

Histopathological results of nasopharyngeal masses of adult patients: a study from two centres in Port Harcourt, Nigeria

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Abstract

Background: Nasopharyngeal masses in adult patients in most cases are considered to be tumours unless proven otherwise.

Aim: To determine the histopathological results of nasopharyngeal masses seen in adult patients in Port Harcourt Nigeria. It will also highlight the management outcomes of these patients.

Methods: A prospective (January 2010 to December 2013) study of 45 patients with both clinical and radiological evidence of nasopharyngeal masses seen at the Ear Nose and Throat (ENT) surgery clinics of University of Port Harcourt Teaching Hospital (UPTH) and Kinx Medical Consultants clinic in Port Harcourt. All the patients had examination under anaesthesia (E/U/A) of the nose and nasopharynx and biopsy. The data collected were documented in a proforma designed for the study by the researchers. The data are bio-data, clinical features, investigations, histopathological findings, treatment, complications and management outcome. The data were entered into an SPSS version 14 computer software and analyzed descriptively.

Results: Forty five adult patients had E/U/A of the nose and nasopharynx and biopsy of nasopharyngeal masses. They all had history of chronic rhinorrhoea, snoring and nasal obstruction. Age range was 18-72 years. There were 20 males and 25 females with male to female ratio of 1:1.25. The commonest histopathological diagnosis was adenoidal hyperplasia (n=36, 80%) followed by non-Hodgkin lymphoma (n=5, 11.11%).

Conclusion: Even though the predominant histopathological result of nasopharyngeal masses in adult patients we encountered was adenoidal hyperplasia, all tissues from the nasopharynx irrespective of their benign macroscopic appearances should be subjected to histopathological examination to avoid missing out more sinister diagnosis.

Keywords: Examination under anaesthesia, Nasopharyngeal masses, Non-Hodgkin lymphoma, Adenoidal hyperplasia, Squamous cell carcinoma

Introduction

Histopathological evaluation of all surgical specimens is a standard procedure in most institutions worldwide. This is either to analyze suspicious material or for medico-legal purposes as proof of its removal. Furthermore, it helps to guide patient care and treatment¹⁻⁴.

Masses originating from the nasopharynx of adult patients are in most cases considered to be neoplastic disease until proven otherwise^{3, 5}. Adenoidal enlargement in adult patients can mimic nasopharyngeal tumours when seen in plain

radiographs of the post nasal space. Most literature suggests that adenoidal hypertrophy or hyperplasia rarely indicates a malignant diagnosis⁶⁻⁸. However, it is difficult to distinguish neoplastic masses from adenoidal hypertrophy or hyperplasia based on the macroscopic appearance alone^{4,9}.

Thus, most surgeons may not be quick to make a diagnosis of adenoidal hypertrophy in adult patients unless they have done examination under anaesthesia (E/U/A) of the nose and nasopharynx and have taken biopsy for histopathological

examination^{4,10}. Nasopharyngeal carcinoma (NPC) is the most common carcinoma originating in the nasopharynx especially in adult patients. It accounts for approximately 85-95% of malignancy originating in the naso-pharynx, the remaining mostly being lymphoma. Nasopharyngeal carcinoma differs significantly from other cancers of the head and neck in its occurrence, causes and treatment. It is vastly more common in certain regions of East Asia and Africa than elsewhere, with viral, dietary and genetic factors implicated in its causation^{11,12}.

A search of literature in our environment reveals paucity of information on nasopharyngeal masses in adult patients. Hence this study aim to determine the histopathological results of nasopharyngeal masses seen in adult patients from two centres in Port Harcourt, Nigeria. It will also highlight the management outcomes of these patients.

Patients and Methods

A prospective (January 2010 to December 2013) study of 45 patients with both clinical (nasal obstruction, rhinorhea, mouth breathing and snoring at night) and radiological (soft tissue shadow in the roof of the nasopharynx/isodense lesion of the nasopharynx) evidence of nasopharyngeal masses seen ENT surgery clinics of UPTH and Kinx Medical Consultants clinic in Port Harcourt. All the patients recruited for the study gave their consent for the study. They all had E/U/A and biopsy of the nose and nasopharynx. The data collected were documented in a proforma designed for the study by the researchers. The data include; bio-data (age and gender), clinical features, investigations, histopathological findings, treatment, complications and management outcome. The data were entered into an SPSS version 14 computer soft ware and analyzed descriptively. The data were expressed using a simple statistical table and percentages, while pie chart was further used for more illustration.

Results

A total of 45 adult patients were confirmed to have nasopharyngeal masses out of a total of 4,240 patients who attended the ENT clinics of both centres during the study period giving a prevalence of 1.06%. They all had E/U/A of the nose and nasopharynx and biopsy of the masses. They all presented with history of rhinorrhoea, snoring at night, mouth breathing and nasal obstruction as their complaints. No history of epistaxis and neck swelling. Their age range was 18-72 years. The commonest age group affected was 29-39 years (Table 1). There were 20 males and 25 females with male to female ratio of 1:1.25.

Histopathological diagnosis confirmed 36 (80%) as adenoidal hyperplasia, 5 (11.11%) as non-Hodgkin lymphomas, 4 (8.89%) as squamous cell carcinomas (Figure 1). Six (13.33%) patients tested positive to human immunodeficiency virus (HIV) and out of these 6 patients 4 of them had adenoidal hyperplasia and the other 2 had non-Hodgkin lymphoma. Four (8.89%) patients had primary haemorrhage during the surgery which was managed conservatively with posterior nasal packing using gauze bandage and blood transfusion. Out of the four patients with primary haemorrhage 2 of them had squamous cell carcinoma, 1 had non Hodgkin lymphoma and the last one had adenoidal hyperplasia. The patients with nasopharyngeal malignancies and HIV were jointly managed with other specialists within and outside our centre and are still undergoing further expert management and follow up.

Table 1. Age distribution of patients

Age range (years)	Number of patients	Percentage (%)
18-28	8	17.78
29-39	18	40.00
40-50	9	20.00
51-61	6	13.33
62-72	4	8.89
Total	45	100

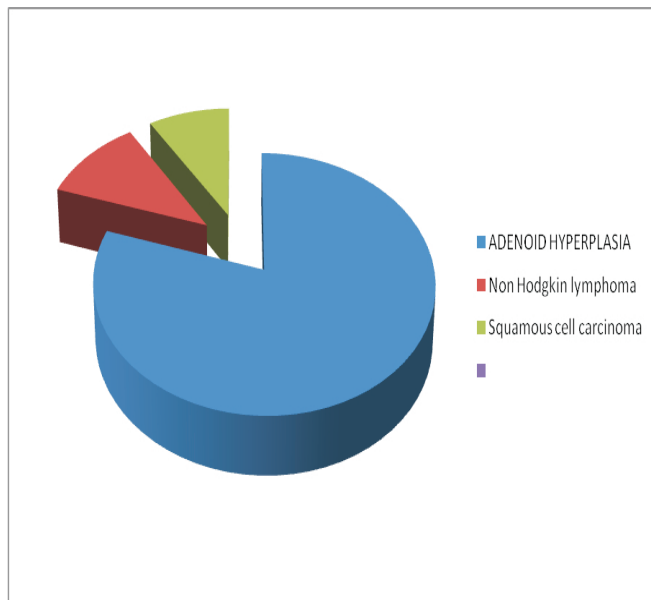


Figure 1. Pie chart showing histopathological diagnosis of nasopharyngeal masses

Discussion

In this study, there was a prevalence of 1.06% of adults who had nasopharyngeal masses. Eighty percent of them had histopathological diagnosis of adenoidal hyperplasia which is a benign lesion while, 11.11% of the patients had non-Hodgkin lymphomas and 8.89% squamous cell carcinomas of the nasopharynx. Surprisingly none of our patients presented with epistaxis and cervical neck swelling even though histopathological examinations found nasopharyngeal carcinomas. In a study done by Mitchell *et al*⁴ on 110 adults that underwent biopsy of post nasal tissues reported similar findings, 84% of the biopsies were benign lesions, 4% was nasopharyngeal carcinoma, and 14% was lymphomas. In another case series by Rout *et al*⁹, they reported 94% of adenoidal hyperplasia, while 3% had non-hodgkins lymphoma and 3% had squamous carcinoma. Furthermore, Finkelstein *et al*¹⁰ in their study reported 2 cases of carcinomas out of the 8 patients with nasopharyngeal masses, while the rest of their patients had benign disease.

On the contrary, Kamel and Ishak⁵ in their study found 100% of biopsied adult

nasopharyngeal masses to be benign disease of which adenoidal hyperplasia was the predominant finding. Yildirim *et al*¹³ also reported benign adenoidal tissues in all adult patients in a cohort study comparing the histopathological characteristics of adult nasopharyngeal masses and childhood adenoid hypertrophy.

In this study, 6 (13.33%) patients were found to be HIV positive pre-operatively. HIV could be among the aetiologic factors of nasopharyngeal masses as adenoid hypertrophy and lymphomas can be a presentation of HIV infection¹⁴. Rout *et al*⁹ reported only a case of HIV infection in their study of 30 adult patients with adenoid hypertrophy.

In this series, most of our patients were in the age group of 29-39 years. Rout *et al*⁹ reported a slightly younger peak (60%) age group of 16-26 years. It appears that the younger age are more prone to benign lesions while the older age group is more prone to malignancies.

There was a slight female preponderance in this study (M: F=1:1.25). However, Rout *et al*⁹ reported a contrary finding with a male preponderance of 2:1, Mitchell *et al*⁴ also reported a male preponderance of 1.4:1. More studies need to be done to ascertain the actual role of gender in predisposing patients to nasopharyngeal masses.

During E/U/A and biopsy of the nose and nasopharyngeal masses some 4 (8.89%) of the patients had primary haemorrhage which was managed by inserting posterior nasal packs prepared with gauze bandage into the posterior nasal space to help secure haemostasis. Blood transfusion was only given to the patients whose haemoglobin concentration levels were low enough to cause haemodynamic instability. Haemorrhage during or after examination under anaesthesia and biopsy of nasopharyngeal masses is not unexpected especially when the masses are malignant in nature. The patients with nasopharyngeal malignancies and HIV were jointly managed with other specialists within and outside our centre and are still undergoing further expert management and follow up.

As part of our limitations in this study

some of the patients did not keep their follow up appointments and some patients could not afford radiological investigations. These factors affected the number of patients recruited for this study.

Conclusion

Even though the predominant histopathological result of nasopharyngeal masses in adult patients encountered in our series was adenoidal hyperplasia all tissues from the nasopharynx irrespective of their benign macroscopic appearances should be subjected to histopathological examination to avoid missing out more sinister diagnosis.

References

- Wysocka J, Hassmann E, Lipska A, Musiatowicz M. Naive and memory T cells in hypertrophied adenoid in children according to age. *Int J Pediatr Otorhinolaryngol* 2003; **67**: 237-241.
- Karodpati N, Shinde V, Deogawkar S, Ghate G. Adenoid hypertrophy in adults - a myth or reality. *Webmed Central Otorhinolaryngology* 2013; **4**:WMC004079.
- Orji F, Okorafor I, Ofoegbu V, Ilechukwu I A. Obstructive adenoid hypertrophy in the adult: a case report. *Orient J Med* 2009; **21**:20-24.
- Mitchell J, Pai I, Pitkin L, Moore-Gillon V. A case for biopsying all adult adenoidal tissue. *The Internet Journal of Otorhinolaryngology* 2008; **9**(2).
- Kamel RH, Ishak EA. Enlarged adenoid and adenoidectomy in adults: endoscopic approach and histopathological study. *J Laryngol Otol* 1990; **104**: 965-967.
- Huang H M, Chao MC, Chen YL Hsiao HR. A combined method of conventional and endoscopic adenoidectomy. *Laryngoscope* 1998; **108**:1104-1106.
- Wan YM, Wong KC, Ma KH. Endoscopic-guided adenoidectomy using a classic adenoid curette: a simple way to improve adenoidectomy. *Hong Kong Med J* 2005; **11**:42-44.
- Schaffer SR, Wong GH. Endoscopic visualization facilitates adenoidectomy. *Otolaryngol Head Neck Surg* 2007; **136**:510.
- Rout MR, Mohanty D, Vijaylaxmi Y, Bobba K, Metta C. Adenoid hypertrophy in adults: a case series. *Indian J Otolaryngol Head Neck Surg* 2013; **65**:269-274.
- Finkelstein Y, Ophir D, Talmi YP, Shabtai A, Strauss M, Zohar Y. Adult-onset otitis media with effusion. *Arch Otolaryngol Head Neck Surg* 1994; **120**:517-527.
- Nwaorgu OG, Ogunbiyi JO. Nasopharyngeal cancer at the University College Hospital Ibadan Cancer Registry: an update. *West Afr J Med* 2004; **23**: 135-138.
- da Lilly Tariah OB, Somefun AO. Malignant tumours of the nasopharynx at Jos University Teaching Hospital, Nigeria. *Niger Postgrad Med J* 2003; **10**: 99-102.
- Yildirim N, Sahan M, Karslioglu Y. Adenoid hypertrophy in adults: clinical and morphological characteristics. *J Int Med Res* 2008; **36**: 157-162.
- Moazzez AH, Alvi A. Head and neck manifestations of AIDS in adults. *Am Fam Physician* 1998; **57**: 1813-1822.