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Original Article

Correlation Between Cervical Lymph NodesMetastases And Histological Types Of Nasopharyngeal Carcinoma

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Abstract

Objective: The aim is to investigate the relationship between cervical lymph nodes metastases and histological types of nasopharyngeal carcinoma. Methods:Prospective study conducted on 100 patients who had been diagnosed as nasopharyngeal carcinoma, in Otolaryngology department at AL-Thawra Teaching Hospital during the period from September 2003-January 2006. Results:Males 70% and females 30%. The mean age was 36.8 years. WHO type III was the most common type comprising 58% and. presented with cervical Lymph nodes in 82.7%. WHO type I occurred in 30% and cervical lymph nodes metastases was 26.6%. WHO type II found in 12% and cervical lymph nodes were involved in 50%. Conclusion: Nasopharyngeal carcinoma affects males more than females Undifferentiated. nasopharyngeal carcinoma (WHO type III) was the most common type found in the nasopharyngx followed by the keratinized (WHO type I) nasopharyngeal carcinoma. Cervical lymph node metastases occurred in high prevalence with undifferentiated nasopharyngeal carcinoma followed by the non keratinizing nasopharyngeal carcinoma (WHO type II).

Key words: nasopharyngeal carcinoma, metastases cervical lymph nodes, WHO type.

Introduction:

carcinoma (NPC) is low, but it varies significantly among ethnic groups and geographical regions.1.2 NPC has an early tendency to locally spread and nodal involvement is highly frequent and bulky regardless of the size of the primary. 3.4

NPC can be difficult to diagnose. not only because is the post nasal space (PNS) is inaccessible to examination, but also it is frequently occupied by normal lympho-epithelium which can make differentiation from NPC difficult. Together with its frequent atypical presentation, it is not surprising that the diagnosis is missed or delayed.5.6.7

Endemic NPC is biologically different from squamous cell carcinoma of the head and neck. Systemic relapse, especially in those who present with locally advanced disease, is more commonly seen and tends to be more aggressive.8.9 Most NPC in endemic areas are of the World Health Organizination (WHO)type II (non keratinizing carcinoma)

and type III undifferentiated carcinoma. (WHO type III).10

NPC has-unique features among head and neck malignancies that increase the significance of quality of life.11 NPC affects a younger group of patients than do other carcinomas of the head and neck, and usually is not associated with smoking or alcohol abuse.11-15

The purpose of this study is to investigate the correlation between cervical lymph nodes involvement and histological types of nasopharyngeal carcinoma.

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Methods:

One hundred cases had of nasopharyngeal carcino ma are included in this study. All patients underwent history, clinical, examination, nasal endoscopy, biopsy from the nasopharynx under local anesthesia, fine needle aspiration biopsy (FNAB) and histopathological examination. They were attended to in Oto Rhino-Laryngolgy Department, at Al-Thawra. Teaching Hospetal, Sana'a, Yemen, during the period September 2003 – January 2006.

Results:

100 patients diagnosed as nasopharyngeal carcinoma were investigated during the study period from September 2003 to January 2006. males 70 (70%) female 30 (30%) with mean age 36.8 years. According to WHO histological types were: WHO type III 42 (72.4%) males, 16 (27.6%) females, WHO type II 8 (66.7%)male, 4 (33.3%) females, WHO type I 20 (66.7%) and 10 (33.3%) females Table 1.

Cervical lymph nodes involvement found in 62 (62%) 38% unilateral and 24% bilateral in NPC.

Histological types of (WHO III) 58 (58%), keratinized (WHO I) 30 (30%) and non keratinized (WHO II) 12 (12%). Table 2.

The relationship between histological types of PNC and cervical lymph nodes involvement were, WHO type III 48 (82.9%), WHO type I 8(26.7%) and WHO type II 6 (50%). Table 3.

Discussion:

The first nodal station in NPC is the retropharyngeal node which is not clinically palpable but may be shown on cross-sectional imaging. Early diagnosis hence must precede the cervical lymphadenopathy which remains the most common presentation. Besides the fact that the tumour bed is a lympho-epithelium rich in lymphatics allowing early locoregional spread to one or both sides of the neck.12

The relationship between the histological differentiation of the primary tumour and its tendency to metastasize is not certain. Although it has been suggested that the poorer the differentiation the more likely the tumour is to metastasize.13 More recently it has been shown that a close relationship exists between certain histopathological features and neck node metastasis.14

Painless cervical lymph nodes involvement account for 62% in the present study. This is similar to other studies.12-15,16 However, others reported that cervical lymph nodes involvement occurred in higher percentage 70-90%.3-17,18 The later studies were carried on an advanced NPC and used other tools for the diagnosis of cervical lymph nodes metastasis like, CT scanning and MRI.

In the present study WHO type III found in 58% and 82.7% of them

presented with cervical lymph nodes affection. This is similar to other studies reported that WHO type III is the most common histopathological type and associated with higher cervical lymph nodes involvement.10-19,20

In the present study WHO type I found in 30% of NPC, while 26.6% of these cases presented with cervical lymph node involvement. This agreement with other studies mentioned that WHO type I is associated with lower incidence of cervical lymph nodes involvement.17,18,19,20 Its prognosis is worse because of a higher incidence of death from uncontrolled primary tumours and nodal metastases.17-19

WHO type II carcinoma found in this study in 12% and cervical lymph nodes involvement in 50% of them. This agreement with other study reported that WHO type II accounts for 12% of NPC.21 However, Chan etal.10 reported that the most NPC in endemic areas is of WHO type II and WHO type III. Corry etal.19 mentioned that WHO type II account for 6.6% of NPC. This is lower than our results

Generally keratinizing squamous cell carcinoma is relatively radioresistant but less aggressive in behavior. The undifferentiated nasopharyngeal carcinoma is more radiosensitive but aggressive, frequently with advanced

locoregional spread.12 NPC in low-risk populations is of the poorly differentiated type in contrast to the common well differentiated type in sporadic cases.

Conclusion:

The nasopharynx is still the most frequent site for an occult primary in the head and neck with cervical metastases. The most histological type of NPC was WHO type III followed by WHO type I cervical lymph nodes involvement were more prevalent with WHO type III and

high incidence was in males in all histological types of NPC.

Table 1:Relation between histological subtype of NPC and sex of patients.

WHO classification	No. of patients			n =100	
	Males	%	Females	%	Total
WHO type III	42	72.4	16	27.6	58
WHO type II	8	66.3	4	33.7	12
WHO type I	20	66.7	10	33.3	30
TOTAL	70		30		100

Table 2: Histological type of NPC

WHO Classification of NPC	No. case	Percentage %
WHO type III	58	58 %
WHO type II	12	12 %
WHO type I	30	30 %

NPC: Nasopharyngeal Carcinoma.

Table 3: Cervical LN involvement.

Histological type of NPC	Cervical LN involvement			
	Unilateral	Bilateral	Total	%
WHO type III	30	18	48	82.8
WHO type II	3	3	6	50
WHO type I	4	4	8	26.7

LN : Lymph Nodes

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