

SINO - NASAL SURGERY IN THE SUB-SAHARAN AFRICA: A CRITICAL APPRAISAL

B. M Ahmad, *M. B. Sandabe, and *A. M. Kodiya

Department of Otorhinolaryngology (Ear, Nose and Throat), College of Medical Sciences, University of Maiduguri, Maiduguri, Nigeria and *Department of Ear, Nose and Throat, University of Maiduguri Teaching Hospital, Maiduguri, Nigeria

Reprint requests to: Dr. B. M. Ahmad, E-mail: bgmahmad@yahoo.com

Abstract

Background: Sino - nasal surgery poses a great challenge to practicing ear, nose and throat surgeons in the sub-Saharan Africa where facilities are inadequate and most patients are distantly located from the few hospitals available in this region.

Method: A retrospective study of 79 patients who had nasal and paranasal sinuses surgery at the university of Maiduguri teaching hospital (UMTH) between January 1997 to December 2001.

Results: The most common indication for surgery was infection/allergy in 49 (62%) patients, followed by tumours in 16 (22.3%) patients. In the infection/allergy subgroup, intranasal antrostomy and nasal polypectomy were the most common procedures done constituting 63.3% and 32.7% respectively. Nasal surgeries as a result of trauma and congenital anomalies were quite few.

Conclusion: This rather low figure is unexpected considering the few available services in this region. Therefore health education and community awareness on health matters should be stressed.

Key words: Nasal surgery, intranasal antrostomy, nasal polypectomy

Introduction

The lining of the nose and the paranasal sinuses is continuous and act as one unit,^{1, 2} therefore pathological changes in the nose are usually accompanied by similar findings in the sinuses to a large extent. It is implied here that nasal surgery also includes the surgery of the paranasal sinuses. Although computerized tomographic (CT) scanning is now the best measure of imaging the sinuses,³ in the developing countries plain X-rays of the sinuses still has a place where CT scanning is not available or unaffordable.⁴ Various surgeries are performed for various nasal conditions as elective or emergency situations. In the tropical countries indication for such surgeries are mainly due to infective conditions.⁵⁻⁷ Patients with malignant conditions present at advanced stages of the diseases⁸ where surgery is performed to obtain biopsy and for palliation. Here we present 79 cases who had nasal surgery from our center.

Materials and Methods

This study included the patients seen at the ear, nose and throat (ENT) clinic or the accident and emergency department of the university of Maiduguri teaching hospital (UMTH) and had their surgeries under

general anesthesia (G.A) from January 1997 to December 2001. Information on patients was extracted from the operation register in the main theatre and other details of surgeries from patients' files. Only patients operated under G.A. were considered for the study.

Results

A total of 79 patients were operated under G.A. within the study period. Forty-three (54.4%) were males and 36 (45.6%) were females; with male to female ratio of 1.2:1. Their ages range from 3 months to 68 years. The highest number of surgeries was performed in the year 2000, which was closely followed by that of 2001. This is shown in table 1. The most common indication for surgery was infection/ allergy accounting for 62% of all cases, whereas the next common indication was tumour in 20.3%. The least indication for surgery was the congenital anomaly group in only 6.3%. This is shown in table 2.

Among the infection/allergy subgroup, examination under anesthesia (EUA) of the nose and intranasal antrostomy was the most common procedure performed constituting 63.3%; this was followed by procedures like nasal polypectomy in 32.7% and partial turbinectomy in 26.5%.

External fronto-ethmoidectomy and Caldwell-Luc's operation constituted 12.2% and 8.2% respectively.

This is shown in table 3. It is important to note that some patients had more than one procedure.

Table 1: Yearly sino-nasal operations 1997-2001

Sex	Year					Total
	1997	1998	1999	2000	2001	
Males	7	3	7	15	11	43
Females	7	8	4	10	7	36
Total	14	11	11	25	28	79

Table 2: Reasons for sino - nasal surgery

Reasons	No.	%
Infection/allergy	49	62.0
Tumours	16	20.3
Trauma	9	11.4
Congenital anomalies	5	6.3
Total	79	100

Table 3: Surgeries for sino - nasal infection / allergy

Procedure	No.	%
EUA nose/intranasal antrostomy	31	63.3
Nasal polypectomy	16	32.7
Partial turbinectomy	13	26.5
Proof puncture under G.A.	7	14.3
Fronto-ethmoidectomy	6	12.2
Caldwell-Luc's operation	4	8.2
I+D of septal abscess	2	4.1
SMR of nasal septum	2	4.1

One patient may have more than one procedure

I + D: Incision and drainage

SMR: Submucour resection

Discussion

Nasal diseases are quite common ranging from "common cold" to malignant neoplasms. In our study, 79 patients had surgery with a slight male preponderance. This figure is rather low, but delays in seeking remedies in the hospital due to high cost of hospitalization in a predominantly peasant population could be a factor. The highest numbers of surgeries were performed in the 2000. The previous years were riddled with several industrial actions embarked upon by various hospital workers as well as the shortage of trained personnel greatly affected services.

Sixty two percent of the patients had surgery to remedy their infective/allergic conditions. Earlier study in the region showed that rhinosinusitis constituted a public health problem.⁴ This is as a result of peculiar weather conditions of low humidity, dust and high wind velocity in the region. Intranasal antrostomy, nasal polypectomy, partial turbinectomy and proof puncture under GA were some of the commonly performed procedures. Chukuezi⁷ reported on nasal polyposis where all the patients had nasal

polypectomy with certain patients treated with antral washout and Caldwell-Luc's operation. Few patients had Caldwell-Luc's operation in our report. This could be due to difference in sample size. External fronto-ethmoidectomy constituted 12.2% of the surgeries performed in the infection/allergy subgroup in this report. They were all performed in patients with fronto-ethmoidal mucocoeles using Foley's catheter as a short-term drainage procedure as described by Ijaduola.⁶ Earlier report on mucocoeles showed that fronto-ethmoidal mucocoeles were the most common types of paranasal sinus mucocoeles in this environment.⁵

Only 20.3% of the total surgeries were carried out due to malignancies. Most of these surgeries were biopsies as well as few maxillectomies. Antral malignancies progress slowly masquerading as rhinosinusitis delaying referral and early diagnosis. Singh et al⁸ made similar observation on late presentation leading to ineffective management. Most of the trauma cases have associated facial/head injuries. Primary nasal trauma patients necessitating surgery under GA are few in our report. However, the need for effective road network and communication system to enable such patient reach hospital in time is highly advocated. Apart from such difficulties, some patients prefer seeking alternative home remedies. Those patients finally come to hospital with fulminant sepsis and facial disfigurement. Congenital anomalies were also few, such as atresia of the anterior nares and unilateral choanal atresia.

Most of the difficulties leading to late reporting can be corrected. Since most of the patients are either peasants or traders with low income, medical insurance policies need to be instituted by government at various levels of health care. Certain beliefs that alternative remedies are better can be rectified through health education and community participation. Industrial action, until recent, was a major impediment in the health sector; adequate incentives, proper placement and dialogue should help prevent future occurrence.

References

1. O' Donoghue G.M, Bates G.J, Narula A.A. Clinical ENT an illustrated textbook. Oxford University Press, Oxford. 1992; 98-108.

2. Mackay I, Cote P. Rhinitis, sinusitis and associated chest diseases. In: Mackay I. S, Bull T. R. (eds) Scott-Brown's otolaryngology. Butterworths, London. 1987; 61-92.
 3. Phelps P. D. Radiology of the nose and paranasal sinuses. In: Mackay I. S, Bull T. R. (eds). Scott-Brown's otolaryngology. Butterworths, London. 1987; 10 - 130.
 4. Ahmad B. M, Tahir A. A. Rhinosinusitis in North Eastern Nigeria. Clinico-radiologic findings. Niger J Med 2000; 9: 21-23.
 5. Martinson F. D. Mucocoeles of the paranasal sinuses in Nigeria. Ghana Medical Journal. 1974; 13: 192-198.
 6. Ijaduola G.T.A. Use of Foleys catheter for short-term drainage in frontal sinus surgery. J Laryngol Otol 1989; 103: 375-378.
 7. Chukuezi A.B. Nasal polyposis in Nigerian district hospital. West Afr J Med 1994; 13: 231-233.
 8. Singh S. P, Martinson F. D. Malignant diseases of the sinuses in Nigeria. J Laryngol Otol 1969; 83: 239-250.
-