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Research Article

Ophthalmo-Neurologic Manifestation of Nasopharyngeal Carcinoma as Seen in Port Harcourt

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Abstract

Background: There are four cardinal symptom manifestation in nasopharyngeal cancer presentation. Nasal symptoms, Otological symptoms, Ophthalmo-neurologic symptoms and Metastatic symptoms. This study is concentrated on the ophthalmo-neurologic manifestation of nasopharyngeal carcinoma, which may be confusing to the clinician if there is no high index of suspicion.

Method: This is a retrospective study of all cases of nasopharyngeal carcinoma, that specifically presented with ophthalmo-neurologic manifestation in our center. The study period is six (6) years, between January 2017 and December 2022. Case files of this patients were retrieved, and ophthalmic and neurological manifestation recorded and analyzed.

Results: Eighty-two (82) cases of nasopharyngeal cancer presented within the period of study and twenty-one (21) had ophthalmo-neurological manifestation. Optic nerve lesion and visual impairment constituted 20% of manifestation. Diplopia and ophthalmoplegia presented 10% and 17% respectively.

Aim: The aim is to draw attention to clinicians to show a high index of suspicion as this may be an early presentation in nasopharyngeal cancer.

Conclusion: It is important and mandatory to suspect nasopharyngeal cancer when there is ophthalmic or neurological manifestation when evaluating a patient in the head/neck region.

Keywords: Nasopharyngeal cancer; Diplopia; Neurologic manifestation

Introduction

Nasopharyngeal cancer is known for its multiple organ involvement. Hence, clinical manifestation is multiple and can be misleading to the clinician who may misdiagnose the condition [1]. Four (4) major organ manifestations are involved. Otologic manifestation, nasal manifestation, ophthalmo-neurologic manifestation and metastatic neck manifestation. Any of these presentation can manifest depending on the pathological/histological type. It therefore becomes necessary for the clinician to show a high index of suspicion when evaluating patient with nasopharyngeal carcinoma [2]. This study is therefore set to highlight the importance that clinicians should exhibit high index of suspicion for nasopharyngeal cancer when there is evidence of ophthalmic and neurologic symptoms/signs. As this might be an early symptom/sign of the disease [3].

Patient and Method

All the case files of patients that had nasopharyngeal cancer within the period of study (January 2017 – December 2022) were retrieved from the medical records and the ENT wards, of

the University of Port Harcourt Teaching Hospital. The study is a retrospective paper between January 2017 and December 2022. The diagnosis was made based on clinical examination, radiological and histologic results. Age, gender, symptoms manifested were retrieved and analyzed.

Results

Within the period of study, we had eighty-two (82) cases of nasopharyngeal cancer. 21 (25%) cases had ophthalmic-neurologic symptoms/signs. The age of patients ranged between 10 years and 80 years. There is an increasing incidence with age, from the first decade to a maximum in the third and fourth decades. There is a drop from the age of fifty (50). Optic nerve damage and visual impairment constituted about (15%). Ophthalmoplegia and diplopia (16%) and (14%) respectively. Ptosis seen (12%), proptosis (12%) Horner's syndrome (1%) (Tables 1 & 2).

Table 1: Age Group and Gender Difference.

Gender	0-10	20-Nov	21-30	31-40	41-50	51-60	61-70	Total
Male	--	10	8	14	12	6	7	57
Female	--	4	7	3	4	4	3	25
Total		14	15	17	16	10	10	82

Table 2: Ophthalmo-neurologic symptom/signs.

	Type	Incidence	Percentage (%)
Symptoms	Proptosis	10	12
	Visual Impairment	13	15
	Diplopia	12	14
	Horners syndrome	1	1
	Ptosis	10	12
Signs	Optic nerve lesion	13	16
	3^{rd}, 4^{th}, 6^{th} cranial Nerve lesion	12	15

Discussion

The incidence of nasopharyngeal cancer varies from one region to another. At the area of high incidence, it can be about over 100,000. In this study, it affects males more than females with male/female ratio of 2.3:1. In the study of Ogunleye et al, male/female ratio as 2.4:1 [4]. The incidence increased in the age group 31-40 (17%) and age group 41-50 (16%). This is in agreement with Martisons (1968), with peak presentation at 30-40 year [5]. Okeowo et al. in 1979 showed peak at 50-59 age group [6]. The fossa of Rosenmuller has been incriminated as a site for the majority of the cases. Twenty-five percent (25%) of the cases under study had ophthalmo-neurologic symptoms/sign, while in a study of 56 cases, Martison has 29% [7]. Cranial nerve III, IV, V and VI are known to be commonly involved in nasopharyngeal carcinoma. This is due to infiltration of the tumour to basiocciput and the orbit. In this series diplopia with corresponding infiltration to the (III) 3rd, (IV) 4th and (V) 5th cranial nerve constituted 14% and 15% respectively [8]. Orbital tumour invasion with displacement of the globe occurs through the cavernous sinus and superior orbital fissure. In our study, visual impairment and corresponding optic nerve lesion constituted 16% of the manifestation of malignant nasopharyngeal tumours.

In our series, ptosis was seen in 12% of cases. This is usually due to sympathetic nerve chain involvement and as well as III nerve (oculomotor). Horner's syndrome was observed to be 1% of cases [9]. Four cardinal symptoms are involved in nasopharyngeal carcinoma. Involvement of two cardinal symptoms out of the four allows diagnosis of nasopharyngeal cancer. In the 38 series of Schlivek (1937), he emphasized that involvement of the Vth nerve, sympathetic chain, VIth nerve with otologic symptom strongly suggest nasopharyngeal cancer. It is important to note that the management of nasopharyngeal cancer must involve the ophthalmologist, neurologist, otorhinolaryngologist and other physicians [9,10].

References

1. Godtfredesen E, Lederman M (1965) Diagnostic and Prognostic roles of Ophthalmo-neurologic signs in malignant nasopharyngeal tumours. Am J Ophth 59(6): 1063-1069.
2. New BG (1922) Syndrome of malignant tumours of the nasopharynx. JAMA 79: 10-12.
3. Kao LY, Chuang HC, Liang YS (1993) Visual loss as the initial presentation of nasopharyngeal carcinoma. J Clin Neuro-ophthalmol 13: 24-26.
4. Ogunleye AOA, Nwaorgu OGB, Adaramola SF (1999) Ophthalmo-neurologic manifestation of Nasopharyngeal Carcinoma. West Afr J Med 18: 106-109.

5. Martison FD (1968) Cancer of the Nasopharynx in Nigeria. J Laryngol Otol 82: 1119-1126.

6. Okeowo PA, Ajayi DOS (1979) Nasopharyngeal cancer in Nigerians. Cancer in Nigeria. Ibadan Tropical Medicine Series pp. 117- 122.

7. Martison FD (1968) Cancer of the Nasopharynx in Nigeria. Journal of Laryngology and Otology 82: 1129-1128.

8. Andrew Van Hasselt C, Skinner DV, Tsao SY (1991) Nasopharyngeal Carcinoma: Modes of presentation. Ann Otol Rhinol Larygol 100: 544-551.

9. Schlivek K (1937) Ocular manifestation of malignant nasopharyngeal tumours: Reports of cases. Arch Ophthalmol 17: 1055-1072.

10. da Lilly Tariah OB, Somefun AO (2003) Malignant tumours of the Nasopharynx at Jos University Teaching Hospital, Nigeria. Nig Postgrad Med 10: 99-102.

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