

Original Article

Nasal polyps - clinical profile and management in Ibadan, Nigeria

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Abstracts

BACKGROUND Nasal polyps are benign mucosal protrusions into the nasal cavity of multifactorial origin and are characterized by chronic mucosal inflammation. They result from the prolapsed lining of the ethmoid sinuses and block the nose to a variable degree depending on their sizes. This study aims to evaluate the clinical profile and management of nasal polyposis as seen in Ibadan, Nigeria.

METHOD A 5-year (1998-2002) prospective study of 63 nasal polyposis patients depicting the clinical profile and implications was done at the department of Otorhinolaryngology, University College Hospital, Ibadan, Nigeria.

RESULTS There were 38(60%) males and 25(40%) females with M: F of 1.5:1 and with an average age of 34 years. The duration of symptoms ranged from 2months –14years with an average occurrence of 12 new cases a year.

The main clinical presentations were nasal obstruction 95%, nasal discharge 81%, sneezing 59% and observed nasal polyps 78%. The polyps were found in the right nasal 16%, left nasal 25% while bilateral 37%. The rest were of antro-choanal polyps 22%. Polyps from ethmoidal region constituted 88% while from lateral nasal wall 12%. Treatment is a combination of surgery and medical therapy with topical corticosteroids. Eighty-Seven percent (87%) of the cases had surgical treatment; simple polypectomies 67%, Caldwell-Luc's operations 15%, and external ethmoidectomies 13% while internal ethmoidectomies 5%. The hospital stay ranged from 1- 6 weeks with recurrence rate of 13% and onset of recurrence ranged from 2 weeks – 4 years.

Conclusion

Whatever therapeutic regimen is used nasal polyps are a chronic common condition in which their cause remain unknown, are prone to recurrence and in some cases with embarrassing frequencies.

Nasal polyps are pedunculated portions of oedematous mucosa of the nose or paranasal sinuses. Simple mucous or benign nasal polyps are an early recognizable clinical entity. They usually result from the prolapsed lining of the ethmoid sinuses and block the nose to a variable degree depending on their size¹. When it results from prolapsed lining of the maxillary sinus through the middle meatus backwards into the post-nasal space they are referred to as antrochoanal polyp. Polyps, which arise from the middle meatus, are pale and relatively insensitive to touch when probed; thus differentiate it

from mucosa of the middle turbinate, which may be polypoid. The pale colour is due to its poor blood supply, though in the presence of repeated trauma and inflammation, they may become reddened¹. Nasal polyps are usually bilateral, and when unilateral may require histological evaluation to exclude the transitional cell papilloma (inverted papilloma) or malignancy. This study is designed to evaluate the clinical profile and management of nasal polyposis as seen in Ibadan, Nigeria

Materials and Methods

All patients in this retrospective study were referred and managed at the Department of Otorhinolaryngology of the University College Hospital, Ibadan, Nigeria, over a 5-year period from 1998 – 2002. Data obtained from each patient during study included demographic data, clinical features, histological diagnosis and treatments obtained for the nasal polyps.

Results

Sixty-three patients with nasal polyposis were seen and treated between 1998 and 2002. There were 38(60%) males and 25(40%) females with a Male-Female sex ratio of 1.5:1. The age ranged from 5.5years to 82years with a mean age of 33.5 years. The duration of symptoms ranged from 2 months to 14 years with a mean of 2.6 years. Twenty -six (41%)

of the patients were students while 13 (20%) and 10 (16%) were artisans and civil servants respectively. Clinical presentations for the nasal polyposis is characterized by; nasal obstruction constituting 60 (95%), nasal discharge 51 (81%) and sneezing 37(59%) while the polyps were observed in 49(78%) cases.

The locations and site of the polyps are as shown in table1 ; 14 (22%) were antrochoanal. The others 23(37%) were bilateral, left were on the 16(25%) and 10(16% were on the .right . Forty -three (88%) of the polyps originated from the ethmoidal region while 6(12%) were from lateral nasal wall . Fifty - five (87%) of the cases had surgical treatments; and other treatments Table 2 given are surgical approaches.

Table 1 – Nasal polyps sites

Site	No(%)
*Bilateral	23(37%)
*Left	16(25%)
*Right	10(16%)
Antro/ choanal polyps	14(22%)
Total	63(100%)

Discussion

Nasal polyposis is a chronic inflammatory disease of the upper airway characterized histologically by the inflammatory cells and large quantities of extra-cellular fluid with mast cell degranulations^{1, 6}. The cause however remains unknown¹. Several hypotheses have been put forward; these include chronic infection, aspirin intolerance, alterations in sino-nasal aero-dynamics, epithelial disruptions, epithelial cells defects/gene deletion (CFTR gene), inhalant or food allergies^{1,2,3}. Osmotically Active Hyaluronan (HYA) and numerous Alpha-atrial Natriuretic Polypeptides (ANP) – immunoreactive cells, active in fluid and/or ion transport functions have been found to be present in human nasal polyps. These substances may well be involved in oedema formation with resultant growth of nasal polyps⁴. The high level of Vascular Endothelial Growth Factors (VEGF) protein levels induced by hypoxia, that have been found to be very important for the

Table2 – Surgical treatment modalities

Surgery	No/%
Simple Polypectomy	37(67%)
Caldwell-Luc External ethmoidectomy	8(15%) 7(13%)
Intranasal ethmoidectomy	3(5%)
Total	55(100%)

early stages of polyp's formation, supports local tissue hypoxia as an aetiology of polyp's formation⁵. Thus nasal polyposis is a multifactorial disease with several different aetiological factors however chronic persistent inflammation is undoubtedly a major factor irrespective of the aetiology. Nasal polyps are common, affecting one to four percent of the population, however, the true incidence is difficult to assess^{1,6}. Nasal polyp is more common between 4th to 7th decades of life with a decreasing tendency thereafter¹. It is unusual for simple nasal polyps to arise before the age of 10 years and if found may be presenting complaint of cystic fibrosis⁷.

In this study, most of the subjects (91%) with nasal polyps were between second and sixth decades of life with an average age of 34 years. Fifty –one percent were found to be between third and fourth decades of life. A male predominance in this study is in consonance with other reports who have reported a M : F ratio 2:1 to 4:1^{1,8}. Most of our

subjects were found to be of students' population (41%) followed by artisans (20%) and civil servants (16%) respectively (table 1). Equally, the duration of symptoms ranged from 2 months to 14 years.

The significance of the above combinations is that this clinical condition tends to affect their studies (in terms of loss of school times) and their work due to the effect of chronic nasal symptoms with all the associated inconvenience and discomfort. The onset of symptoms in nasal polyposis is insidious and in this study nasal obstruction (95%) is found to be the chief symptom followed by nasal discharge (81%), sneezing (59%), post nasal discharge and hyposmia/anosmia (37%) respectively (table 1).

Epistaxis as a symptom was not observed in this study, as it is infrequent in nasal polyposis. If it does occur it may indicate a more sinister underlying pathology than nasal polyps^{1,11}. The dull tympanic membrane seen in 30% of the subjects may be as a result of eustachian tube dysfunctions from the obstructive effect of the nasal polyps. During this study an average of twelve new cases were seen per year. There is correlation between nasal polyps and asthma, 20-40% may coexist with asthma with a similar proportion of adults with asthma having nasal polyps⁹. In this study, 10% of the patients with nasal polyposis had associated asthma however late onset asthma rather than childhood asthma is associated with nasal polyps. It has been suggested that patients with asthma may be a distinct subgroup within the disease because proportionately a greater number of patients with asthma and polyp are women whereas polyps usually occur more frequently in men¹. Patients with aspirin hypersensitivity, asthma and nasal polyps are a well-recognized subgroup that occurs in 8% of patients with nasal polyps and the mechanism for these associations is unclear¹⁰. However, we did not see any aspirin hypersensitivity among the nasal polyps subjects in this study. Skin tests have been widely used to investigate nasal polyps, but the incidence of positive skin tests is no greater than expected in the general population¹¹. Thus, the subjects in this study were not subjected to

skin tests. 88% of polyps was ethmoidal in origin, while, 12% originated from the lateral nasal wall. The antrochoanal polyps constituted 22%. Although, polyps are a disease of the ethmoid sinus, the mucosal changes frequently extend further in the nose and into the other paranasal sinuses.

Treatment of nasal polyposis is a combination of medical and surgical modalities. The aims of treatment are to relieve nasal blockage, restore olfaction and improve sinus drainage. Most surgeons today treat polyps surgically but many polyps are sensitive to corticosteroids and where polyps are not obstructing the nose completely a trial of intranasal corticosteroids preoperatively is worthwhile^{1,6,12-14}. However, most of our subjects had obstructing nasal polyposis hence the reason for offering surgical treatment modalities for 55 (87%) of them, while the rest were lost to follow up before surgery (table 4). Surgical procedures employed were simple polypectomies (67%), Caldwell-Luc's (15%), fronto-ethmoidectomies (11%), and 2% external ethmoidectomies. The Caldwell-Luc surgery was done mainly for the antrochoanal polyps' cases. The average hospital stay was between 1 week and 6 weeks. The medical treatment for nasal polyps, which is mainly intranasal corticosteroids, will induce remission and second prevent recurrence. Some of our subjects who had intranasal corticosteroids had it mainly to prevent recurrence.

Recurrence of nasal polyps is one of the problems facing every Otolaryngologist who is involved in the management of polyps. In his report, Drake-Lee found a recurrence rate of 5%¹¹. The recurrence rate 13% observed in this study more than doubles the previous rate. It is difficult to study all factors associated with recurrence well but several factors have been implicated namely polyps development at a younger age; long history of nasal polyposis complaints; and association with asthma and aspirin hypersensitivity^{1,11}. In conclusion, Nasal polyps are a common chronic condition in which their cause, remains unknown. The recurrence rate is significantly high irrespective of whatever therapeutic option is chosen.

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Nasal polyps -clinical profile

