

## Neck lymphadenopathy as the only clue to nasopharyngeal carcinoma

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**Objective:** To determine the frequency of neck lymphadenopathy as early manifestation of nasopharyngeal carcinoma.

**Methodology:** This was a prospective descriptive study carried out at departments of ENT Ghulam Muhammad Mahar Medical College Hospital, Sukkur, Pakistan, from July 2007 to December 2013. A total of 60 patients with nasopharyngeal carcinoma on histopathology examination were included in this study. A pro-forma was made to collect the data regarding the initial presentation of patient symptoms and signs. In all patients with neck node, fine needle aspiration cytology (FNAC) was done to confirm the metastatic nature of the lymph node.

**Results:** Out of 60 patients, 45 were males and 15 were females with male to female ratio 3:1. The

age ranged from 8 to 68 years (mean 42 years). The most common presenting symptom was neck lymphadenopathy (node) in 80%, followed by ear symptoms in 35%, nose symptoms in 25%, neurological symptoms in 20%, eye in 16.66%, and throat in 11.66%. 75% were diagnosed as squamous cell carcinoma and 21.7% had lymphoma.

**Conclusion:** Cervical lymphadenopathy was the most common presenting feature along with decreasing frequencies of other symptoms of ear, nose, neurological, throat and eye. Biopsy of lymph node is often helpful in diagnosis of such lesions. (Rawal Med J 2014;39:446-448 ).

**Key Words:** Nasopharyngeal carcinoma, neck lymphadenopathy, squamous cell carcinoma.

## INTRODUCTION

Nasopharyngeal neoplasm (NPC) may present solely with cervical lymph node enlargement. NPC constitutes 85% of all malignant tumors of the nasopharynx. It arises from epithelial linings of the nasopharynx, most often within the lateral nasopharyngeal recess or fossa of Rosenmuller. Although NPC is an uncommon malignancy in most parts of the world, it is endemic to certain well-defined populations. The highest incidence is in a Cantonese region of South China, where the frequency of this disease is approximately 100-fold higher than in European and North American populations.<sup>1,2</sup> In Taiwan, the annual incidence rates for males and females in 2007 were 8.41 and 2.93 per 100,000 person-years, respectively.<sup>3</sup> The etiology of NPC involves genetic susceptibility, Epstein-Barr (EBV) Virus infection, environmental factors and gene-EBV-environment interaction.<sup>1,4</sup>

The clinical diagnosis in early stage is a difficult because the post nasal space is relatively inaccessible for examination, and the frequent presence of normal sub-mucosal lymphoid tissues makes an accurate diagnosis even more difficult.

The presenting symptoms of patients with nasopharyngeal carcinoma are related to the location of the primary tumor and degree of spread.<sup>5</sup> It has a tendency for early lymphatic spread. The common first palpable node is juglodiagastic and or apical node under the sternomastoid. Bilateral and contralateral lymph node metastasis is not uncommon. Clinical and pathological factors predicting possible distant spread are primary tumor with node extension, and treatment failure.<sup>6</sup> Posterior triangle lymphadenopathy may point to a nasopharyngeal primary carcinoma. As there is no previous reports from our area, this study was carried out, to determine the presenting symptoms of NPC, in our rural population of Sukkur and surroundings.

## METHODOLOGY

The study included 60 patients with NPC who were admitted in Ghulam Muhammad Mahar Medical College Hospital, Sukkur, Pakistan from July 2007 to December 2013. All had neck nodes histopathologically proven for NPC. Those who presented with cervical lymphadenopathy but were

diagnosed as Tuberculosis adenitis or other diagnosis on histopathology were excluded from the study.

A detail history and physical examination was carried out in each case. A separate pro-forma was used to collect the bio-data, details regarding the initial presentation of symptoms and signs. In all patients, FNAC was done to confirm the metastatic nature of disease. Other investigations were done, as needed to confirm or exclude NPC. Statistical analysis was done using SPSS v. 11.

## RESULTS

Out of 60 patients, 45 (75%) were male and 15 (25%) were female with male to female ratio 3:1. The age ranged from 8 to 68 years (mean 42 years). The durations of presenting symptoms ranged from 15 days to 3 years with a mean of 156 days.

**Table 1. Clinical presentation of NPC. (n=60).**

Symptoms and signs	Number	Percentages
<b>Neck</b>		
Neck nodes total	48	80%
Unilateral	30	60.22%
Bilateral	18	37.08%
<b>Ears</b>		
Unilateral deafness	10	16.66%
Tinnitus	07	11.60%
Earache	04	06.66%
<b>Nose</b>		
Unilateral nasal obstruction	10	16.66%
Blood stained nasal discharge	05	08.11%
<b>Eye</b>		
Diplopia	5	8.11%
Visual loss	3	5.00%
Ptosis	2	3.33%
<b>Throat</b>		
Hoarseness	5	08.11%
Dysphagia	2	03.33%
Neurological symptoms		
Headache	10	16.5%
Cranial nerve palsy	2	3.33%

Symptoms of the ear, nose, eye and throat at the time of presentation with their percentage frequencies

are shown in Table 1. The percentages in decreasing order were neck node 48(80%), ear 21(35%), nose 15(25%), neurological symptoms 12(20%), eye 10(16.66%) and throat 7(11.66%). All the neck swellings were lymphadenopathy due to metastatic NPC.

**Table 2. Histopathological type of tumor (n=60).**

Tumor type	Number	Percentage
Squamous cell carcinoma	45	75%
Lymphoma	13	21.7%
Rhabdomyosarcoma	02	3.3%
Total	60	100

75% had squamous cell carcinoma, followed by lymphoma and rhabdomyosarcoma (Table 2).

## DISCUSSION

NPC differs from other head and neck malignant neoplasms in its tumor characteristics and treatment outcome.<sup>7</sup> It is endemic in south China and Southeast Asia.<sup>8</sup> In this study, male to females ratio was slightly lower than the reported by Adnan et al<sup>9</sup> as 4:1 but slightly higher than reported by Tiong et al from Malaysia.<sup>10</sup> The mean age of 42 years in our study is lower than reported by Lim GCC et al<sup>11</sup> from Malaysia. The exact reason is not known for this.

The most common presenting symptoms was the neck node in 80%, followed by ear, nose, neurological symptoms, eye and throat symptoms, similar to as reported by Tiong et al<sup>12</sup> from Malaysia. In a local literature, cervical lymphadenopathy was reported 60%, nasal symptoms 40%, ear 30% and neurological symptoms 20%, respectively.<sup>13</sup> In this study, ear symptoms were slightly higher than the previously reported in local studies.<sup>9,13</sup> As the presence of neck nodes implies advanced disease, the very high percentage (80%) in our study is similar to the local and international studies.<sup>9,10,13</sup> The hearing loss and epistaxis, when occurring alone, are often the symptoms of early stages of NPC; the very small percentages of patients with single presenting symptom of hearing loss (3.3%) and epistaxis (1.66%) in this study could have accounted for low percentage of the early stages of NPC.

The neurological symptoms (headache and cranial nerve palsy) were in 20% of cases; similar to

reported by Adnan et al.<sup>9</sup> Lee-Yi et al from Taiwan reported 14 cases of NPC with headache as the initial presentation symptom.<sup>14</sup> Headache often indicates a skull base lesion or intracranial tumor invasion or an advanced disease implying a poor prognosis.

In our study, squamous cell carcinoma constituted 75% of patients with NPC, followed by lymphoma in 21.7% and rhabdomyosarcoma in 3.3%. This is similar to observations made by Adnan et al.<sup>9</sup> In the literature squamous cell carcinoma of the nasopharynx is 85%, lymphoma 5% and rhabdomyosarcoma in adults are very rare, but exceeds to 40% in pediatric cases.<sup>15</sup> Other malignancies, like adenocarcinoma, adenoidcystic carcinoma and malignant melanomas were not seen in our study.

## CONCLUSION

The clinical presentation of NPC is variable and can occur at any age and in either gender. Cervical lymphadenopathy was the most common presenting feature along with decreasing frequency of other symptoms of ear, nose, neurological and eye. The high index of suspicion is required to detect NPC in any patient presenting with cervical lymphadenopathy. Biopsy of node is often helpful in diagnosis and CT or MRI may be indicated in submucosal lesions not visible on clinical examination.

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