STEADY NECK, STABLE HEAD, AND UNOBSTRUCTED THROAT: THE OTORHINOLARYNGOLOGIST AT WORK

AN INAUGURAL LECTURE,
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UNIVERSITY OF IBADAN

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An inaugural lecture delivered at the University of Ibadan

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By

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The Vice-Chancellor, Deputy Vice-Chancellor (Administration), Deputy Vice-Chancellor (Academic), Registrar, Librarian, Provost of the College of Medicine, Dean of the Faculty of Clinical Sciences, Dean of the Postgraduate School, Deans of other Faculties and of Students, Directors of Institutes, Distinguished Ladies and Gentlemen.

It is with great delight, honour and gratitude to God that I stand before you to deliver today's inaugural lecture on behalf of the Faculty of Clinical Sciences of our great University. This is the second inaugural lecture from the Department of Otorhinolaryngology in twenty six years. Professor G.T.A. Ijaduola, a doyen of Otorhinolaryngology delivered the first lecture in 1990. That inaugural lecture was also the first to be delivered in the West African sub-region by a Professor of Otorhinolaryngology. The title of his lecture was 'That All May Hear'.

Otorhinolaryngology, Head & Neck Surgery or as it is more often called Ear, Nose, and Throat Surgery is a branch of Medicine involved in the study, diagnosis and treatment of diseases of the ear, nose, throat as well as related aspects of the head and neck region. It is worth noting that the Department of Otorhinolaryngology of the University of Ibadan is the oldest in Nigeria. All the previous and present academic staff have contributed significantly to the development of the Department.

The Vice-Chancellor Sir, permit me to cite a section of the introductory paragraph of Professor G.T.A Ijaduola's inaugural lecture (1990):

> The ear, nose and throat are a good example of complex organs functioning very well. In fact I always say '*seek ye the kingdom of the Ear, Nose and Throat and all pleasures of the Flesh shall be added unto you*'. This is not a corruption of Matthew 6; 33 which says "Seek ye first the kingdom of God and His righteousness and all

these things shall be added unto you". In fact it can be said to be a projection of it because without the ear, we cannot hear the word of God nor can we hear the sweet words from loved ones, such as 'I love you', 'I want you'. The child or adult cannot learn, and a disease of the organ of balance of the inner ear might even make dancing, standing or any other type of movement impossible. Acrobatics, either in the day or at night, outdoors or indoors would also be impossible. I add of course, that without the nose, the wonderful after-shave and body lotions used by you important guests, colleagues and friends here today would never be appreciated. At the other end of the scale, a blocked nose may cause disaster when it is not able to smell. This is because a good sense of smell might be able to detect early, a burning food in the kitchen. But if absent and one is busy doing other odd jobs in the house a fire outbreak can start. The throat, as we all know enjoys the role of 'express way'. Unfortunately, the amount that can pass through it nowadays has been drastically reduced by the new Structural Adjustment Policy. The throat also houses the voice box – the larynx; blockage of which could lead to death within minutes.

The foregoing apparently summarises the physiologic functions of the ear, nose and throat.

Mr. Vice-Chancellor Sir, I crave your indulgence to start my discourse with a rather prophetic story. It came to pass that with the end of the Nigerian civil war in January 1970, a friend of the family gave a he-goat to my father. We did observed that the goat was apparently ill. The disease which I now know as *Coenurus cerebralis* results from infestation by the adult tapeworm *Taenia multiceps* (Achenef, Markos, Feseha, Hibret & Tembely 1999; Scott 2012). The *coenurus* (intermediary stage) occurs in sheep and is usually localised

in the brain or spinal cord. Other ruminants and man can also be infected. The *coenurus* is a large cyst filled with liquid and many floating scolices, and could reach 5cm or more in diameter. This disease caused the goat to stagger and whirl around—a form of acute meningoencephalitis which may have been due to migration of large numbers of immature stages of this parasite. The chronic stages develop as a result of increased destruction of brain and spinal cord tissue as the *coenurus* grows.

I almost cried my eyes out as my father resolved to have the goat slaughtered to end its apparent suffering! I remonstrated with my father loudly on this decision of his by unrelented crying and refusal to eat. Fearing not to endanger my health, he rescinded his decision and pushed off the goat to me! I was happy and looked after it, and to the amazement of everyone, the staggering by the goat resolved over time; only that its movement while walking resembled that of a 911 truck that has lost alignment! Barely 3months after the initial episode of the he-goat reported above, my younger brother, while having his meal, had fishbone stuck to his throat. All local attempts at dislodging it failed. As days passed by, the life of my brother became a nightmare—he was really sick, presenting with fever, neck rigidity, drooling of saliva and halithosis! He could not eat; he was obstructed! In search of remedy, my parents got to know that in faraway Uyo, there was a hospital where a white man was performing magic in treating such a case! The war just ended and the family had no money! The goat which could have been killed months earlier was sold and the proceeds used in getting my brother treated at Anua Mission Hospital Uyo! It was an ENT Surgeon that did the magic! My younger brother came back home hale and hearty. He is today a Medical Laboratory Scientist, happily married with three fantastic children.

Becoming a Medical Doctor

In my secondary school days I was very good in the sciences and mathematics. I really intended to read engineering—especially Electrical/Electronic Engineering. However due to

recurrent illnesses in the family, I decided to read medicine. This made me to apply to both Federal School of Arts and Science (FSAS) Aba, and Victoria Island Lagos to do Physics/Chemistry/Biology. While FSAS Aba insisted that I study Physics/Chemistry/Mathematics, that of Victoria Island gave me my desired option. While in Medical School, exactly a week to my second MB exams, I lost my mother. I finished my studies and qualified with MBBS degree from the College of Medicine, University of Ibadan. During one of my reflection moments, while toying with the idea of specialising in either Obstetrics and Gynaecology or Neurosurgery; the voice reminded me of the need to go into the area that saved my younger brother and thus began my journey into the world of Otorhinolaryngology.

My research interest/focus has been mainly in the areas of Laryngology, Head and Neck Surgery. Over the years, I have addressed the issue of tumours/masses of the head & neck and have described the diagnostic features and rewarding treatment modalities which are novel/modification of treatment modalities. I have also raised the awareness as to the peculiarities of three important malignancies in the specialty in our environment, namely, (a) nasopharyngeal cancer, (b) sinonasal tumour, and (c) laryngeal cancer.

I have shown in my studies with others how some of the aesthetic and functional restoration challenges facing the otorhinolaryngologist can be resolved by modification of existing techniques. My works have also increased knowledge, awareness and management of upper airway obstruction and corrosive ingestion which were often misdiagnosed and poorly or inappropriately treated. This is in addition to some of our other published works that have highlighted the co-existence of some congenital external ear lesions with branchiogenic cysts/fistula and have shown how meticulous search for these apparently hidden lesions can be beneficial. Also over the past few years of my employment in the College of Medicine University of Ibadan and University College Hospital as an otorhinolaryngologist, I have addressed issues on hearing loss amongst other aspects of neurotology.

It is worth noting that my brother's case and other patients I encountered during my residency led to my special interest in laryngology, head & neck surgery and thus the choice of the title of this inaugural lecture—"Steady Neck, Stable Head, and Unobstructed Throat: The Otorhinolaryngologist at Work".

Nasopharyngeal Cancer

Nasopharyngeal cancer is a cancer that starts in the nasopharynx, the upper part of the pharynx (throat) behind the nose and close to the base of skull.

The first report on Nasopharyngeal Carcinoma (NPC) in Nigeria was by Elmes and Baldwin (1947). Martinson's (1968) report of 56 patients in 1968 highlighted the fact that NPC was not rare contrary to initial belief. Two previous reports from Ibadan Cancer Registry—Martinson (1968), Martinson & Aghadiuno (1984), showed a progressive increase in the annual average number of patients (9 & 12 respectively) of the disease. We carried out a review of all histologically confirmed cases (223) of nasopharyngeal cancer accumulated in the Ibadan Cancer Registry from 1981–2000 (Nwaorgu & Ogunbiyi 2004) and noted an annual average increase of 15 NPC cases (fig. 1).

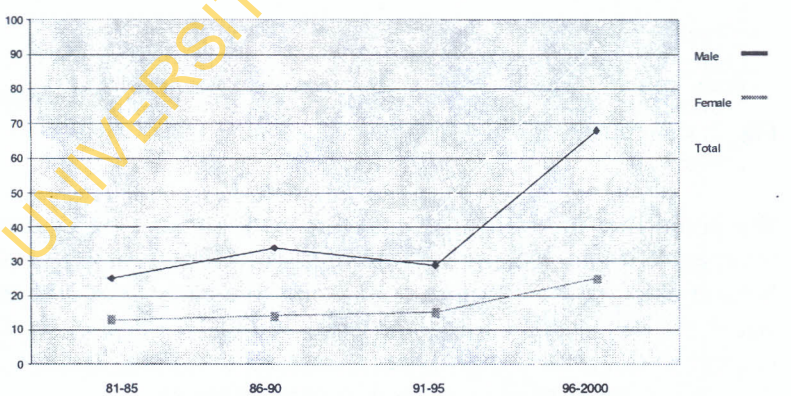


Fig. 1: Five yearly distribution by sex of patients with nasopharyngeal cancer.

In the 1968 study, NPC constituted 1.4% of all cancers in the hospital's cancer registry while in our 2004 study, it constituted 2 percent of total cancers in the same registry. It is worthy of note that during the period of review, the number of ORL units/departments in Nigeria increased from 6 to 15 so that these units took quite a proportion of NPC patients. Thus this increase is real!

In our study, the male to female ratio was 2.3: 1 with an overall mean age of 41.1years (age range 10–81 years). The females had a mean age of 36.1 years (age range 11–80 years) and males 43.2 years (age range 10–81 years). The peak age of incidence for the females was in the 20–29 years age group. Among the males, this was in the 50–59 years age group with an almost equal number of cases occurring in each of the preceding three decades (fig. 2).

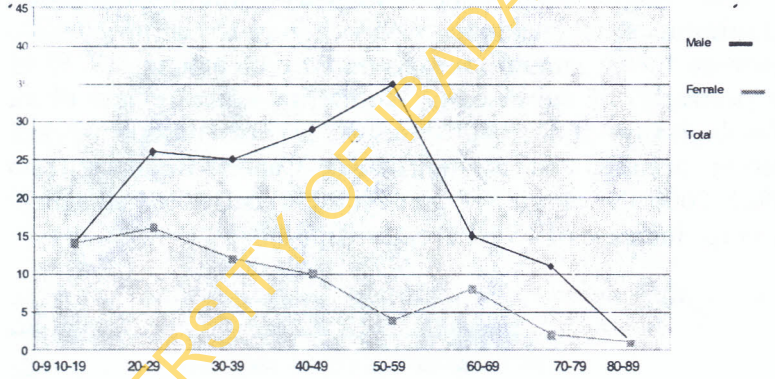


Fig. 2: Comparison of age distribution by sex in nasopharyngeal cancer patients.

We noted that the ratio of Regaud to Schmincke type cancer reversed with increasing age amongst the females, with the Schmincke type being more common in the early ages and an equal incidence of histological types in the 5th decade. With respect to the males, both types increased to a peak in the 6th decade but never really reversed in ratio (table 1).

Table 1: Age and Sex Distribution of the Regaud and Schmincke Histological Types of Nasopharyngeal Carcinoma

Age group (Years)	Regaud (WHO type I)		Schmincke (WHO types II & III)	
	Male	Female	Male	Female
10 - 19	3	2	10	10
20 - 29	7	6	18	8
30 - 39	9	6	16	5
40 – 49	15	5	13	5
50 – 59	14	3	19	1
60 – 69	5	7	10	1
70 - 79	3	1	8	1
80 - 89	-	-	1	1
Total	56	30	95	30

Regaud and Schmincke histological types constituted 38.6% and 56.1% respectively of the nasopharyngeal cancers. All cases of adenocarcinoma, mucoepidermoid carcinoma and embryonal rhabdomyosarcoma were seen in the females while pleomorphic rhabdomyosarcoma, adenoid cystic carcinoma, and malignant fibrous histiocytoma were seen in the males. The early peak is associated with the Schmincke type (WHO types II & III) of nasopharyngeal carcinoma seen in subpopulations with intermediate incidence. These also have longer remission and survival after treatment (da Lilly-Tariah & Somefun 2003).

The Regaud type of nasopharyngeal carcinoma (WHO type I) has been associated with Human Papilloma Virus (types 11 & 16) while the Schmincke type is more commonly associated with anti-EBV serologies and EBV DNA in the tumour cells (Hording, Nielsen, et al. 1994). The peak age of incidence of 20-29 years for the females corresponds to the early peak in the age distribution curve of nasopharyngeal carcinoma patients and 50-59 years of the males to the second peak. We also noted that the suspected aetiological agents such as smoking, alcohol and tobacco consumption, eating of salted, ungutted smoked fish, and woodwork, were not found to be significant factors, as also noted by some works from Nigeria. There would seem to be an unexplained increased susceptibility of the female sex to early EBV infection. The

reasons behind this are unknown, except probably that there are some social factors involved.

There is no doubt as to the role of indoor cooking with firewood as a factor even though one would expected a female predominance in our environment, since cooking is done mostly by women. We also know that in our environment and communities there is increasing use of saw dust as fuel for cooking. Observed also is the preservation of fish at the fishing ports and roadside by smoking which itself contains polycyclic hydrocarbons which are carcinogenic. Thus, the role of hormonal aetiology as postulated by Clifford (1970a) is highly suspected.

Nasopharyngeal cancer may occur at any age, occurring in endemic proportions in the Chinese population. The disease is thought to be prevalent amongst the Easterners in Nigeria. The adduced reasons for this include the high prevalence of their use of snuff, the geographical distribution which appears to coincide with that of Burkitt's lymphoma that has its prevalence in the southern parts of the country where rainfall is maximum, forest widespread and malaria infection hyperendemic (Ketiku, Igbinoba & Okeowo 1998).

Due to its cryptic nature, nasopharyngeal cancer may be difficult to diagnose. The reasons for this include relative inaccessibility of the nasopharynx in the past, vague and non-specific symptoms in the early stages and the tendency for submucosal spread. Some of the symptoms which may serve as early pointers to the lesion in the adult include tinnitus, hearing impairment, sensation of fullness in the ear, progressive nasal obstruction and recurrent epistaxis. Our patients presented with very late disease and diagnosis was hardly in doubt. Occasionally the patients may present first to the ophthalmologist (diplopia, ophthalmoplegia, Horner's syndrome); neurosurgeon (subtemporal lesions); or a neurologist (multiple cranial neuropathies including vello-pharyngeal incompetence, dysphagia). The commonest symptom at presentation was neck swelling as over 65 percent of the patients presented with cervical lymph node enlargement (fig. 3).

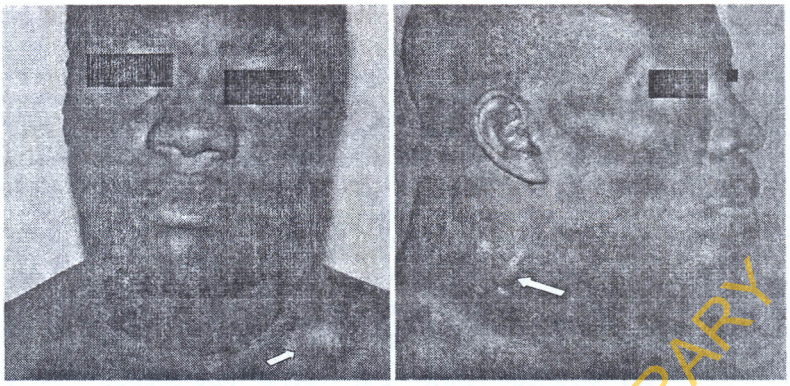


Fig. 3: Cervical presentation of nasopharyngeal cancer (arrowed).

The other symptoms which induce patient presentation include recurrent epistaxis, chronic or complete nasal obstruction and dysphagia that are non-responsive to alternative medical remedies (faith healing and traditional remedies). In our 12-year retrospective study of 79 nasopharyngeal cancer patients, we documented for the first time in the country and the sub-Saharan region two essential manifestations—ptosis (15%) and Horner's syndrome (3%) (Ogunleye, Nwaorgu & Adaramola 1999), thus drawing more attention to ophthalmo-neurologic form of presentation as an aid to early diagnosis of nasopharyngeal carcinoma.

The treatment of choice for nasopharyngeal cancer is radiotherapy and/or chemotherapy. The place of surgery in the management of nasopharyngeal cancers includes:

- Biopsy of nasopharyngeal lesions;
- Airway management (e.g. tracheostomy in cases with obstructive features);
- Neck dissection with confirmed extirpation of disease at the primary site in the nasopharynx;
- Nasopharyngectomy, in cases of recurrence;
- Tympanocentesis.

It is worrisome that the increase in the number of cases of NPC has not been matched with a commensurate increase in diagnostic and radiochemo-therapeutic centers/facilities for

management of the disease. Presently in our country, the prognosis for this cancer is still very gloomy. The five-year survival for stage I, II, III diseases are 90%, 70% and 60% respectively while stage IV without distant metastasis is 40%. However, stage IV disease with distant metastasis has a zero percent five-year survival. We reported the only case of NPC in this environment for now; a male who survived for eight years following Chemoradiation (Elumelu, Adenipekun & Nwaorgu 2006). From the foregoing, it is clear that the key to improved survival is early presentation and diagnosis, and treatment.

Primary Extranodal Non-Hodgkin's Lymphoma of the Upper Aerodigestive Tract

Sinonasal cancer is the cancer involving the paranasal sinuses and the nose. There is lack of specificity in clinical symptoms of sinonasal tumors and this makes them often indistinguishable from benign sinonasal diseases. This can lead to a delay in diagnosis of a malignancy. Sinonasal cancer is especially challenging in a patient who has been diagnosed with chronic rhinosinusitis with temporary improvement and recurrent symptoms. Arising from clinic observations of increasing frequency of sinonasal and nasopharyngeal lymphoma and the paucity of information on primary upper aerodigestive tract lymphomas in our environment, we carried out a 10-year retrospective study highlighting the clinical features, natural history and response to available therapy of this disease (Onakoya, Adeyi, et al. 2003). There was a male preponderance (M:F 2:1). The mean age of the patients was 42.5±17.9 years with a bimodal frequency of occurrence between age groups 31–40 and 51–60 years. Seventeen patients (60.7%) had the lesion in the Waldeyer's ring while 8 (28.6%) and 3 (10.7%) patients had primary involvement of the sinonasal and nasal regions respectively. A total of 18 patients (64.3%) presented with stage IV disease, all with primary affectation of the sinonasal and the Waldeyer's ring. We noted the diagnostic problem posed by this malignancy in view of its variable manifestations and late presentation in our environment (fig. 4).

It is interesting to note that diagnosis of lymphoma can often be suggested on fine needle aspiration cytology. It is thus important to screen all patients with cervical node enlargement positive for lymphoma for primary sinonasal or naso-/oropharyngeal lymphomas. Thirty-eight percent of the cases were associated with 'B' symptoms (significant fever, night sweats or unexplained weight loss exceeding 10% of normal body weight), which is usually seen in aggressive disease.

Intermediate and high-grade diffuse large cell histological types constituted 61% and 39% respectively with no diagnosis of low-grade lymphoma. The high-grade tumours were the commonest histological type observed in the sinonasal and nasopharyngeal sites. Immunotyping of these tumours were not done though T-cell tumours are considered common in these sites.

Fig. 4: Sinonasal lymphoma.

Majority of the patients (47%) had combined therapy (Chemoradiation) for all the clinical stages while radiotherapy alone was offered to 32% of those with advanced disease. The disease outcome in our environment is very poor with 56.6% dead within one year of onset of symptoms and an overall mean survival period of 14 months. We observed that comparison of the median survival of the

patients with the site, Ann Arbor staging, histological grade/subtype and treatment modality yielded no significant differences. This further confirms the aggressive nature of the disease in our environment. It is however uncertain if the poor prognosis is related to the late presentation or the natural history of the disease, thus requiring further evaluation in our environment. We also recommended further studies on the relationship between Sinonasal lymphomas and HIV seropositivity in our environment as an increasing frequency has been associated with HIV infection. The HIV status of our patients in the early part of this review was unknown while those carried out from 1994 to 1998 were negative.

Inverted Papilloma of the Nose and Paranasal Sinuses

This is a relatively rare epithelial neoplasm of the nose and paranasal sinuses accounting for 0.5–4% of the primary tumours of the nose (Lampertico, Russel & MacComb, 1963). Following the observation of synchronous and metachronous squamous cell carcinoma respectively in two of our patients with recurrent inverted papilloma of the nose, we studied retrospectively 15 patients that had histologically confirmed inverted papilloma from 1986–2000 (Nwaorgu & Onakoya 2002). The sample comprised 12 males and 3 females (M:F = 4:1) with a median age of 39 years and comparable to those reported in literature (Weissler, Montgomery, et al. 1986). Five of the patients had advanced lesions of which four were bilateral. There were associated synchronous and metachronous squamous cell carcinoma in two cases respectively. We noted bilateral involvement of the nasal cavity in 4 patients—two patients with only IP and one patient with metachronous malignancy who had no evidence of septal erosion/perforation, while the fourth with synchronous malignancy had evidence of septal perforation. Recurrences were noted in four patients—a patient had four recurrences with evidence of dysplasia; two had three recurrences while the patient with synchronous malignancy had five recurrences.

Though IP is a relatively rare neoplasm; its features of aggressiveness, recurrence and association with malignancy as shown in our study is worthy of note. The lesion is mostly unilateral, but in our study three patients had bilateral involvement without any evidence of septal erosion or perforation in contrast to direct spread through the nasal septum (Weissler, Montgomery, et al. 1986). Direct spread through the nasal septum was noted only in the patient with synchronous carcinoma. The tendency for malignancy arising either synchronously or metachronously ranges from 2–53% (Lawson, Le Benger, et al. 1989). Thus, all tissues obtained must be subjected to histology regardless of the number of times the biopsies were obtained. Based on our findings, we made case for radical surgery (medial maxillectomy) for its management in our environment while stressing the need to intimate any patient with IP to adhere to regular follow-up post-surgery. This no doubt will allow for early detection of recurrence or malignant transformation in those with dysplastic changes histologically.

Carcinoma of the Larynx (CaL)

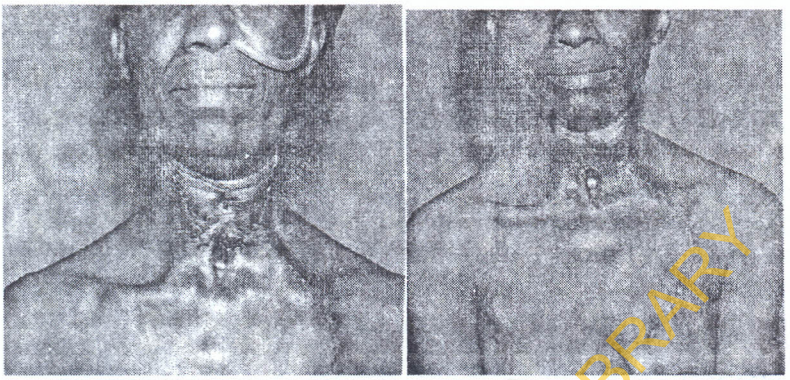
This important malignant epithelial neoplasm is the third most common carcinoma of the head and neck region observed in the ORL Clinic of the UCH Ibadan. Though the real incidence in our center has not been established, between 1986 and 1995, laryngeal carcinoma constituted 28.6% of the total ORL Carcinomas recorded in Ibadan Cancer Registry. We evaluated 72 patients with histologically confirmed CaL comprising 65 males (90.3%) and seven females (9.7%) with M:F ratio of 9:1 (Nwaorgu, Onakoya, et al. 2002). The patients had an overall mean age of 55.8years while the peak age was in the 5th decade of life. The vocal cord constituted the commonest anatomic site (29.1%). Histologic analysis revealed that 94 (96.9%) patients had squamous cell carcinoma of the larynx. Majority of our patients (65%) presented within 1 year of the onset of their symptoms reaching a peak of 84.7% at 2 years. Majority of the patients (>90%) had advanced disease (Stages III and IV). Hoarseness

and difficulty with breathing were the most common symptoms and 64(88.9%) patients presented in acute upper airway obstruction necessitating emergency tracheostomy.

It is worth noting that in our environment, presenting late to specialists in the hospital could be attributed to all or any of the following: nonspecific symptoms of laryngeal lesions at the early stage; religious and sociocultural beliefs and practices (spiritual attack etc) of the people; poverty and illiteracy and initial self-medication. Non-availability of health facilities with ORL clinics, inadequate and inappropriate number of specialists in the field may also be contributory. Thus, these patients presented with advanced disease and upper airway obstruction, which necessitated emergency tracheostomy.

We reiterated the need for improved awareness of the general populace through social campaign and general health programmes similar to those conducted for lung cancer. This will enable early referral of patients presenting with signs and symptoms of airway obstruction to the ORL specialist for appropriate evaluation and treatment.

Total laryngectomy is our preferred treatment option for advanced CaL (stages III & IV) and cases of failed radiotherapy. However many of these patients opt for radiotherapy/chemotherapy in spite of adequate counselling against fear of losing the voice box (larynx) and thus unable to speak after surgery. Advanced disease and previous irradiation of the neck causes tissue fibrosis, reduces blood supply and hinders wound healing and thus contributes to the development of pharyngocutaneous fistula in some of our patients. Faced with this challenge, we used the pectoralis major musculocutaneous pedicled flap to carry out a one-stage pharyngo-oesophageal repair of pharyngocutaneous fistula with good result. Our initial experience with the first case was highlighted in the publication entitled: 'One Stage Pharyngo-oesophageal Repair of a Pharyngocutaneous Fistula and Esophageal Stenosis, using a Pectoralis Major Musculocutaneous Pedicled Flap' (Nwaorgu & Oluwatosin 1998) (fig.).



(A) (B)

Fig. 5: Pharyngeal reconstruction of pharyngocutaneous fistula after total laryngectomy: (A) One week post-reconstruction; (B) One month post-reconstruction

This to our knowledge was the first of such a successful restoration of pharyngo-oesophageal lumen following total laryngectomy complicated by a pharyngocutaneous fistula in Nigeria and the sub-region. Musculocutaneous flaps have the advantage of transferring richly vascularized skin for repairs. Distant axial flaps such as the delto-pectoral flap may provide good repair flaps, but may require; several stages before reaching the recipient site; a wide base to get enough length, and skin grafting to close the donor site, and may not provide bulk to fill in large defects (Bakamjian 1956). We could not use free flap mainly because there were no easy vessels that could be dissected out for anastomosis. Success stories of other cases of pharyngocutaneous fistula managed with this procedure have followed this initial case in Nigeria.

Stomal Recurrence

Tumour recurrence at the tracheostome is a major complication experienced post-surgery for advanced CaL; many a time it has grave prognosis. We retrospectively studied 18 patients that had total laryngectomy for histologically confirmed CaL over a 12-year (1990–2002) period for stomal recurrence and possible predisposing

factors (Onakoya, Nwaorgu, et al. 2004). They had a mean age of 52.23±10.31 years. All the patients were hoarse at presentation with 15 (83.3%) in severe stridor signaling significant obstructive laryngeal airway. Seven patients (38.9%) had palpable deep cervical nodes. Pre-laryngectomy, fourteen (77.8%) and 4 (22.2%) patients had emergency and elective tracheostomy procedure respectively. Twelve patients (66.7%) had neck node dissection during surgery made up of the seven patients identified at presentation and five with suspicious nodes at surgery. The surgical specimen in 10(55.6%) were transglottic while eight had one or two sites involvement. Histologically 12 (66.7%), 4 (22.2%) and 2 (11.1%) specimens were well, moderately and poorly differentiated squamous cell carcinoma respectively. Post-operatively, twelve patients had only radical radiotherapy; 4 (22.2%) had chemoradiation, while two had preoperative and additional post-operative radiotherapy.

The mean duration between the pre-operative tracheostomy and total laryngectomy was 62.19±64.56 days (range 1 – 240 days) while the mean duration between total laryngectomy and development of stomal recurrence was 7.79±8.57 months (range 1–26 months). Ten patients (55.6%) died (7 with and 3 without stomal recurrence but who died with distant metastases to the lungs and thoracolumbar vertebrae). We observed that the mean duration from onset of symptoms till death for those with stomal recurrence was 28.3±26.9 months (range 6-84months) and that only four patients (22.2%) without recurrence were still alive as at the time of our report.

Based on the foregoing, we concluded that advanced stage of disease (stages III & IV), involvement of all subsites of the larynx (transglottic) and the presence of preoperative tracheostomy are the likely risk factors that could be associated with stomal recurrence in our environment. The view that incidence of stomal recurrence may be prevented by emergency total laryngectomy within 24-hours of presentation (Rubbin, Johnson & Myers 1990), or combined pre- and post-operative chemoradiation (Leon, Quer, et al.

1996) has been found not to be significantly right. The use of radiotherapy or chemotherapy preoperatively as short course to reduce the incidence of stomal recurrence may not ensure the reduction rate of this complication as it may prevent the administration of full therapy post-operatively thereby leading to high recurrence rate. There is the need to plan for elective course of moderate to high dose radiation pre- or post-laryngectomy to involve the stoma and surrounding areas of the neck and chest in high risk patients in order to sterilize these regions (Breneman, et al. 1998; Tong, Moss, & Stevens, 1977).

Emergency laryngectomy has not been possible in our environment as the people reject losing their voice at the initial stage of informing them of the type of lesion and possible outcomes. Flowing from our findings, we advise adequate counselling of the prospective laryngectomee and surgery should be carried out in the presence of one or two previous laryngectomees. This has helped in allaying some of the fears hitherto exhibited by our patients as attested to by our recent work (Fasunla, Ogundoyin, et al. 2016) thus; "In this 11-year review covering 2005 – 2015 period, 97 cases of CaL were seen and managed in our Department. Fifty three (54.6%) out of this had total laryngectomy while 3 (3.1%) had stomal recurrence". At surgery, dissection of paratracheal, pretracheal and retrosternal nodes and complete excision of previous tracheostomy tract are carried out. This practice has thus reduced the incidence of this complication in our centre.

The Vice-Chancellor Sir, late presentation is still a problem. Although there is an improvement in the level of awareness on CaL with a consistent rise in the number of patients presenting to us; a challenge which still remains incompletely solved is voice restoration post-laryngectomy. Post-laryngectomy speech rehabilitation in our patients has been by oesophageal speech, except in two patients who are using electrolarynx and more recently, trachea-esophageal voice prosthesis in a patient.

Head and Neck Cancers

Following our retrospective study on CaL, we decided to look at the prevalence and pattern of Head and Neck Cancers especially with respect to the retroviral status of our patients from 1996 to 2005 (Nwaorgu, Kokong, et al. 2007). A total of 521 HNCs were seen in 7941 otolaryngology consultations within the study period, with a peak in 2004–2005 (fig. 6). HNCs were most common in the sixth decade of life in this study (fig. 7). Males constituted 67.4% and females 32.6% (M:F ratio 2.1:1). The mean age was 22.19±13.7 years (age range 8 – 85 years). Ten patients (6 males and 4 females) were HIV seropositive in the study population of 521 subjects, giving a prevalence of 1.9%. Their ages ranged from 17 to 64 years, with 70% being within the range 17– 45 years. Seventy-eight patients (15.0%) with HNC had a history of cigarette smoking and alcohol ingestion, of which 3 (3.8%) were among the HIV seropositive patients. Laryngeal cancers 163 (31.3%) were the most common HNCs seen in this study (table 2). This is contrary to the findings of Amusa et al. (2004) where oral cavity cancers were the commonest. There were eleven cases of malignant salivary gland cancers (all parotid) with 4 (36.4%) of them being HIV/AIDS seropositive. High rates of salivary gland diseases, not necessarily tumours, were observed by Marsot-Dupuch et al. (2004), Nwaorgu and Osowole (2005) and Bakari, Ahmad & Imogu (2005). Marsot-Dupuch et al. (2004) attributed this to a probable increase in HIV concentration in saliva.

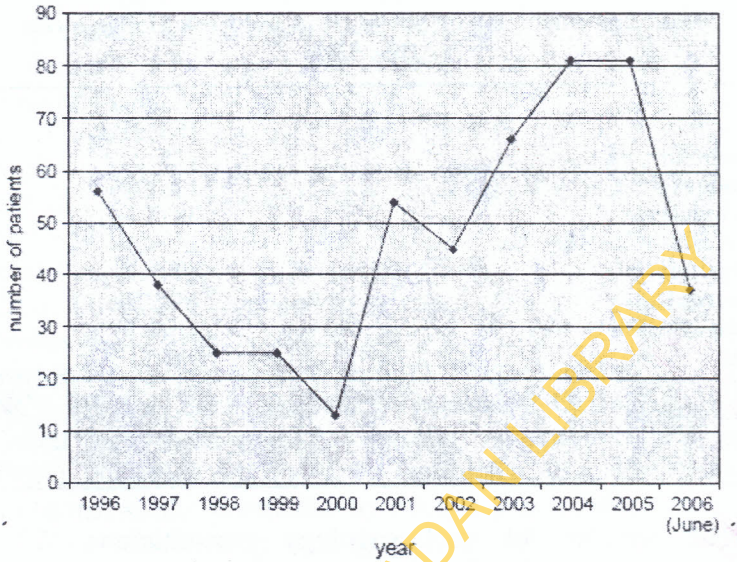


Fig. 6: Trend of head and neck malignancies.

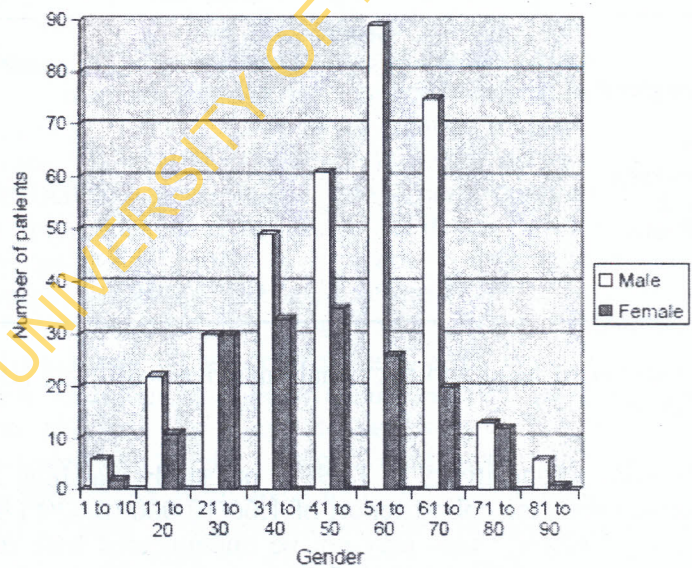


Fig. 7: Gender distribution of head and neck malignancies among age groupings.

Table 2: Distribution by Site of Head and Neck Malignancies (N = 521)

Site	Number (%)
Larynx	163 (31.3)
Nasopharynx	115 (22.1)
Sinonasal	104 (20)
Oropharynx	38 (7.3)
Metastatic Neck Disease	25 (4.8)
Hypopharynx	19 (3.7)
Thyroid	15 (2.9)
Salivary glands	11 (2.10
Ear	9 (1.7)
Oral cavity	8 (1.5)
Oesophagus	7 (1.3)
Others	7 (1.3)
Total	521 (100)

[Total number of otolaryngology consultations -7941; prevalence of head and neck cancer -6.6%]

Table 3: HIV Seropositivity by Gender and Site (n =10)

Site	Gender		Total
	Male	Female	
Salivary gland	3	1	4
Ear	1	1	2
Larynx	1	-	1
Nasopharynx	-	1	1
Sinonasal	1	-	1
Oesophagus	-	1	1
Total	6	4	10

Total number of head and neck malignancies = 10/521; HIV prevalence = 1.9%.

The HIV seropositivity of 1.9% in our study was high in comparison with the cohort report of 1.66/10 000 (0.02%) by Powles et al (2004). This may not be unconnected with the high prevalence of HIV in sub-Saharan Africa. The United Nations programme on HIV/AIDS (UNAIDS) 2005 report

described Nigeria as one of those countries with the most rapidly increasing numbers of cases of HIV/AIDS. The adult prevalence in 1991 was 1.8%; this rose to 5.8% in 2001. The reproductive age group, i.e. those aged 25 – 44 years, have been found to have the highest prevalence of retroviral infection, which in the USA was found to be the leading cause of death in men and the third cause of death in women (John 1999). Our study found a similar age range (17 – 45 years) that had 70% of the cases of HIV seropositivity. The period 2004–2006 recorded more cases of HIV seropositivity whereas none was recorded for 1997–2000. This picture coincided with the period with the highest prevalence of HNCs (15.5% each and 7.2% in mid–2006). Thus, we inferred that there may be a weak relationship between HIV/AIDS seropositivity and malignant head and neck neoplasms, as also postulated by Powles et al. (2004).

It is worth noting that there were 13 cases of Non-Hodgkins lymphoma out of the 104 sinonasal cases none of which was HIV seropositive. There is thus a need for further research into the factors responsible for high salivary gland involvement in HIV seropositive patients, especially in the tropics. It thus becomes imperative that cases of salivary gland diseases should be handled with a high index of suspicion. However, we were unable to establish whether primary head and neck cancers occur more frequently in HIV/AIDS patients than in the general population, although an inference could be drawn as it was with the study of Powles et al (2004). In a recent study on head and neck cancers we noted decreased serum levels of micronutrients (Vitamin A and Zinc) in our patients (Daniel, Fasunla, et al. 2016). It was a case-control study of 65 consecutive patients with histological diagnosis of HNSCC and 65 healthy volunteers similar in age, sex and socioeconomic status. The participants' height, weight, mid upper arm and waist circumference were measured and in addition, serum Zinc and Vitamin A (Retinol) levels were assayed. The mean ages of cases and controls were 50.9±15.2 years and 49.49±16.35 years respectively. The commonest sites of HNSCC were the

nasopharynx and sinonasal regions. Fifty five (84.6%) HNSCC patients presented with advanced form of the disease (stage III and IV). The mean body mass index of cases and controls was 22.66±4.70 and 23.14±3.8 respectively (p=0.524). The mean serum zinc level of the controls (113.63±6.04) was significantly higher than the cases (89.84±14.27) (p=0.000). The mean serum vitamin A (retinol) level of the controls (77.74 µg/dl±2.82) was significantly higher than the cases (61.34±5.89) (p=0.000). Thus we concluded that head and neck squamous cell carcinoma patients are more malnourished than the healthy population. Although no abnormality of serum zinc and retinol was found in both groups, there is a trend of lower levels of these nutrients in the patients than the healthy individuals.

Quality of Life in Patients with Head and Neck Cancer

It is a fact that the disfigurement and dysfunction associated with head and neck cancer (HNC) affect the emotional well-being and some of the most basic functions of life. The most important physical symptoms associated with it are speech problems, dry mouth, and throat and swallowing problems. It was based on this premise that my colleagues and I evaluated, over a three-month period, the functional status and psychosocial effects on the QOL of 50 adult patients with HNC who were still on treatment but had spent a period of at least four weeks from commencement of treatment using the multidimensional University of Michigan Head and Neck Quality of Life (HNQoL) instrument (Onakoya, Nwaorgu, et al. 2006). QOL describes a person's perception of his/her ability to function in meaningful areas of living after illness as compared to before illness (Dolbeault, Szporn & Holland 1999). The HNQoL instrument consisted of four domains, namely communication (four items), pain (four items), eating and swallowing (six items) and emotion (six items) with a five Likert-scale response option for each item or question.

The overall mean age of our study participants was 47.74 ± 16.89 years (range 16–83 years). Forty-one patients (82%)

had advanced cancers (stages III & IV) with 70% and 12% occurring among the low and high socioeconomic classes, based on Oyedeji's (1985) social class classification respectively. Also, 54% of the males had advanced disease as compared to 28% of females. Overall, 92% received various forms of combined treatment modalities, with 8% receiving radiotherapy alone. The response to pain medication showed that 48% and 28% either have to always or sometimes take pain medication respectively. Generally, females had higher mean scores than males in communication, eating and emotion domains; (fig. 8) and global and general questions but almost equal scores with males in pain domain (fig. 9). Males only had higher scores in overall satisfaction with the ongoing HNC care they were receiving in the hospital. Pain domain had the lowest overall mean score of 52.79 amongst the four domains, while the overall bother was the lowest (46.81) amongst the global questions (table 4). Overall bother are physical problems that include the patient's inability to communicate effectively, general physical outlook and psychosocial problems, such as depression or anxiety over their present health condition. These constructs are further aggravated by financial worries, lack of social interactions due to loss of self-esteem and air of uncertainty in the response of their condition to treatment.

The psychosocial impact of this disease on family life is an important issue that cannot be over-emphasized, thus we recommended further research to identify prognostic factors that can guide in restoring cancer patients to their desired level of work function and economic productivity. It is apparent that pain relief in patients with HNC should require more attention by the caregiver in order to improve their QOL through a multidisciplinary approach. We commend the efforts of the Palliative team of the University College Hospital Ibadan ably led by Professor Olaitan Soyannwo in this regard and wish her successor a successful tenure.

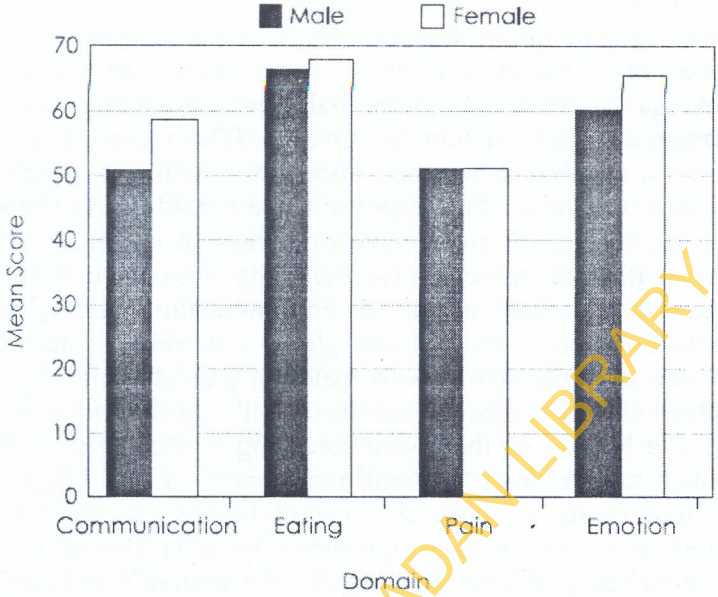


Fig. 8: Mean scores for main domains according to gender.

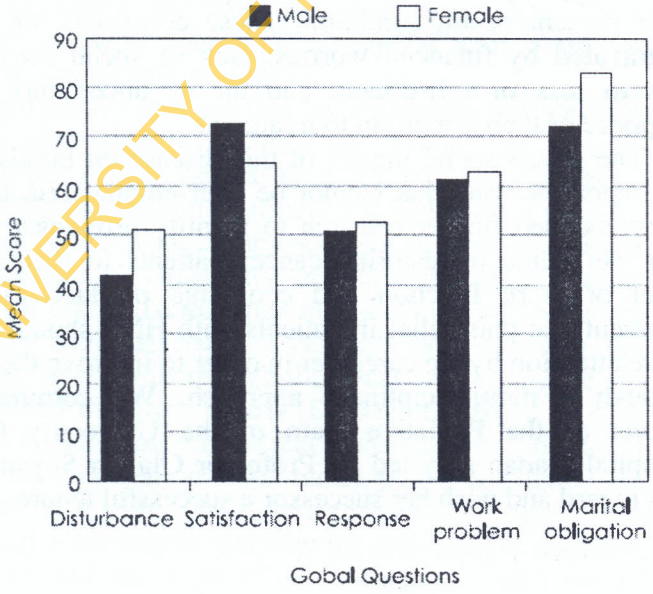


Fig. 9: Mean scores of various global questions according to gender.

Table 4: Overall mean scores of various domains, global and general questions

Domains	Score
Communication	55.50 ± 31.36
Eating	68.67 ± 19.49
Pain	*52.79 ± 20.29*
Emotion	62.92 ± 28.48
Global	
Overall bother	*46.81 ± 29.77*
Overall satisfied	71.20 ± 24.13
Response to treatment	53.13 ± 25.07
Work-related problems	63.52 ± 23.08
Marital obligations	78.26 ± 37.28
General	
Compare site with quality of life	70.21 ± 23.10
Rate HRQOL	71.35 ± 19.97
Difficulty completing questionnaire	90.31 ± 19.64

Upper Airway Obstruction

The upper airway extends from the anterior nares to the extra thoracic trachea (nose, nasopharynx, oropharynx, larynx and extra thoracic trachea) (fig. 10).

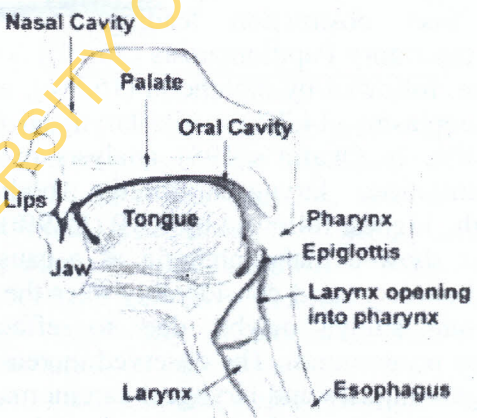


Fig. 10: Illustration showing the extent of the upper airway

Stridor and dyspnea are symptoms indicative of respiratory tract obstruction which may be present in both benign and life threatening disorders involving the upper airway. We studied eighty (80) consecutive patients who presented to us with upper airway obstruction to determine the various aetiologies of this clinical state (excluding adenoidal vegetation) and their relative incidences over a ten-year period (Ogunleye, Nwaorgu & Sogebi 2001). Males constituted 81.3% (65) of the study population. The age range was 6 months to 70 years. The most common site of obstruction was the larynx-65 (81.3%), while the other sites include oral cavity/oropharynx-7(8.8%), hypopharynx-5(6.3%), and nose/nasopharynx-3(3.8%). The study revealed a spectrum of causes of upper airway obstruction in our environment. The acquired causes of upper airway obstruction were 79 (98.8%), and congenital 1(1.2%) (table 5). In children, the most common causes were Recurrent Respiratory Papillomatosis (RRP)-13 (16.3%), and laryngeal foreign body-11 (13.8 %), while in the adult, laryngeal carcinoma-19 (23.8%) and direct laryngeal injuries-12 (15%), were the most common.

In Mukherjee's 1977 study of 49 cases of upper respiratory tract obstruction leading to tracheostomy, Recurrent Respiratory Papillomatosis (36.7%) constituted the highest cause, followed by diphtheria (16.3%), and laryngeal malignant neoplasms (14.3%), while laryngeal foreign body constituted 8%. In Okafor's 1981 analysis of 82 cases of airway obstruction, laryngeal foreign bodies (34.1%) constituted the highest followed by RRP (15.9%). Comparing these studies showed that diphtheria as a cause of airway obstruction had decreased considerably over the 10-20 years preceding our study, maybe due to effectiveness of immunization programmes. The observed increase in cases of direct laryngeal injuries and laryngeal carcinoma may be due to lifestyle changes and increase in physical sports, automobile accidents and smoking.

Table 5: Causes of Upper Airway Obstruction

Diagnosis	Number of patients (%)
Congenital (1st arch syndrome)	
1 (1.2)	
Acquired	79 (98.8)
Trauma [31(38.8%)]	
Direct laryngeal injury (blunt 6%, penetrating 9%)	12 (15)
Foreign body (larynx)	11 (13.8)
Chemical injury (larynx)	4 (5)
Vocal nodules	3 (3.8)
Lefort 3 fractures	1 (1.2)
Inflammatory [12(15%)]	
Retropharyngeal abscess	5 (6.3)
Acute laryngitis	2 (2.5)
Chronic laryngitis (non-specific)	2 (2.5)
Diphtheria	1 (1.2)
Table 5 Contd. **ngitis**	1 (1.2)
	1 (1.2)
Neoplasm [36 (45%)]	
Recurrent laryngeal papillomatosis	**13 (16.3)**
Laryngeal haemangioma	1 (1.2)
Laryngeal carcinoma	**19 (23.8)**
Hypopharyngeal carcinoma	2 (2.5)
Nasopharyngeal carcinoma	1 (1.2)
Total	80

The lone laryngeal tuberculosis that presented with upper airway obstruction emphasized the importance of histological confirmation of all laryngeal growths, however minute or typical their clinical appearance. It is worth noting that 56 (70%) of the patients had tracheostomy to relieve the airway obstruction before the definitive treatment. Thus we advised support through community awareness and health education programmes tailored at encouraging early presentation, prompt referral to experts, and thus improve the outcome of treated cases.

Deriving from the above study, my colleagues and I decided to review the indications for our tracheostomies and see if there is any change in its trend at the University College Hospital Ibadan over a ten-year period (Onakoya, Nwaorgu &

Adebusoye 2002). Tracheostomy is an important life-saving procedure in the management of the obstructed airway. It is a surgically created fistula between the skin of the anterior neck and the mucosa of the cervical trachea the patency then maintained with a tracheostomy tube (see fig. 11).

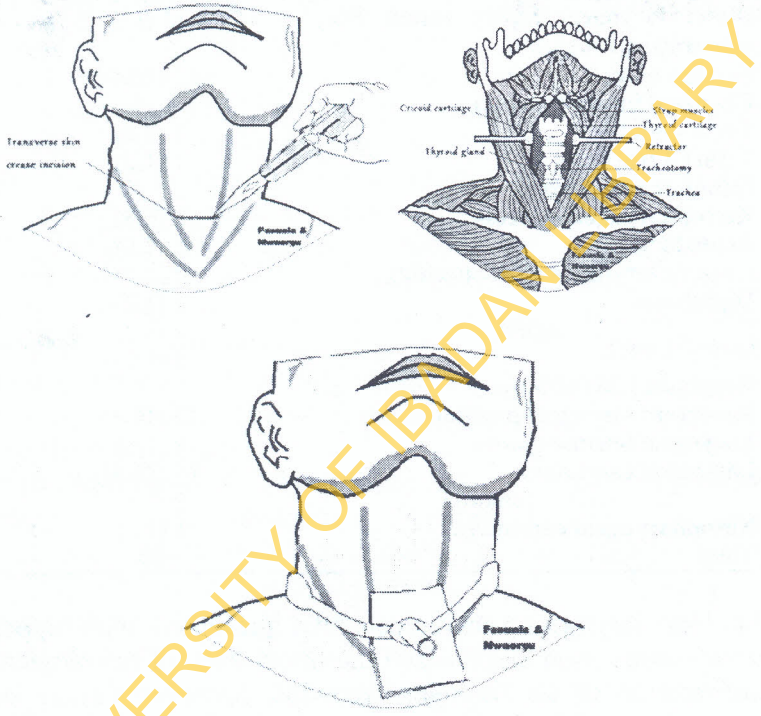


Fig. 11: Some stages of tracheostomy

Two hundred and eighteen tracheostomies constituted 13% of total ORL surgical procedures during the period. We noted a progressive increase in the number of tracheostomies performed. Upper airway obstruction was the indication in 61.4% of cases across all age groups, corroborating the findings of previous works (Mukherjee's 1977, Okafor 1981 & Nwawolo et al. 1997). Tumours accounted for (58.2%) of upper airway obstruction followed by trauma (22%) while

respiratory insufficiency accounted for 3.4% of cases especially in those with tetanus (a major cause in the past which was associated with a high mortality), acute pulmonary oedema and diaphragmatic paralysis following cervical spine injury. Protection of the lower airway/toileting was observed in 24% of cases especially in young adults between 21 and 30 years. In the age group 0 – 10 years recurrent respiratory papillomatosis and impacted foreign body in the larynx accounted for 6.4% and 11% respectively of upper airway obstruction. We re-affirmed the rational use of tracheostomy in infective causes of upper airway obstruction bearing in mind the improved conservative methods of management using humidified oxygen, anti-inflammatory medications, antimicrobials and endotracheal intubation especially in cases of severe stridor.

As important as tracheostomy is, it also has its associated complications as highlighted in our study titled, 'Complications of Classical Tracheostomy and Management' (Onakoya, Nwaorgu & Adebusoye 2003). One hundred and seventy-nine tracheostomies were performed in 168 patients out of which 69 (38.6%) had complications (tables 6 & 7). Seventy-nine (44%) of these were performed as emergency and 100 (56%) as elective procedures. Complications occurred in 43 (54%) emergency cases and 26% elective cases; a difference which was statistically significant ($p = 0.0002$). The overall mortality rate was 2.2%. The complication rate compares with that of Okafor (1981).

Table 6: Distribution of Indications and Total Number of Tracheostomies according to Age Group

Age group (year)	Total n=179 (%)	Indications				No. of Tracheostomy complications n=69 (38.6%)
		Upper airway obstruction n=110 (%)	Protection/ toileting of trachea-bronchial tree n=43 (%)	Respiratory insufficiency n=6 (%)	Preoperative procedure n=20 (%)	
0 -5	23 (13)	20 (18)	2 (4.7)	1 (16.7)	0 (0)	12 (52)
6 – 10	23 (13)	13(12)	8 (18.6)	2 (33.3)	0 (0)	6 (26)
11 – 20	16 (9)	8 (7)	5 (11.6)	0 (0)	3 (15)	6 (38)
21 – 30	32 (18)	14 (13)	10 (23.3)	2 (33.3)	6 (30)	16 (50)
31 – 40	20 (11)	10 (9)	5 (11.6)	0 (0)	5 (25)	5 (25)
41 and above	65 (36)	45 (41)	13 (30.3)	1 16.7)	6 (30)	24 (37)

Bacterial colonization of the stoma site and the tracheal lumen by potential pathogens with resultant pneumonia can be minimized if the copious secretions produced for the first few days post-operatively, be frequently suctioned under aseptic conditions. We also highlighted the usefulness of short-term course of antibiotics in protecting against the initial tracheobronchial colonization by Staphylococcus aureus, *Streptococcus pneumonia* and *Haemophilus influenza*.

Table 7: Complications pPimarily due to Tracheostomy

Complications	Percent (%) n=69
Pneumonia	18 (26.1)
Wound infection	12 (17.4)
Blockage of tube	12 (17.4)
Displaced tube	6 (8.70
Surgical emphysema	6 (8.7)
Suprastomal granuloma	5 (7.2)
Difficult decanulation	4 (5.8)
Laryngo-tracheal stenosis	3 (4.3)
Haemorrhage	2 (2.9)
Pneumothorax	1 (1.5)

The overall mortality of 2.2% (four cases) shows the magnitude of risk involved with tracheostomy. One of the deaths was a 2-year old child who suffered severe hypoxia and bronchospasm following a displaced tube while the other three deaths were adults; cardiorespiratory arrest secondary to blocked tube, failure of re-cannulation after removal for cleaning at home while the fourth case secretly decannulated himself. Thus we recommended a standard approach towards tracheostomy and its care in hospitals especially in emergency situations; and regular follow-up for those on long-term or permanent tracheostomy having thoroughly instructed them on its home-care.

Recurrent Respiratory Papillomatosis (RRP)

This is the most common benign neoplasm of the larynx known to result in upper airway obstruction and which has

most often been misdiagnosed in our environment as lower airway disease in children. It is aetiologically associated with Human Papilloma Virus subtypes 6 and 11. Its true incidence and prevalence. the various aspects of the clinical course, most effective methods of treatment and mechanisms of transmission are still unknown (Armstrong, Derkay, Reeves & RRP task force 1999). It has the tendency to affect sites of airway constriction. drying or crusting but more common in the larynx.

Nwaorgu, Ayodele and Onakoya (2004) reported the first florid case of RRP of the pharynx in an 18-month old female child which mimicked a retropharyngeal abscess in the sub-region. Following this, I alongside my colleagues, reviewed 43 histologically confirmed cases of RRP managed at the UCH Ibadan from 1988 – 2002 with a view to determining the clinical features and course of the disease (Nwaorgu, Bakari, et al. 2004). There were 28 (65.1%) males and 15 (34.9%) females while the mean age was 8.7 years (range 2 – 23 years). Majority of the patients 32 (74.4%) were aged between 1 – 10years with age group 6 – 10 having the highest prevalence of 39.5%. These findings are at variance with hitherto generally held belief of equal gender prevalence in juvenile onset-RRP and bimodal peak (Donald, Homer and Zarod 2002).

In the areas recording the second peak, (Adult onset-RRP), it has been noted that the mode of transmission is via sexual contact or indirect contact with anogenital lesions with a slight male preponderance. Based on Office of population Census and Survey classification of occupations, 41 (95.3%) belonged to the low social class (V and IV) and 4.7% middle class. The social class of the parents may have contributed to the delay in presentation as the majority are of the low socio-economic group, and as a result of the financial challenges and ignorance are most likely to seek alternative forms of treatment. Six (14%) patients presented symptomatically within one month while 31 (72%) patients presented within one year of onset of symptoms with a mean of 6.6 months (range 0.1–2 years). All the patients were hoarse at presentation with 70% of them dyspnoeic and had to have

emergency tracheostomy at presentation. Young children may present with weak cry, stridor or chronic cough. Lateral soft tissue x-rays of these patients showed soft tissue shadow in the larynx.

Our mainstay of treatment was microlaryngoscopy and excision of the papillomata aimed at disease eradication and preservation of serviceable voice. Alternative surgical options include laser excision, aggressive suctioning and microdebridement. The last two have been recommended to limit laser-induced injury to the larynx (Donald, Homer and Zarod, 2002). Follow-up after excision showed no recurrences in 23 (53.5%) patients while 14 (32.4%); 4 (9.3%); 2 (4.7%) had 2, 3, and 5 recurrences respectively. With regard to time interval before recurrence, 1, 1, 2, and 1 patient/s had recurrence after 8, 5, 4 and 2 years respectively. However, the average interval between excisions in the remaining 15 patients was 3 months. Many authors believe that the incidence of tracheostomy is higher in younger children with aggressive disease recurrences (Armstrong, Derkay, Reeves & RRP task force, 1999; Donald, Homer and Zarod 2002). This select group tends to have frequent recurrences following excision. Our experience is different in respect of recurrences as there was no recurrence in 53.5% of the patients after the initial surgery in spite of the fact that majority were obstructed at presentation and the highest incidence of 5 occurrences over the 10–year period were only in two (4.7%) patients.

With regard to the clinical diagnosis of the referring physician, only in 15 (34.9%) was there an accurate diagnosis (table 8) while noting that majority (n=18; 41.9%) of patients were of the fourth order of birth in their respective families (table 9). Our finding is at variance with the belief that RRP is more prevalent among first-borns vaginally delivered by teenage mothers with genital wart. It is also known that apart from vertical transmission in which there is a chance of 1: 400 transmission of HPV, there can be haematogenous spread and ascending transplacental inoculation (Armstrong, Derkay, Reeves & RRP task force 1999). This explains the finding of

the disease as more prevalent in the fourth order of birth, while supporting the argument against elective caesarean section in women with vaginal warts.

Bearing in mind the complications associated with tracheostomy, loss of serviceable voice resulting from delayed presentation and repeated excision of papillomata, we advised a high index of suspicion and prompt referral in any patient with progressive voice change exceeding three weeks unresponsive to standard medical therapy.

Table 8: Diagnosis of Referring Physicians of 43 Cases of RRP

Diagnosis of referring physician	No of patients n=43 (%)
Recurrent Respiratory Papillomatosis	15 (34.9)
Asthma	11 (25.6)
Laryngitis	7 (16.3)
Tumour	5 (11.6)
Croup	3 (7.0)
Foreign body in the larynx	2 (4.7)

Table 9: Birth Order of the Recurrent Respiratory Papillomatosis Patients

Birth order	No of patients n=43 (%)
1st	8 (18.6)
2nd	2 (4.7)
3rd	6 (14.)
4th	18 41.9)
5th	7 (16.3)
7th	2 (4.7)

Hoarseness

Voice is produced in the larynx by vibration of the vocal cords in an expiratory blast of air. The resulting mixed sound is selectively amplified by the resonators of the pharynx, mouth, nose and chest to impart to it its characteristic quality or waveform. Thus our thoughts and information are conveyed to one another through the sound produced in the larynx. For the production of pure and pleasing tones, there

must be an accurate balance between the adductors and abductor muscles of the larynx; maintenance of an even expiratory air pressure and the margins of the vocal cords must be smooth and unimpeded in their separation and recoil. Deviation from this leads to hoarseness. Hoarseness and stridor (obstructed breathing) are the two major symptoms of laryngeal disease. It has been noted that attention is not usually paid to hoarseness by majority of the Nigerian populace until it becomes incapacitating (Okeowo 1977). It may be an early warning of CaL.

Considering the morbidity and mortality inherent in some lesions that present with associated persistent hoarseness, and scanty otorhinolaryngological services available in Nigeria, my colleagues and I evaluated 124 hoarse adult Nigerian patients over an 8-year period (Nwaorgu, Onakoya, et al. 2004). There were 72 (58.1%) males and 52 (41.9%) females with an overall mean age of 47±17.1years (age range 16 – 84 years). The mean duration of hoarseness before presentation was 17.2±25.1 months; and 56 (45.2%) presented within six months of onset of hoarseness. Chronic non-specific laryngitis including vocal cord nodules [fig. 13] was the most common cause of hoarseness 69 (55.6%). This is in agreement with previous works in Nigeria (Okeowo 1977, Okafor 1983). The prevalence was higher among professional voice users—traders, preachers, teachers, singers, etc.

Fig. 12: Vocal cord nodules

About 14.5% of patients with chronic non-specific laryngitis smoked cigarette and ingested alcohol while 60.9% were professional voice users. The other causes of hoarseness included laryngeal cancer 30 (24.2%) and recurrent laryngeal nerve palsy (8.1%) [table 10]. In this study the peak age of the cancer patients was in the 4^{th} – 6^{th} decades of life with a mean age of 57.6years, which is in agreement with a previous study on CaL in Ibadan (Nwaorgu, Onakoya, et al. 2002). About 43% of our patients smoked an average of 20 sticks of cigarette daily with variable amounts and brands of alcohol daily for over 15years. These are likely aetiological factors but the peculiarity of our environment cannot allow for accurate computation of people involved in the habit. From our study, the pathologies associated with hoarseness are varied, and persistence for more than three weeks should prompt early referral to specialists for detailed otolaryngological evaluation.

Table 10: Relative Incidence with regard to Underlying Pathology and Age Group

Pathology	Age group in years				Total (%)
	16 - 20	21 - 40	41 - 60	61 & above	
Chronic laryngitis	2 (2.9)	31 (45)	21 (30.4)	15 (21.7)	69 (55.6)
Laryngeal carcinoma	-	7 (23.3)	11 (36.7)	12 (40)	30 (24.2)
Laryngeal neurological lesions	-	7 (70)	2 (20)	1 (10)	10 (8.1)
Papilloma	4 (50)	4 (50)	-	-	8 (6.5)
Corrosive laryngitis	1 (20)	4 (80)	-	-	5 (4)
Laryngeal tuberculosis	-	2 (100)	-	-	2 (1.6)

In a similar study I carried out with colleagues on pathologies associated with hoarseness in 56 children seen at the ORL Clinics of two tertiary health institutions in Nigeria, there were 33 (58.9%) males and 23 (41.1%) females with an overall mean age of 6.8±4.5years and age range 3 weeks to 15 years (Nwaorgu, Mgbor, et al. 2004). The mean duration

of hoarseness before presentation was 8.3±16.8 months with a range of 1 day to 6 years. The most common pathology identified was Recurrent Respiratory Papillomatosis–29 (51.8%), followed by acute laryngeal infections –9 (16.1%), and laryngeal foreign bodies–8 (14.3%) (table 11). We noted that the average age of the RRP from Enugu (8.8years) was relatively higher than those from Ibadan (6.8yrs), the reason for which may be revealed by further research. There were two cases of diphtheria which were fatal. It is worth noting that the age group 4 - 7 had the highest prevalence of RRP (11 out of 29). The patients had a mean duration of 17.4±22.3 months (range 2 days to 6years) before presentation with 62% of the patients dyspnoiec at presentation necessitating tracheostomy (table 12).

Table 11: Hoarseness: Age Distribution of the Laryngeal Pathologies

Age group in years	RRP	Acute infections	Foreign body	Trauma	Laryngeal tuberculosis	Corrosive laryngitis	Vocal cord nodule	Total n=56
0 – 3	5	5	3	-	-	1	-	14
4 – 7	11	3	2	2	1	1	-	20
8 – 11	7	1	1	1	-	-	1	11
12 - 15	6	-	2	1	1	1	-	11
Total	29	9	8	4	2	3	1	56

The acute infections, namely, measles, epiglottitis, croup, diphtheria and retropharyngeal abscess presented relatively early and all but the diphtheria cases responded to therapy. It was not possible to procure diphtheria anti-toxin for the two cases before their death.

Table 12: Hoarseness: Laryngeal Pathology and Corresponding Number of Patients Requiring Tracheostomy

Laryngeal pathology	Tracheostomy	
	Yes	No
Recurrent respiratory papillomatosis	18 (62%)	11 (38%)
Acute infections	6 (66.7%)	3 (33.3%)
Foreign body	3 (37.5%)	5 (62.5%)
Trauma	4 (100%)	-
Corrosive laryngitis	1 (33.3%)	2 (66.7%)
Laryngeal tuberculosis	1 (50%)	1 (50%)
Vocal cord nodule	-	1

Gonococcal pharyngitis

Pharyngitis is the inflammation of the pharynx, commonly referred to as sore throat and most times is of viral etiology. The most important bacterial agent found in association with acute pharyngitis and tonsillitis is *Streptococcus pyogenes*. *Neisseria gonorrhoea* has been shown to be a possible cause of acute pharyngitis (Owen and Hill 1972, Stolz and Sculler 1974), a form of asymptomatic gonorrhea. This becomes an issue to remember in differentials of recurrent or recalcitrant sore throat. In a collaborative study with my colleagues (Bakare, Nwaorgu, Oni, Umar, Fayemiwo and Adeyemo 2002), we investigated the possibility of isolating *Neisseria gonorrhea* from the throat swabs of 102 females seen at the ORL clinic, 85.3% of whom complained of sore throat, and 341 females from the Special Treatment Clinic (STC). About 72.9% of the study participants were within the age of 20 to 39 years while 5.9% were over 50 years (table 13). Ninety-eight (28.7%) of the 341 females screened had positive genital *Neisseria gonorrhoea* culture with 11 (2.5%) having gonococcal pharyngeal infection. This is at variance with the 5% incidence reported by Stolz and Schuller (1974). Eight (8.2%) of those who had genital gonorrhea also had pharyngeal gonococcal infection. There was none isolated from the throat swab of the 102 ORL clinic female patients; however, 16 (15.7%) had *Streptococcus pyogenes* isolated.

Twenty four (7%) of the 341 females from the STC admitted to the practice of fellatio-orogenital sex, while 9 (81.8%) of the 11 patients with pharyngeal gonococcal infection had history of fellatio (table 14). We concluded that pharyngeal infection was significantly associated with gonococcal genital infection while the practice of fellatio was therefore associated with pharyngeal gonococcal infection. Thus, whoever practices orogenital sex and has genital gonococcal infection is at risk of developing pharyngeal gonococcal infection. It should be noted that it is much more difficult to isolate gonococci from the throat than from the genital tract because unwanted bacterial flora grows more readily in spite of the use of selective medium. This may account for the low prevalence in our study.

Table 13: Age Distribution of Participants

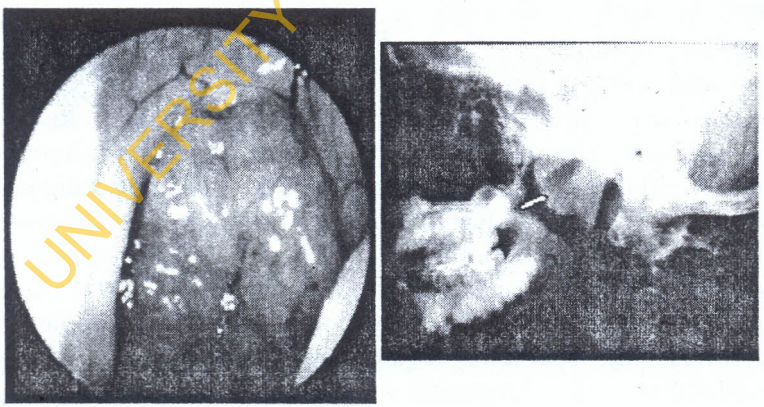
Age group (years)	N = 443 (%)
10 – 19	63 (14.2)
20 – 29	191 (43.1)
30 – 39	132 (29.8)
40 – 49	31 (7.0)
>50	26 (5.9)

Table 14: Isolation of *Neisseria gonorrhoeae* from Genital and Pharyngeal Cultures

Isolates	Genital culture n = 341(%)	Pharyngeal culture n = 443 (%)
Neisseria gonorrhoeae	98 (28.7)	11 (2.5)
Candida albicans	158 (46.3)	-
Trichomonas vaginalis	81 (23.8)	-
Clue cells	60 (17.6)	-
Streptococcus pyogenes	-	39 (8.8)

The Vice-Chancellor Sir, my submissions above have highlighted Human Papilloma Virus (HPV), Epstein Bar Virus (EBV), HIV, exposure to polycyclic hydrocarbons, and some dietary deficiencies as risk factors in the development of head and neck neoplasms. We know that the prevalence of HPV in relation to head and neck neoplasms is on the increase (Gillison, Koch, et al. 2000). The infection is acquired mostly through the birth canal, or through oro-genital sex with someone who has the infection. In our environment, engaging in such sexual practice is culturally and religiously unacceptable, hence, in our study, participants were too shy to volunteer the information. Also the religious and sociocultural beliefs and practices of the people, in addition to the nonspecific symptoms of the lesions at an early stage, contributed to delays in presentation at the health facilities for specialist evaluation. Inadequate or non-availability of diagnostic equipment, non-functioning (frequently, breaking down) treatment facilities conspire to worsen the prognosis in these already advanced cases.

The Vice-Chancellor Sir, as a Laryngologist, Head and neck Surgeon, I wish to dwell a bit on a disease entity which has made most of the parents of the afflicted child night 'watchmen' and emergency prayer warriors—Adenoidal disease! The adenoid is an aggregation of lymphoid tissue, pyramidal shaped with its base on the posterior nasopharyngeal wall and its apex pointed toward the nasal septum, which attains its maximum size between the ages of 3 and 7 years. Adenoids are part of the secondary immune system and by virtue of their position in the upper aerodigestive tract are exposed to inspired or ingested antigens from air or food. The adenoids together with the tonsils are involved in the production of mostly secretory IgA, which is transported to the surface providing local immune protection. The adenoid size with respect to the nasopharynx is more important in its symptomatology than the actual size. A lateral soft tissue x-ray of the postnasal space (nasopharynx) is a reliable way of assessing adenoidal size (Kolo, Ahmed, et al. 2011) (fig. 13). This assesses the absolute size of the adenoid and its relation to the nasopharyngeal (palatal) airway.



I II

Fig. 13: Enlarged nasopharyngeal adenoid: (I) showing endoscopic view: and (II) the soft tissue shadow in the nasopharynx on X-Ray postnasal space [arrowed]

Enlarged/obstructive adenoids may present with symptoms of chronic nasal obstruction, rhinorrhoea, snoring, mouth breathing, and a hyponasal voice. Other symptoms include nocturnal enuresis, poor school performance and decreased attention span. Obstructive sleep apnea in children is clinically marked by loud snoring, apneic episodes while sleeping, daytime somnolence, behavioural problems, and enuresis. It is the belief of many otorhinolaryngologists that the development of middle-ear disease in children is as a result of the significant role played by both functional and mechanical obstruction of the eustachian tube by the adenoids.

The cardiac complications of an obstructive adenoid (*cor pulmonale*) usually necessitate the routine request by surgeons and anaesthetists for electrocardiographic and/or echocardiographic evaluation as part of the pre-operative evaluation of a child going for adenoidectomy. We evaluated 74 children; 45 (60.8%) males and 29 (39.2%) females with a mean age of 38.35 ± 30.32 months (range 5–144 months) to know if routine electrocardiography (ECG) request in adenoidectomy is necessary or not (Fasunla, Onakoya, et al. 2011). It was observed that all the patients presented with mouth breathing and recurrent mucopurulent rhinorrhea. Mild snoring was detected in 18 (25%) patients, moderate snoring in 39 (54.17%) patients, and severe snoring in 15 (20.83%) patients. Mild apnea was observed in 55 (74.32%) patients and moderate in 19 (25.68%) patients. Only seven (9.46%) patients had abnormal electrocardiographic findings but their ejection fraction on echocardiography ranged from 63 to 72% with a mean value of 68.17% (S.D of ± 3.22). Cardiac complications of enlarged obstructive adenoid appear not to be common. Thus, we concluded that routine preoperative electrocardiography should be restricted to only the high risk patients.

In another study, we compared the oxygen saturation of children with obstructive adenoid and tonsil, and normal children (Mbam, Adeosun, et al. 2014). We noted the following: that the mean nocturnal SPO_2 (peripheral

saturation of oxygen) profiles of children with adenotonsillar enlargement were as follows: basal = 96.86%, minimum = 84.99%; maximum = 99% and average SPO2 < 92% = 87.74% while the saturation profiles of the control group were as follows; basal = 97.88%, minimum = 89.71%; maximum = 99%, average SPO2 < 92% = 90.82%. The SPO_2 values found in this study were comparable to those observed by Arrarte et al (2007) in a group of Brazilian children with adenotonsillar enlargement admitted for adenotonsillectomy ($p < 0.53$), but were significantly higher than the values in a subsection of Iranian children admitted for adenotonsillectomy ($p<0.00$), as was reported by Kargoshaie et al (2009). Thus, we concluded that normal children have better nocturnal saturation profiles than children with adenotonsillar enlargement. Adenotonsillectomy is a rewarding treatment of choice for obstructive adenotonsillar enlargement. There is a strong parental satisfaction after adenotonsillectomy owing to the resolution of symptoms of their children/wards as captured by the words of a parent to me after his son's surgery: "Dokky my son was merely existing but now he is living! May God reward you in His own measure!"

Acute Retropharyngeal Abscess (RPA)

Acute Retropharyngeal Abscess is a disease of children aged between 2 and 4 years, commonly following suppuration of retropharyngeal nodes in the space of Gillette (Gaglani & Edwards 1995; Craig & Schunk 2003). There is neck stiffness/torticolis and fullness of the posterior pharyngeal wall, usually with pooling of saliva. Sudden death from laryngeal oedema and asphyxia, or spontaneous rupture and aspiration are grave sequelae. The soft tissue X-ray usually assists in diagnosis as it reveals pre-vertebral soft tissue fullness displacing the air column anteriorly with compromise.

An 11-year retrospective review of 30 confirmed cases of RPA consisted of twenty-five children and 5 adults (Nwaorgu, Onakoya, et al. 2005). The median age was 21

months while 23(77%) of the children were less than 5 years of age. The major complaints were fever (87%), stridor/respiratory distress (57%), cough 53%, pain in the neck/swelling 43%, and refusal of feeds (30%), while nasal discharge 33%, nasal obstruction 20% and snoring 15% were seen more among the younger age group. There was limitation of neck extension, torticollis and limitation of neck flexion in 67%, 30% and 27% of the patients respectively. All the patients were retroviral negative. All had surgical drainage with 14(46.7%) having preoperative tracheostomy. We noted that all the patients had received antibiotic therapy prior to presentation in the clinic thus affecting the bacterial yield from the aspirated pus. Only *Staphylococcus aureus* was isolated from 4 patients. The mean duration of hospital stay was 10.3±3.7 days (range 5 – 17 days). There was no mortality recorded.

The prevalence mainly in children was a sequelae of upper aerodigestive tract infection especially rhinosinusitis with adenoiditis and malnutrition which may have affected their immune response. All the adult patients developed RPA as a result of trauma to the pharynx by penetrating fish bone and instrumentation. We also observed that while the adult patients presented early for specialist treatment, the paediatric patients presented late probably due to non-recognition of the disease process by parents or initial care-givers. The low bacterial yield in our study was probably due to prior administration of antibiotics before presentation and pre-operatively. This is in conformity with Kirse and Robertson findings (2001). Other common organisms that could be cultured from the aspirate include Streptococcus, Bacteroides, Proteus, etc. Thus, knowing the rapid onset and potentially life-threatening course of RPA, it became necessary to create awareness of this lesion and its features among clinicians to enable early and careful evaluation of the patient and x-ray findings even when only mild pharyngeal symptoms are noted.

Mr. Vice-Chancellor Sir, the clinical symptoms of acute retropharyngeal abscess include torticollis, drooling of saliva, and possible associated airway obstruction. This is in addition to other general malaise, and likely frustration. This is just as it was with my brother before the *oyinbo* man—the otorhinolaryngologist performed the miracle at Uyo.

Once the neck stiffness or torticolis is treated, the head becomes stable, obstruction of the airway is cleared and the patient is able to enjoy the good service of his throat by 'chopping life'. This is only possible if the otorhinolarygologist personified by my humble self has already done the needed. That your neck may remain steady, for your head to be stable, in order to always enjoy throat activities without any hindrance, you need to keep the contact address of an otorhinolaryngologist in your address book.

Concluding remarks

Mr. Vice-Chancellor Sir, I assumed duty as an academic staff of this great institution—my Alma Mata, in June 1995. Barely 10-months afterwards, I found myself as the only academic staff in the Department. This was by no means an enviable status! I had medical students on rotation through the department and trainee resident doctors to look after. The stress was so enormous and written all over me that Professor O.A. Ojengbede (then Provost of College of Medicine, University of Ibadan), on this fateful day in the theater noticed it! George, he called, I hope all is well? To which I replied "No sir". I am really stressed; I informed him. He there and then inquired if there were no qualified ORL specialists that could be employed! Luckily, two of my trainees (Drs. A.A. Adeosun & A.O.A. Ogunleye) just passed their Part II Fellowship examinations! He gave them temporary appointment the next day! And so we became three academic staff in the Department. Together we were able to train more Fellows, two of whom (Professor Lasisi & Dr. Onakoya) joined the academic staff in December 2000 and January 2001 respectively. Unfortunately on 29th October 2006 we lost Dr. A.O.A. Ogunleye in an air crash. The Department now has seven academic staff.

Mr. Vice-Chancellor Sir, it is with humility and air of fulfilment, I inform you and this wonderful audience that with my colleagues, we have trained many otolaryngologists for Nigeria and the sub-region, and many of them are here today. Among our products are Professor B.M. Ahmad (UMTH Maiduguri), Professor K.R. Iseh (Immediate Past Head, ORL Dept. UDUTH, Sokoto), Professor A.D. Dunmade, ORL Dept, UITH, Ilorin), Professor T.S. Ibekwe (Head ORL Dept., UATH, Abuja), Dr. Aminu Bakari (Ass. Prof. & MD, NECC, Kaduna), Dr. A.S. Adoga and Dr. A.A. Adoga, both brothers, who are now Readers at JUTH, Jos, Dr. L. Onotai (Reader, UPTH Port Harcourt) etc, etc, etc!

I have contributed significantly to the development of my specialty in the sub-region having served 4 years each as Secretary and Chairman respectively, of the Faculty of Otorhinolaryngology, West African College of Surgeons. I have also served as member of Faculty Board in both the West African College of Surgeons and National Postgraduate Medical College of Nigeria.

Today Mr. Vice-Chancellor, I will say that I am a fulfilled man and will however keep on doing my best for the advancement of the Specialty, to keep up with world standard and best practices.

Recommendations

Mr. Vice-Chancellor Sir, the treatment modalities for head and neck cancers include surgery, chemotherapy and radiotherapy. Their successful management depends on accurate diagnosis, tumour stage, and selection of appropriate treatment modality with close post-operative follow-up.

I have highlighted above some of the major challenges of management of our patients which include late disease presentation and acceptance of surgical treatment by patients and their families, initial self-medication, poverty and illiteracy. Thus a targeted and well co-ordinated health education and awareness programme for ORL diseases and their prevention at the community level, through the various media and even religious organizations should be pursued with the support of appropriate and relevant agencies.

Inclusion of therapy for head and neck cancers in the existing National Health Insurance Scheme in Nigeria will likely encourage early presentation to the ORL Specialist while also reducing default of treatment.

It is desirable that functional world class centres for the management of head and neck cancers are established in the six geopolitical zones of the country. Programmes aimed at creating awareness and encouraging immunization against Human Papilloma Virus and other infective agents will go a long way in prevention of the infection, and other agents that may result in neck infections and abscess.

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In a presentation as this, the likelihood of missing out some people unintentionally exists. Let me assure us that they are unintended and not meant to slight anyone.

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BIODATA OF PROFESSOR ONYEKWERE GEORGE BENJAMIN NWAORGU

Professsor Onyekwere George Benjamin NWAORGU, a native of Umuaku in Umuodagu Ntu, Ngor-Okpala Imo State was born on 23 April, 1959, to the family of Mr Paulinus Nkemjika and Late Mrs Maria-Celine Adanma Nwaorgu. After his primary education at St John's Primary School, Imerienwe in 1972, followed by secondary education at Owerri Grammar School Imerienwe, he shifted base in 1977 to South Western Nigeria for his Higher School Certificate at the Federal School of Arts and Science, Victoria Island, Lagos. He was admitted in 1980 to the prestigious University of Ibadan for his MBBS degree which he obtained in June 1985.

His career after obtaining the MBBS degree of the University of Ibadan in 1985 commenced with employment as an House Officer at the then General Hospital, Aba (Now Abia State University Teaching Hospital, Aba); NYSC medical officer at the Tombia Health Centre, Delga L.G.A., Rivers State between 1986 and 1987; employment as a Medical Officer, Alvan Ikoku College of Education Medical Centre, Owerri in 1988. This was before he opted for specialist training as a Resident doctor in Otorhinolaryngology at the University of Nigeria Teaching Hospital, Enugu from December 1988 to June 1995 when he passed his Final Fellowship examination. He became a Fellow, West African College of Surgeons in 1995 and a year later, Fellow, National Postgraduate Medical College of Nigeria 1996. He was appointed Honorary Consultant Otorhinolaryngologist by the Board of the University College Hospital, Ibadan in August 1995 and has been serving in this capacity till date.

Professor Nwaorgu commenced his academic career in earnest at the University of Ibadan with appointment as a Lecturer I in the Department of Otorhinolaryngology, College of Medicine, University of Ibadan in June 1995; promoted to

the rank of Senior Lecturer, in October 1998; Reader in October 2003 and a full Professor in October, 2006

Professor Nwaorgu is a professional through and true. He belongs to several professional organisations. He is a:

- Member of the Nigerian Medical Association;
- International Fellow, American Academy of Otorhinolaryngology, Head & Neck Surgery, 2007 to date;
- Fellow, American-Austrian Foundation since April, 2008;
- Member, European Academy of Allergy & Clinical Immunology (EAACI) from 2008 to date;
- Vice-President, Otolaryngological Society of Nigeria since November 2015.

He also served as Secretary, Faculty of Otorhinolaryngology, West African College of Surgeons between January 2007 and July 2011; and more recently as Chairman, Faculty of Otorhinolaryngology, West African College of Surgeons from July 2011 to March 2015. He coordinated yearly update and revision courses for Parts I & II fellowship candidates in Otorhinolaryngology for the Faculty of Otorhinolaryngology, West African College of Surgeons from 2001 to 2006.

His administrative responsibilities in University of Ibadan have been considerable including the following:

- Coordinator, Department of Otorhinolaryngology, College of Medicine, University of Ibadan, April 1996 to December 1999;
- Acting Head, Department of Otorhinolaryngology, College of Medicine, From Jan 2000 to April 2002 and then June 2007 till August 2009;
- Professor and Head of Otorhinolaryngology between August 2011 and July 2015.

In addition to these, he is or has served on the following committees and in the following capacities in the College of Medicine and the University of Ibadan:

- Postgraduate Coordinator and Member of Faculty of Clinical Sciences Postgraduate Subcommittee;
- Department of Otorhinolaryngology representative at the Faculty of Clinical Sciences committee on Continued Medical Education;
- Faculty of Clinical Sciences representative on the College of Medicine Board of Survey;
- Member, College of Medicine Ad-Hoc Committee on Fund Raising;
- Member, College of Medicine Academic Board;
- Member, Faculty of Clinical Sciences, Appointments and Promotions Committee;
- Member, Business Committee of Senate, University of Ibadan;
- Chairman, Board of Health, University Health Services, University of Ibadan since September 2013.

Professor OGB Nwaorgu is a regular reviewer of several articles in general and speciality journals. In his own right, he is a well published researcher, teacher and clinical specialist who have successfully supervised 34 postgraduate residents' research works. Some of his supervised students are now professors scattered all over Nigeria, including one who is presently the Chief Medical Director in a teaching hospital. Through his well known researches in the field of otorhinolaryngology, and head and neck surgery, he has 120 publications to his credit including published abstracts and 112 full-length original articles in peer reviewed journals. A former UICC World Cancer Congress Scholar; former Visiting International Scholar, Simmon Cooper Cancer Institute, Springfield, Illinois, and International Fellow, American Academy of Otorhinolaryngology, Head and Neck Surgery, he has attended over 25 international conferences and several workshops in and outside of Nigeria where he presented high quality papers. He obtained a postgraduate certificate in Epidemiology from the World health Organisation in February, 2000.

This former Professorial Consultant ORL Surgeon to the Aminu Kano Teaching Hospital, Kano between January 2011 and December 2014; as well as a Visiting Professorial Consultant ORL Surgeon to University of Abuja Teaching Hospital, Gwagwalada since January 2013, serves as an Examiner of the Faculty of Otorhinolaryngology Fellowship examinations of the National Postgraduate Medical College and West African College of Surgeons. He was the Chief Examiner for the Faculty of ORL West African College of Surgeons Fellowship Examinations from October 2011 to April 2015.

Professor OGB Nwaorgu is a man of many parts, a man of true faith, a devout Catholic who was ordained a Knight of the ancient and noble order of St. John International (KSJ) in 2003. A truly detribalised gentleman, who is happily married to Adenike Oluwakemi Nwaorgu (Nee Ajaiyeoba) in a union that is blessed with three lovely children, namely, Ayomide Uchenna, Olufemi Victoria and Chimdinma Emmanuella Nwaorgu.

NATIONAL ANTHEM

Arise, O compatriots
Nigeria's call obey
To serve our fatherland
With love and strength and faith
The labour of our heroes' past
Shall never be in vain
To serve with heart and might
One nation bound in freedom
Peace and unity

O God of creation
Direct our noble cause
Guide thou our leaders right
Help our youths the truth to know
In love and honesty to grow
And living just and true
Great lofty heights attain
To build a nation where peace
And justice shall reign

UNIVERSITY OF IBADAN ANTHEM

Unibadan, Fountainhead
Of true learning, deep and sound
Soothing spring for all who thirst
Bounds of knowledge to advance
Pledge to serve our cherished goals!
Self-reliance, unity
That our nation may with pride
Help to build a world that is truly free

Unibadan, first and best
Raise true minds for a noble cause
Social justice, equal chance
Greatness won with honest toil
Guide our people this to know
Wisdom's best to service turned
Help enshrine the right to learn
For a mind that knows is a mind that's free