 (50%)
Nasopharyngeal mass	30 (30%)
Secretory otitis media ipsilateral	29 (29%)
oropharyngeal mass	8 (8%)
Trismus	4 (4%)
Squint	2 (2%)

Discussion:

The poor prognosis for patients with nasopharyngeal cancer is due to its advanced stage at the time of diagnosis (Suzina and Hamzah, 2003). NPC is difficult to be diagnosed. Not only because the postnasal space (PNS) is inaccessible to examination, but also it is frequently occupied by normal lympho-epithelium which make differentiation from NPC difficult (Leong *et al*., 1999).

Over the last two decades improved methods of examination and health education have changed little in the initial clinical presentation of NPC (Chuan, 1997).

In the present study highest was in the age group 40– 49 years of life (32%), and lowest incidence was in the age group 10–19 years of life (14%). This is in agreement with another study reported that NPC tends to be manifested at relatively younger age in North Africa and Saudi Arabia (Weber *et al*., 2003). However, these results disagree with other studies which, reported that the most NPC occurred between 45 to 55 years age (Chuan, 1997 and Horsinger and Myers, 2003). Lim *et al*. 2003 mentioned that NPC is rare below 20 year olds. This disagrees with our study, where we found 14% of NPC below 20 years old. Males were affected more than females with a ratio of 2.33:1. This is in agreement with other studies (Chuan, 1997; Horsinger and Myers, 2003 and DaLilly-Tariah and Somefun, 2003).

Patients with nasopharyngeal cancer are rarely totally asymptomatic with the exception of patients detected by screening. Most patients have multiple symptoms, which are insidious in onset and are some times disregarded by the patients for months (Chuan, 1997). Symptoms and signs are similar to those reported in the international series. The most common symptoms and signs were painless cervical mass in 60% of our patients. The same findings were observed by other authors (Chuan, 1997 and Sun *et al*., 2004). However, other studies reported that cervical mass occurred in 70-90% in PNC (Oburra, 1998, Weber *et al*., 2003 and Lim *et al*., 2003). Those studies had conducted on late stage NPC and used other tools for diagnosis of cervical mass as MRI and CT- scanning.

Nasal symptoms and signs were found in 60% of our patients. This disagrees with other reports which mentioned that nasal symptoms occurred in 40-41% (Chuan, 1997, DaLilly-Tariah and Somefun, 2003).

Complete nasal obstruction is a late presentation, it occurs in the early stage of the disease, it is often due to superimposed infection (Chuan, 1997).

Pain is an ominous symptom in nasopharyngeal cancer. Severe pain and headache is the hallmark of terminal disease. Our study reveled that 34% of patients presented with headache. However, other study reported that 25% of patient ware presented with headache (Lim *et al*., 2003). It suggests that variations of prevalence of headache may be due that the patients couldn't explain correctly their complaint and confuse between headache and otalgia especially in the late stages. Hearing loss and ear fullness is common presenting complaint in N P C patients. In this study, 32% of N P C ware presented with aural symptoms. The presenting complaint was hearing loss, due to secretory otitis media founded in 29%, and sensorinural hearing loss in 3%. Other studies reported similar findings and otitis media with effusion was not an uncommon presentation of NPC. It is often insidious in onset and the primary tumour can be insignificant in the peritubal region (Chuan, 1997). However, Uzudun *et al*. 2001 mentioned that aural symptoms occurred in 57% of NPC patients. Adult patients with unresolving otitis media with effusion ware presumed to have NPC until prove otherwise.

All the cranial nerves, either singly or in groups can be affected by nasopharyngeal cancer through tumour invasion or compression (Chuan, 1997 and Weber *et al*., 2003). The nerves of ocular muscles (III,IV,VI) are commonly affected within the cavernous sinus. Isolated single cranial nerve palsy is common with nerves V and VI (Chuan, 1997 and Penas-Prado *et al*., 2001). In our study cranial nerves V, VI were affected in 2% of NPC.

Trismus occurred in 4% of our patients due to pterygoid muscles involvement, this is found in late stage of patients with NPC which is similar to other studies (Chuan, 1997 and Weber *et al*., 2003).

It has been observed that patients with NPC often presented late for treatment (Skinner *et al*., 1991) presumably because the PNS is often not examined because it is relatively in accessible and difficult in examination. It has been argued that the solution for early diagnosis is to train primary care physicians how to examine the PNS (Indudharan *et al*., 1997).

The argument that primary care physician who are better trained in the technique of PNS examination are more likely to diagnose NPC earlier, may not necessarily be true. On the contrary, it can be argued that the risk of missed or delayed diagnosis of early NPC may be increase, as NPC are the ones most likely to appear unclear or innocuous in the PNS (Low and Leong, 2000).

Conclusion:

Post nasal space is a clinical blind spot in the middle of the skull base. It is a difficult area to see or feel, nasopharyngeal cancer can remain silent for a long time causing few primary symptoms, so it is difficult to make an early diagnosis. It has an early tendency to cervical lymph node involvement regardless of the size of the primary. Regional Lymph node enlargement, headache, nasal, and ear symptoms were common presenting complaints. Cranial nerves palsies and trismus, were found in the late stages.

In the light of the results of the present study, assessment of the PNS to detect NPC can be difficult, particularly to the primary health physicians, taking considerable training and practice in the technique of PNS examination.

It would be more prudent to focus on educating primary care physicians on clinical presentation and behavior of NPC and to encourage them to refer patients suspected of having NPC for early specialist advice.

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