



NASOPHARYNGEAL CARCINOMA- A CLINICOPATHOLOGICAL STUDY.

ENT

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ABSTRACT

Background: Nasopharyngeal carcinoma is commonly a squamous cell carcinoma arising from the epithelial lining of nasopharynx more frequently seen at the fossa of Rosenmüller.

Materials and methods: It included 25 patients attending Department of ENT and Head & Neck Surgery, SMGS Hospital, Jammu with nasopharyngeal carcinoma from March 2017 to March 2020 were retrospectively analysed. Thorough clinical examination of the head and neck was done.

Radiological examination including chest x-ray, contrast enhanced CT and/or MRI of the head and neck region was carried out. Fine-needle aspiration cytology (FNAC) from the neck node and biopsy from the nasopharyngeal mass for histopathological study was done to arrive at a diagnosis.

Results: A total of 25 histopathologically confirmed cases of nasopharyngeal carcinoma were seen with a M:F ratio of 1.8:1. The peak age was found to be 30-50 years in males and 50-59 years in females. Highest incidence was in the 5th decade of life. The most common presentation is neck swelling seen in 92% patients followed by epistaxis, hearing loss and nasal obstruction. 14(56%) patients were histologically diagnosed with Non Keratinizing undifferentiated, 9(36%) were Non keratinizing differentiated and 2(8%) were Keratinizing squamous cell carcinoma. 15(60%) patients presented with Stage IV disease at the time of presentation, 7(28%) patients presented with Stage III disease and 3(12%) patients presented with Stage II disease.

Conclusion: Screening patients with early symptoms of NPC as it is eminently done in countries endemic for the disease, will aid in its early detection, diagnosis and curative medical intervention and thus reducing morbidity and mortality.

KEYWORDS

carcinoma, histopathology, nasopharyngeal

INTRODUCTION

Nasopharyngeal carcinoma is commonly a squamous cell carcinoma arising from the epithelial lining of the nasopharynx. This neoplasm could arise from any site in the nasopharynx and is more frequently seen at the fossa of Rosenmüller.¹ Although nasopharyngeal carcinoma is rare in most population, it is a leading form of cancer in a few well-defined populations, including natives of Southern China, Southeast Asia, the Arctic, and the Middle East/ North Africa.²

This tumour is uncommon in India with incidence of 0.9 per million.³ The nasopharyngeal carcinoma cells are basically squamous cell carcinoma in origin with minimal differentiation.⁴

Undifferentiated carcinoma constitute the major histological type worldwide.⁵ Only the non-keratinizing variant is associated with Epstein-barr virus (EBV) infection.⁶ The most common mode of presentation of nasopharyngeal carcinoma is a painless unilateral metastatic cervical lymph node.⁷ Thirty percent of patients presented with nasal symptoms including blood stained nasal discharge, nasal obstruction, post nasal drip or even frank epistaxis. Twenty percent patients present with aural symptoms including deafness, tinnitus and otalgia.⁹ Middle ear effusion is present in more than 40% of patients at diagnosis.¹⁰ Neurological involvement comprises of headache and cranial nerve symptoms. Headache occurs in 20% of patients.⁹ Endoscopic examination provides valuable information on mucosal involvement and tumour extent and allows guided biopsy. The endoscopic examination, however, cannot determine deep extension or skull base involvement of the tumour.¹¹ Computed tomography and magnetic resonance imaging studies have improved the accuracy of staging and have allowed radiotherapy planning and treatment.¹² The TNM Classification of Malignant Tumours (TNM) is a globally recognised standard for classifying the extent of spread of cancer. Nasopharyngeal carcinoma is an extremely radiosensitive tumour and the mainstay of treatment for primary local and regional disease is invariably radiotherapy, almost irrespective of the stage of the disease. For patients with advanced disease, the addition of chemotherapy appears to enhance the overall treatment results. Surgery, at present is only used to salvage local and regional failures.¹³

MATERIALS AND METHODS

It included 25 patients attending Department of ENT and Head & Neck Surgery, SMGS Hospital, Jammu with nasopharyngeal carcinoma from March 2017 to March 2020 were retrospectively analysed.

Inclusion criteria

All newly diagnosed, histologically and radiologically confirmed cases of nasopharyngeal carcinoma coming with any one of the symptoms of nasopharyngeal carcinoma.

Exclusion criteria

All previously treated or recurrent or residual cases of nasopharyngeal carcinoma.

Thorough clinical examination of the head and neck was done.

Examination of the nose, endoscopy for the nasopharynx, oral cavity, oropharynx, indirect laryngoscopic/ endoscopic examination was also done. Radiological examination including chest x-ray, contrast enhanced CT and/or MRI of the head and neck region was carried out. Fine-needle aspiration cytology (FNAC) from the neck node and biopsy from the nasopharyngeal mass for histopathological study was done to arrive at a diagnosis. Following diagnosis, proper staging was carried out with latest TNM classification and treatment was given accordingly like radiotherapy, chemo-radiotherapy, chemotherapy and/or salvage neck node dissection.

OBSERVATIONS AND RESULTS:

25 patients were included in the study

Age and Sex distribution of patients:

A total of 25 histopathologically confirmed cases of nasopharyngeal carcinoma were seen during the study period. There were 16 males and 9 females with a M:F ratio of 1.8:1. The age ranged between 15-70 years with a mean of 48±14.9 years. The peak age was found to be 30-50 years in males and 50-59 years in females. Highest incidence was in the 5th decade of life. [Figure 1]

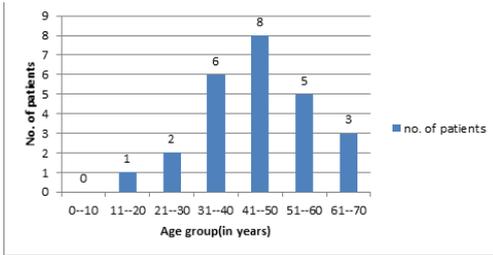


Figure 1: Age wise distribution of patients.

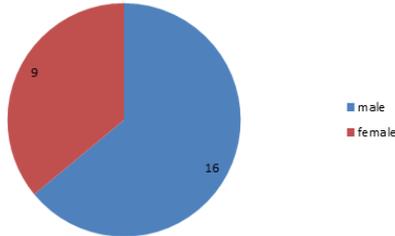


Figure 2: Genderwise distribution of patients.

Clinical presentation of patients

The most common presentation is neck swelling seen in 92% patients followed by epistaxis (76%), hearing loss(72%) and nasal obstruction(48%).[Table 1] Out of 25 cases, 23(92%) patients were presented with neck nodes and FNAC showed features of metastatic undifferentiated carcinoma.

Table 1: Clinical presentation of patients

Clinical presentation	No. of patients
Neck swelling	23(92%)
Epistaxis	19(76%)
Hearing loss	18(72%)
Nasal obstruction	12(48%)
Fullness of ears	11(44%)
Cranial nerve palsy	2(8%)
Diplopia	1(4%)
Headache	8(32%)

Histopathological type

Out of 25 patients, 14(56%) patients were histologically diagnosed with Non Keratinizing undifferentiated, 9(36%) were Non keratinizing differentiated and 2(8%) were Keratinizing squamous cell carcinoma.

Table 2: Distribution of patients according to histological type.

Histopathological type	No. of patients
Keratinizing squamous cell carcinoma	2(8%)
Non keratinizing differentiated	9(36%)
Non keratinizing undifferentiated	14(56%)
Total	25(100%)

Distribution of patients according to stage of disease.

Out of 25 patients, 15(60%) patients presented with Stage IV disease at the time of presentation,7(28%) patients presented with Stage III disease and 3(12%) patients presented with Stage II disease.[Table 3]

Table 3: Stage of disease at time of presentation.

Stage of disease	No. of patients
I	0(0%)
II	3(12%)
III	7(28%)
IV	15(60%)

DISCUSSION

A total of 25 histopathologically confirmed cases of nasopharyngeal carcinoma were seen during the study period. There were 16 males and 9 females with a M:F ratio of 1.8:1. The age ranged between 15-70 years with a mean of 48±14.9 years. The peak age was found to be 30-50 years in males and 50-59 years in females. Highest incidence was in the 5th decade of life. This finding agrees with the studies in Hong Kong and Taiwan, which also reported peak age group at fifth decade.¹⁶ Some studies reported a peak age at fifth decade and bimodal peak was

seen in most of them.^{14,15,17} Bimodal peak was seen in this study too.

The most common presentation is neck swelling seen in 92% patients followed by epistaxis (76%), hearing loss(72%) and nasal obstruction(48%).[Table 1] Out of 25 cases, 23(92%) patients were presented with neck nodes and FNAC showed features of metastatic undifferentiated carcinoma. This finding is similar to a Jamaican study on 35 patients of nasopharyngeal carcinoma found 86% of the patients had cervical lymphadenopathy on presentation.¹⁷ A retrospective study on 966 patients in Taiwan, where 729 (75.5%) of patients presented with neck mass.¹⁶The high incidence of cervical lymphadenopathy reemphasizes the tendency of early metastasis to cervical lymph nodes in nasopharyngeal carcinoma. The typical glandular metastasis develop posterior to the angle of the jaw, over the mastoid process beneath the sternocleidomastoid, where they later extend distally. Upper jugular nodes are most frequently involved followed by mid jugular nodes. The cervical glands being frequently the only sign of a nasopharyngeal carcinoma through half or whole years they are often mistakenly diagnosed as lymphomas, tuberculosis or other infectious origin and treated otherwise.

Out of 25 patients, 14(56%) patients were histologically diagnosed with Non Keratinizing undifferentiated, 9(36%) were Non keratinizing differentiated and 2(8%) were Keratinizing squamous cell carcinoma. A Jamaican study found non-keratinizing carcinoma in 95% of the cases.¹⁷

Out of 25 patients, 15(60%) patients presented with Stage IV disease at the time of presentation,7(28%) patients presented with Stage III disease and 3(12%) patients presented with Stage II disease.

CONCLUSION

NPC remains to have male predominance with the highest peak in the fifth decade of life. Majority of patients presented with clinical features conforming to late stage of the disease such as cervical lymphadenopathy and with majority of them presenting with stage IV when first seen in our hospital setting.

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