



UNIVERSITY OF LAGOS

Inaugural Lecture Series 2014

TOPIC:

THE JAW-BREAKING
WORDS SPECIALTY:
ITS PRACTICE, EDUCATION
AND BEDROOM
TEACHING/LEARNING

By

PROFESSOR AKINWANDE JELILI ADISA

THE JAW-BREAKING WORDS SPECIALTY: ITS PRACTICE, EDUCATION AND BEDROOM TEACHING/LEARNING

An Inaugural Lecture Delivered at the University of Lagos
Main Auditorium on Wednesday, 18th June 2014

by

PROFESSOR AKINWANDE JELILI ADISA

BDS, FMCDS, FWACS, Diploma Immunology, Univ. of London, FACD, MNIM,

Professor of Oral and Maxillofacial Surgery,
Dean, (2003-2008)

Faculty of Dental Sciences,
College of Medicine,
University of Lagos

© Akinwande Jelili Adisa 2014

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without the prior permission of the author.

Published

by

University of Lagos Press
Unilag P. O. Box 132,
University of Lagos,
Akoka, Yaba-Lagos,
Nigeria.

e-mail: press@unilag.edu.ng

ISSN 1119-4456

PREAMBLE

The Vice Chancellor, Prof. Abdul Rahamon Bello;
The Deputy Vice Chancellor (Academics and Research),
Prof Babajide Alo;
The Deputy Vice Chancellor (Management Services)
Prof. Duro Oni;
The Provost, College of Medicine, our very dear Prof.
Folashade Tolulope Ogunsola;
Dean, Faculty of Dental Sciences, Prof. Godwin Toyin
Arotiba;
Deans of other Faculties;
Members of Senate of the University;
The Registrar Dr (Mrs) Folashade Ipaye;
The Bursar;
The Librarian;
Men of the Print and Electronic Media;
All Invited Guests;
Distinguished Ladies and Gentlemen

It is my pleasure to welcome you to this lecture titled "THE JAW-BREAKING WORDS SPECIALTY: ITS PRACTICE, EDUCATION AND BEDROOM TEACHING/LEARNING" which will be the 260th Inaugural Lecture of the University of Lagos and the 56th of CMUL. It is also the 7th in the Faculty of Dental Sciences and the 2nd in the Department of the Jaw-Breaking Words Specialty.

I also want to add that the first Inaugural Lecture delivered in any Nigerian University was in the University of Ibadan in 1951 and was by Grainer, B. Late Prof F.O. Dosekun delivered the first Inaugural Lecture of the University of Lagos in 1962 while the first surgeon to deliver in the CMUL was late Prof. Orishejolomi Thomas

in 1968. Though a General Surgeon, Prof. Orishejomi Thomas demonstrated an extreme interest in the Jaw-Breaking Words Specialty. Indeed, he carried out many jaw surgeries to treat ameloblastoma, which is relatively a common tumour of the jaw bones.

INTRODUCTION

University of Lagos officially raised me to the full Chair in the Department of Oral and Maxillofacial Surgery in 2001. Therefore, you can refer to me as a newly announced old Professor. This inaugural lecture is therefore overdue. However, I sincerely hope, Mr. Vice Chancellor, Sir, that by the end of this lecture, I would have sufficiently defended myself for the delay to warrant your judgement that I expect it will read "Jelili Adisa Akinwande, you are discharged and acquitted". I am not bribing you Sir.

What is my defence for the lateness? Sir, choosing a suitable topic became an albatross before I finally came up with the title" **THE JAW-BREAKING WORDS SPECIALTY: ITS PRACTICE, EDUCATION AND BEDROOM TEACHING/LEARNING.** In addition, I was so much involved with the establishment and nurturing of FUTO, KNUST Dental School, Ghana and the first Dental Nursing School in Africa inclusive of South Africa.



The First Graduates of the School

Sir, I need to emphasise “inclusive of South Africa” because wrongly or rightly, South Africa is usually taken as the benchmark for African countries in technological development. In fact, the University of the Western Cape Dental School is currently the largest Dental School in Africa. Lastly, within the period 2001 and now, I attended conferences home and abroad which have given me the advantage to contribute palpably to undergraduate and postgraduate Dental Education. This contribution forms part of this lecture. An example of such contribution is the championing of the writing of an enduring CUS -driven BDS curriculum template for Dental Schools in West Africa.

Sir, though you seem to have discharged me on one count i.e. the lateness; otherwise, you would have not approved the lecture. However, I still need to put up this

defence for the audience to add their voice to the discharge and acquittal. Audience, now over to you, am I discharged and acquitted?

With this defence Sir, I now stand before you and the distinguished audience to defend that I am worthy of occupying the Chair of The Jaw-Breaking Words Specialty that we professionally know as Oral and Maxillofacial Surgery simply meaning Mouth, Jaw and Face Surgery. Another jaw-breaking words specialty, which fortuitously is our neighbour, is Otorhino Laryngology simply meaning Ear, Nose and Throat Specialty.

Raison-d'être and Forms of Inaugural Lectures

The raison-d'être for an Inaugural Lecture in academia of a University is principally to induct the holder of a Chair in the University. However, there are several views as to what forms an Inaugural Lecture should take. It can be in these three forms which are to:

- “concentrate on the Professor's role in the development of the Department, if the lecturer is also the occupant of the Chair to which the headship is attached;
- focus on the Professor's own work within the general framework of his discipline;
- or “zero in on any of any general topic on which one has something fresh stimulating to tell one's audience” (Alo, B. I. 2003).

My own Form

Mr. VC, Sir, in my case , I am focusing on my owns work within the general framework of the Jaw-Breaking Words Specialty but at a level of generality to enable this mixed audience to appreciate what makes the problems of my works tick. Thus, this Inaugural Lecture is going to be in three broad areas to reflect the elements of my journey to full Chair in this citadel of learning.

The Sub-themes

1. My Professional Milestones.
2. Oral and Maxillofacial Surgery education with a note on Appropriate Financing of Dental education as panacea of decaying infrastructure plaguing all our Dental Schools.
3. My Bedroom Teaching and Learning model.

Definition of the Specialty

Oral and Maxillofacial Surgery is the specialty of Dentistry which includes the diagnosis, surgical and adjunctive treatment of diseases, injuries and defects involving both the functional and aesthetic aspects of the hard and soft tissues of the oral and maxillofacial region.

The Unshared Areas of the Discipline i.e. areas that few surgeons outside the discipline understand or practice

*Dentoalveolar surgery
Orthognatic surgery
Temporomandibular joint surgery
Implantology
Trigeminal nerve repair*

The Shared Areas

The shared areas i.e. the procedures are not unique to the Specialty and in fact overlap considerably with other Specialties such as ENT, Plastic and Reconstructive Surgery:

Maxillofacial Trauma

Cleft lip and palate surgery

Craniofacial surgery

Head and neck surgery

Reconstructive surgery

Facial aesthetic surgery

THE MILESTONES IN THE PRACTICE OF THE DISCIPLINE

**The subsequent six Case Reports are some of the Major
Milestones**

Case 1- A Case of massive Mandibular Fibromyxoma using Acrylic Implant post-total Mandibulectomy for temporary Reconstruction. (Akinwande, J. A. et al 1996)



The Objective/Result

The main objective of reporting this case was to evaluate the usefulness of Acrylic Implant as an immediate procedure in Mandibular Reconstruction in situations when immediate bone grafting is inadvisable. Thus, instead of employing the usual materials for immediate reconstruction, we used acrylic because of cost implication of titanium implant, with good cosmetic result.

By so doing, we have been able to demonstrate that the material is a good substitute for maintaining space for the use of osteo-integrated implant for secondary reconstruction.

This hardware will be affordable by most of our patients. While the cost of titanium implant was at that time about ₦80,000.00, the cost of acrylic implant was just about ₦5,000.00.

After two years of follow-up, the result was satisfactory except the hypertrophic scar. However, the patient was lost to follow-up.

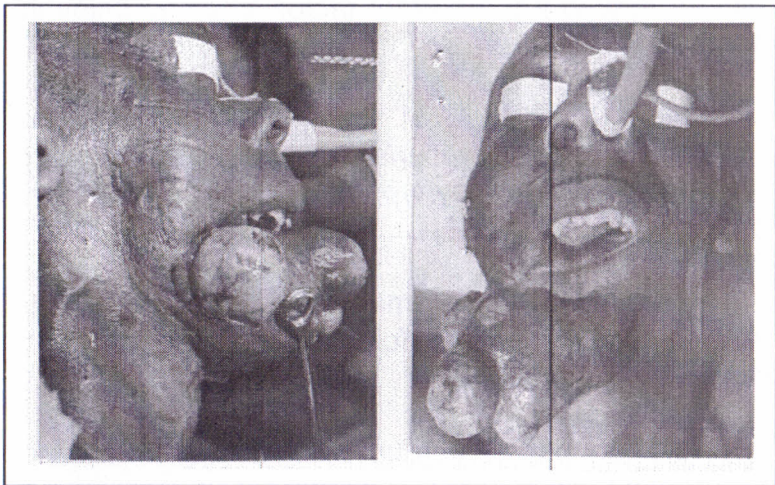
Conclusion/Recommendation

An immediate mandibular reconstruction, using an anatomically fabricated acrylic implant, is possible with an acceptable cosmetic result. However, its use should be limited to benign lesions no matter the size as in this case. This is because mandibular defects due to trauma and benign lesions may have more residual tissues for coverage than malignant lesions.

Methacrylate monomer is an irritant and sensitizer to tissues but people had found out that the level of residual monomer decreases with curing time and temperature.

We therefore recommend curing of acrylic implant for up to 72 hours to bring it to a tolerable level.

Case 2- Acantomatous Ameloblastoma Recurring Extraosseously Twenty Seven Years after Total Mandibulectomy. (Akinwande, J. A. et al 1996)



The Report

Extraosseous recurrent ameloblastomas are rare. This case of an acantomatous ameloblastoma recurred extraosseously 27 years post total mandibulectomy. The mandibulectomy was carried out at UCH. This patient presented 4 years in LUTH after noticing his recurrence because of lack of fund.

It took another 3 years before we performed the surgery, for the patient absconded after incisional biopsy also because of lack of fund.

Conclusion/Recommendation

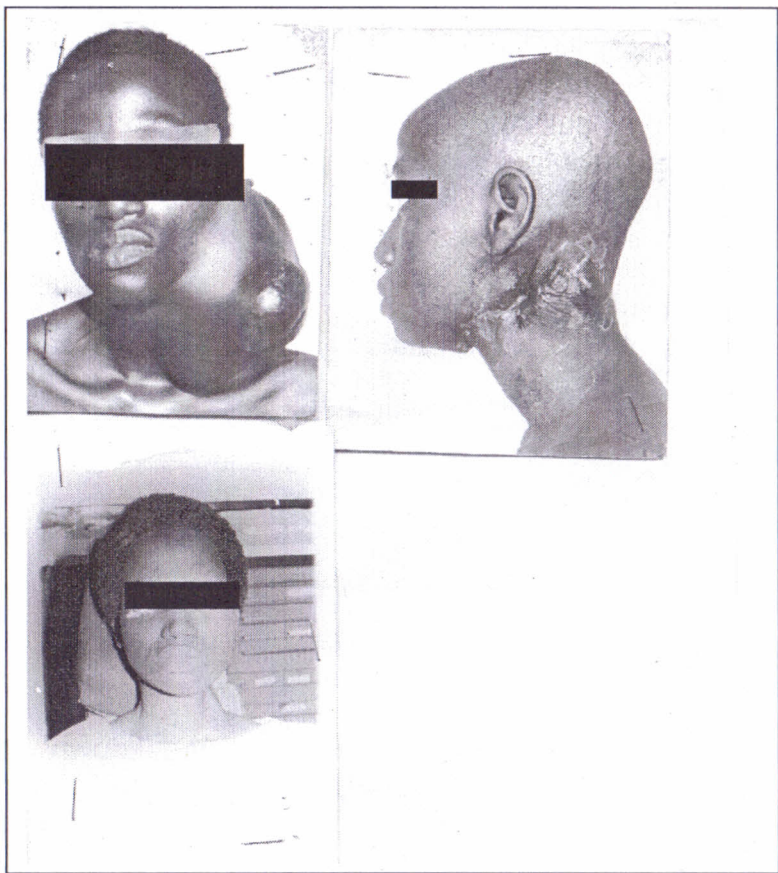
This case does not support the view that after the lapse of 25 years without recurrence can one consider cure of ameloblastomas to be permanent.

That lack of fund is an important factor, causing delay in treatment.

A plea is therefore made that the cost of treating such patients should be heavily subsidised to ensure prompt treatment, for the earlier any type of tumour is treated the greater the chance of cure.

Case 3- Anaplastic Carcinoma of the Parotid Gland disease-free after nine years follow-up (Ladeinde, A. L., Akinwande, J. A. et al 2002).

A 29-year old Nigerian of Yoruba extraction, presented in OMFS outpatient clinic of LUTH with massive swelling on the left side of the face of 2½ years duration, which was said to have followed “a tooth extraction” for which she was placed on a course of antibiotics.



Treatment and Result

The patient received radical parotidectomy with external carotid ligation and post-operative radiotherapy resulting in disease-free patient after 9 years of follow-up in spite of the amount of tumor spillage.

The huge amount of tumour spillage experienced intraoperatively will presume a higher risk of metastasis of such a highly malignant tumour. This was because there was previous evidence of various surgical attempts and preoperative evidence of palpable submandibular lymph nodes, which was positive on histological examination.

Conclusions/Recommendation

The patient was disease-free 9 years postoperatively in spite of the great deal of tumour spillage. We therefore concluded that the good prognosis achieved could be as a result of the postoperative radiotherapy.

We therefore recommend Adjuvant radiotherapy in the treatment of malignant parotid gland tumour.

Delay in reporting and frequent breakdown of radiotherapy machines resulted in delay of the surgery and commencement of radiotherapy, which resulted in referral to another centre. Therefore, frequent servicing of the machines at 3 months interval should be sine qua non.

Case 4: The Case that would have landed this Lecturer in Court



The import of this case is the importance of adequate documentation with pre and post-operative photographs. If we had no preoperative photograph of the patient, we would have landed in court.

What prompted the lawyer to head for the court?

What prompted the lawyer, a freelance, to proceed to sue LUTH and to join me in the suit for negligence? It was because of a very common complication of total mandibulectomy for very large tumour. Thus, the complication, which could have attracted the attention of the lawyer, could have been a postoperative appearance similar to this.



If the lawyer had waited for another three months, we could have been able to provide at least a temporary maxillofacial prosthetic like this:



On receipt of the letter from the lawyer to sue us on behalf of the patient, the CMD requested me to react to the allegation of negligence. I forwarded the case report along with the preoperative photographs. The CMD invited the lawyer for a talk with me in absentia. However, the lawyer on seeing the preoperative appearance of the patient vis-a-vis the source of her complaint begged to withdraw the case. Therefore, case closed!

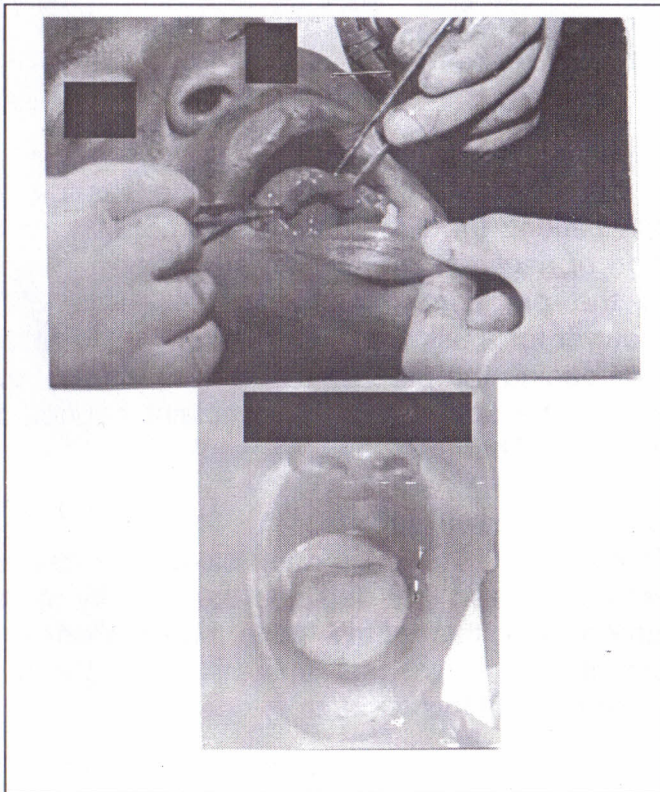
Conclusion/Recommendation

This case could have resulted in court case if we had no preoperative photograph that depicted the severity of the tumour burden and this could have snowballed into embarrassment to the hospital and heads might role particularly the head of this lecturer.

This case underscores the importance of ordering serial preoperative, trans-operative and serial postoperative photographs.

Patient should also be made to fill and sign a well-worded informed consent form.

Case 5: Unusual Injury to the Tongue from Human Bite (Ogunlewe, O., Akinwande, J. A. et al 1996). A 22-year old man presented in OMFS outpatient clinic with an extensive jagged through and through suppurative wound of the tongue during sexual intercourse.



The major problem prompting the publication of this case was, because the injury was so extensive as to mimic a high velocity missile injury whereas it was an amorous bite.

Conclusion/Recommendation

The injury mimicked gunshot injury because of the severity and jagged nature of the wound.

It is so fearsome, that we are inclined to recommend avoidance of oral sex and that kissing should be restricted to period before the real show.

Secondly, the post-operative result has clearly indicated that immediate primary closure of infected wounds of the oral cavity can yield good result because of the very rich vascular supply to the area.

Jehovah's Witnesses (JWs) undergoing Oral and Maxillofacial Surgery

The population of Jehovah's Witnesses in the world is about 8M, and in Nigeria about 350, 000.

JWs approached me close to 20 years ago to be one of the doctors that would be sympathetic to their faith. I first ignored their request but in the wake of HIV/AIDS and the high prevalence of positivity in the donors I started being sympathetic.

However, there should be considerations for the Potential Medico- legal Problems. Therefore, physicians and hospitals concerned about the potential medico-legal consequences of deaths due to misunderstandings about transfusions can limit their liability by making a diligent

effort to establish the existence of a more comprehensive informed consent than has been previously obtained.

Use of Informed Consent Form

In this regard, physicians should consider the use of a form "Informed Consent and Statement of Understanding regarding Blood Transfusion Therapy." This form is available from the Associated Jehovah's Witnesses for Reform on Blood.

Volatile Medico-ethical Challenges

There are four groups of Jehovah witnesses: they are:

Group 1: The Orthodox Jehovah's Witnesses believe the Bible prohibits ingesting blood or its four primary components-red cells, white cells, platelets and plasma. They also believe that Christians should therefore not accept blood transfusions or donate or store their own blood for transfusion. To them, this is a non-negotiable religious stand and that those who respect life as a gift from God do not try to sustain life by taking in blood even in an emergency.

Group 2: Dissident group - Associated Jehovah's Witnesses for Reform on Blood (AJWRB)

This is a group of Jehovah's Witnesses who petitioned for a reform in the WTS's current policy which bans certain types of blood transfusions. They are a group of Jehovah's Witnesses who sincerely believe that the decision to refuse or accept blood transfusions is a purely personal matter, which should be decided individually based on one's own conscience rather than the mandate coming from the organization, the Watch Tower Society (WTS).

Because of the necessity of strict confidentiality, the group is organised mainly on the Internet. Currently, the group are in over 25 countries.

This group declares that they are fully aware of the potential risks involved in blood transfusions, and requests that bloodless treatment and alternatives to blood transfusions be used whenever such treatments are available without undue risk. However, when there are no such alternatives, such as when there is massive and uncontrollable haemorrhage, and bleeding to death appears inevitable, the group believes that physicians should be permitted to make every effort to stabilize patient's condition, including the use of blood transfusions.

Group 3: Those that are unable to take decisions on their own (Follow-follow Group)

Still, many Jehovah's Witnesses may say they adamantly refuse blood transfusions, but a primary reason for this refusal is that it is the policy of the WTS. It is not because it is his or her personal decision based on a full understanding of the doctrine and the risks and benefits of the particular treatment.

Group 4: Those that have not updated their knowledge about WTS faith

This group are not aware that the WTS has ruled that members may elect to accept blood products like haemoglobin, interleukins, albumin, all clotting factors, immunoglobulin, fibrinogen, etc. However, the WTS offers no explanation as to why it is permissible to accept all of these fractions of blood but not blood itself.

With this background information, I carried a pilot review of Literature (Akinwande, J. A. et al 2012).

Case 1- Management of Jehovah Witness patients undergoing major head and neck surgery (Hemelen, G.V. 1999).

The alternative strategies used were Combination of Hypervolemic haemodilution, hypertensive anaesthesia, meticulous surgical haemostasis, and antifibrinolytic therapy.

Case 2 A 72-year old with severe anaemia; lump in the palate with associated dysphagia and otalgia. Biopsy confirmed Adenocystic Carcinoma. Being a witness, he refused blood transfusion.
[http://www.thefreelibrary.com/recombinant+human\)](http://www.thefreelibrary.com/recombinant+human)

The alternative strategies used were RHuEPO 40,000units/day subcutaneously when the PCV fell from 41.1% pre-op to 17.1%. It was reduced to 20000 units/week + IV iron sucrose 100mg/day + Ferrous Sulphate 300mg P.O. 8 hourly, + Vitamin C 500mg P.O. 12 hourly.

Case 3- Management of Jehovah's Witnesses in Otolaryngology, Head and Neck Surgery (Adelola, O. A. 2008)

The alternative strategies used were thorough preoperative planning, RHuEPO administered before, during or postoperatively plus or minus iron therapy.

The Intra-operative considerations when treating JWs as listed:

- surgical techniques
- controlled hypotensive anaesthesia

- cell salvage
- intraoperative haemodilution (acute normovolaemic or acute hypervolaemic Non-blood volume expanders)

Intraoperative Considerations 2

- Haemostatic surgical instruments
- Electrocautery/electrosurgery
- Electrosonic scalpel
- Argon beam coagulator
- Interventional radiology
- haemostatic agents

A JW in the follow-follow group-group 3

An elderly JW presented with a massive parotid gland tumour.

Because of the size of the tumour, and considerations for the Potential Medico-legal problems and oath to preserve life rather than taking it, I decided not to be sympathetic in this case.



Rather I sought out to establish the group of the JWs the Baba belonged. My finding was that the man belonged to follow-follow group, that is, group 3. It was therefore easy for me to convince him to receive blood. When we were to take the postoperative picture, he was so pleased with his appearance that he said we should not cover his eyes but we still had to cover the eyes because we suspected there could be denial of that permission in future.

Conclusion/Recommendation

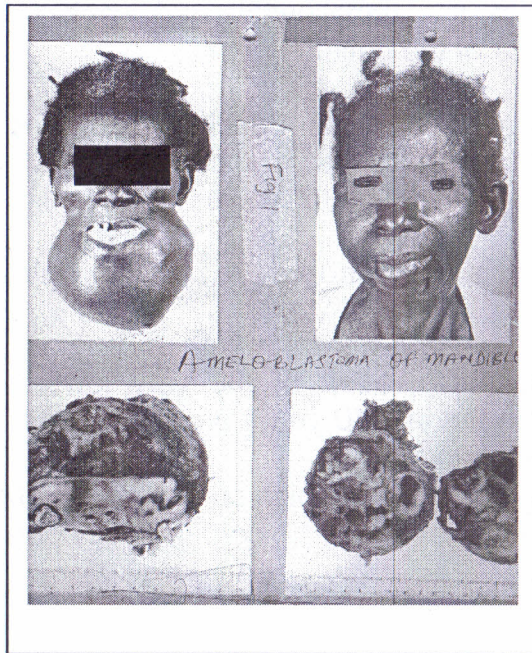
From these case studies, I can confirm that even Orthodox Jehovah's Witness patients no longer have to die because of their faith, which is an absolute refusal to accept blood and blood products provided adequate infrastructure/ facilities are in place. So, over to you JWs to convince the Government to equip adequately our hospitals to be able to hold tenaciously to your faith.

However, we recommend that physicians should establish the group a JW belongs before deciding on whether or not to take up the challenge of treating him or her.

The Case operated by my mentor

It is this case that gave me the inspiration to choose the Jaw- Breaking Words Specialty.

Who is this mentor? He is no other person but the doyen of Oral and Maxillofacial Surgery, Prof Joel Olakunle Akinosi. Prof Akinosi is in a better position to tell the story about this patient but I shall tell the story.



The Story

Prof Akinosi operated the patient for ameloblastoma involving the lower jaw. In the first operative day, the nurses did not allow her husband to see her because she was still under intensive care.

On the second operative through 6th day, at each day of the visit, the husband was able to recognise her wife because of the heavy bandaging mimicking the preoperative appearance of the patient. For unknown reason, the husband was unable to visit his wife for two weeks and when he came at the 4th week; though he was at the beside of his wife, he exclaimed. Nurse, nurse, nurse where is my wife and the whole ward was thrown into wild laughter and they chorused "Baba, you are beside your wife". The mistaken identity of his wife was

because of the unbelievable 4th week post-operative appearance of the patient.

What followed was his dancing round the ward with shower of praises over her doctors. What a transition from potential litigation to praises? Such is life abi!

Is Burkitt's lymphoma a dying phenomenon?
(Akinwande, J. A. et al 2008)

Why did I ask this question?

My casual observation of the very low rate of cases reporting in the last 10 years prompted me to ask myself this question and to:

- Call for records which confirmed the observation
- Ask Colleagues who confirmed my observation
- Ask Pediatrics and hematology who also confirmed

Because the observation was purely conjectural, I proceeded to validate the observation from evidences on the trend of prevalence of BL in Nigeria.

Validation of observation by studying trends in the prevalence

Evidence 1

- UCH (Ibadan) (Ojesina, A.I. et al 2002)
- 1960-1972 56.6%
- 1972- 1990 37.1%
- 1991-1999 17.9%
- By 1999 a decline of 38.7%

Evidence 2

LUTH (Akinwande, J.A. et al 1986, Ajayi, S.O. 2007)

- 1970s-1980s 60.8%
- 1992-2003 38.3%
- By 2003 a decline of 22.5%

Evidence 3 (Takeuchi, K., 2006)

In a very inspiring study in Japan by Takeuchi k et al 2006, they found that seropositivity in the early 1990 was > 80 %; 1995-1999 =59% and by 2006 it was < 50 %. They concluded that the decline might lower the incidence of BL and other associated disorders.

Conclusion/Recommendation

The results of these studies would give an impression that my observation could be true. However, there is no equitable decline in the prevalence of strongly associated risk factors, Malaria (Ikeh et al, 2008), and EBV infection when compared with that of BL.

Thus, the high prevalence in the 60s and 70s could just be due to clustering and or harvesting phenomenon.

The reason for the apparent decline in this century could be due to the galloping increase in hospital fees for in the 60s and 70s; treatment was free for this group of patients.

Photo Gallery

This is a case of Burkitt's lymphoma of maxilla in a 7-year old boy. He died soon after reporting and before treatment.



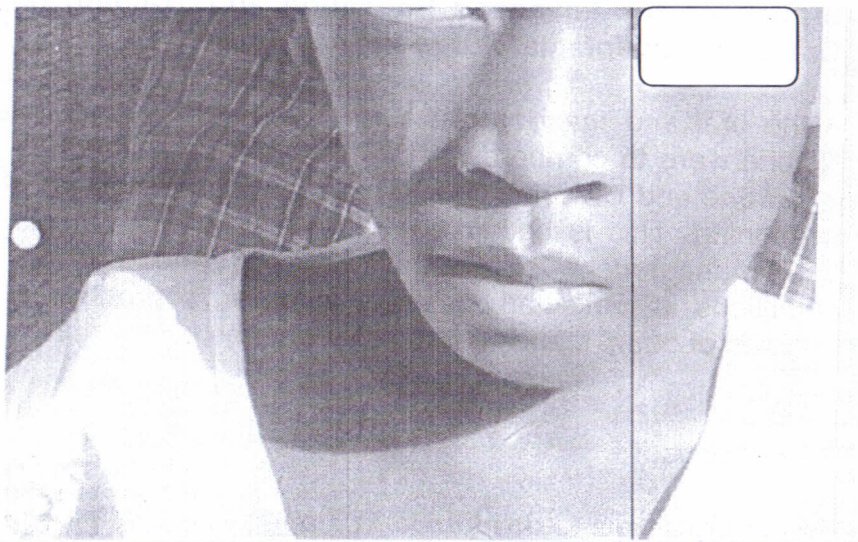
Another devastating case of BL



<http://search.tb.ask.com/search/GGman.jhtm?searchfor=burkitts>

Photo Gallery 2





Burkitt's lymphoma of mandible in stage 3 in a 7 year-old girl and the treatment result one month post chemotherapy.

ORAL AND MAXILLOFACIAL SURGERY EDUCATION

Introduction

Mr, Vice Chancellor Sir, the second broad area is what contribution this lecturer had made to OMFS education.

- a. Guidelines for Advanced Education and Training of Oral and Maxillofacial Surgeons in Nigeria (Akinwande, J. A. 1995)
- b. The Controversies about dual qualification (Akinwande, J. A. 1996)
- c. CUS -driven BDS Curriculum. (Akinwande, J. A. et al 2013)
- d. Appropriate Financing of Dental Education (Akinwande, J. A. 2013)

Guidelines for Advanced Education and Training of Oral and Maxillofacial Surgeons in Nigeria

If the oral and maxillofacial surgeons as envisaged for Nigeria were to compare effectively with their colleagues in Europe and US, they should have a broad-based form of training. This is because emphasis on the diagnosis and management of general medical and surgical conditions is particularly relevant in order to produce a clinician of equal standing to other surgeons.

The Proposal

The Programme is organized in 3 parts

First part

1. The programme will be offered in one institution but other institutions may be utilized for added experience and complementary resources.
2. The residents will spend 6 months in studying internal medicine to learn about comprehensive history taking and physical evaluation with particular emphasis on cardiovascular, pulmonary, hepatic, renal, and endocrine physiology and pathology.
3. They will spend 3 months in studying general surgery to earn knowledge and skills on principles of general surgery, operative and post-operative patients' management.

4. They will also spend some time in the hospital's surgical emergency room.

First Part of Training 2

5. The trainee is to spend three months in studying anesthesiology to become proficient in maintenance of respiration and circulation, immediate establishment of airway and emergency care and resuscitation.
6. She/He is to spend 3 months in ENT to learn skill on how to perform emergency tracheostomy for example in Ludwig's angina or transoperatively.
7. She/He is to spend 3 months in studying plastic surgery to acquire broad experience in the principles of skin grafting and flap surgery.

Total -18 months

Second and Third Parts

Minimum of 3½ years are required to acquire skills in the management of patients and to perform more complex oral and maxillofacial surgery procedures.

During this period, he is to perform at least 50%, participate in at least 25% and observe in at least 25% of major procedures.

The trainee is also to collect data for his Dissertation or Case Book

The last part of the training is that the resident should participate in at least two departmental researches.

Conclusion

The trainee who has successfully completed this phase 2 of the training would have acquired a broad theoretical education and a wide experience in clinical practice.

Fortified with this theoretical and practical knowledge of OMFS and general surgery and related disciplines, he can face the challenge of oral cancer, facial anomalies, trauma and head surgery with confidence and skill.

Oral and Maxillofacial Surgery, its Evolution, Growth and Controversies

In the 19th century, great controversy arose in the medical world concerning Oral Surgery, for Medicine of that era held the view that Oral Surgery should be a subspecialty of Surgery. Thus it became clear that a medical degree should be mandatory for the practice of oral surgery. With the passing of this era, a change gradually took place culminating in the acceptance of the position that a dentist must not necessarily obtain a medical degree to become an oral surgeon.

However, when Oral Surgery changed to Oral and Maxillofacial Surgery in 1975, there was a resurgence of the controversy on the double degree question with both proponents and antagonists giving reasons for their positions. Notwithstanding these controversies, as of now, there is yet to be an international regulation that compels oral and maxillofacial surgeons to possess both medical and dental degrees.

Review/Proposal

This paper reviews the evolution, growth, and controversies over the need for a Medical Degree to practice the specialty. But there is yet to be a consensus on the issue.

Based on this lack of consensus, I proposed guidelines for advanced education in oral and maxillofacial surgery in Nigeria, which I consider as an alternative to double

degree. This is because it is my view that what we really need is adequate medical training and not a medical degree to become an oral and maxillofacial surgeon. This in addition to the fact that acquiring a double degree will not make one a better OMFS than someone with a single degree. In addition, if we adopt the double degree policy, not only will it require a minimum of 8 years. Also in the words of Professor Porswillo, it is a "long winding detour which seldom brings the full-expected recognition to many of those who struggle to the end of the course" (Akinwande, J. A. 1996).

The Proposal 2

When entering the training through BDS, the route to specialization:

FDS (UK) or part 1 FMCDS or WACS or certified 2 years residency training in clinical dentistry (US) PLUS

Minimum of 3½ years specialty training: 1½ years are to be spent rotating through medicine and relevant surgical specialties; the remaining 2 years will be spent in the OMFS and head and neck surgery

For the 1½ years spent to acquire sufficient knowledge in medicine and relevant surgical specialties to be comparable with the core years spent for MBBS, solid foundation needs to have been laid at the undergraduate BDS programme in medicine and general surgery. This underscores the call for dental students to undergo the same junior medicine and surgery rotations as for MBBS students.

If a trainee is entering through MBBS

1. FRCS (UK) or part 1 FMCS or WACS or certified 2 years residency training in general medical or surgical specialties (US) PLUS
2. Minimum of 3½ years specialty training: 1½ years are to be spent on full-time formal training in aspects of dentistry relevant to the practice of oral and maxillofacial surgery.
3. They will spend the remaining 2 years in the OMFS, Head, and Neck Surgery.

CUS- driven Dental Curriculum

The last minor review of CMUL Curriculum for Medical and Dental education was more than 15 years old and this situation is at variance with the NUC policy, which had prescribed the review of curricula in Nigerian Universities as every 10 years. Thus the Dean, Professor K. Savage, appointed a Committee in February 2011 to review the current curriculum (Chairman, Professor J.A. Akinwande).

One of the critical recommendations of this review is implementation of CUS for medical and dental education in Nigeria.

Rationale for Recommending CUS

On May 5, 2004 in Abuja, the NUC organised a workshop on the implementation of Course Unit System for medical and dental Education.

In the report of this workshop, there was a consensus that CUS has merits and we can adopt it for our medical schools. This means with the modification of CUS as

used for other programmes, CUS is applicable to Medical/Dental Education.

NUC has mandated Nigerian Medical Schools to implement CUS in their Curricula.

For many years, the University of Lagos has been issuing an instruction for CMUL to start a UCS-based Curriculum just like other professional courses like Law and Engineering.

The West African Sub-region has approved the implementation of CUS in all Medical/Dental Schools.

Our B.Sc. courses at CMUL including Physiotherapy are Unit Course system - based.

Rationale for Recommending CUS 2

5. There are Medical/Dental Schools that are already adopting and adapting CUS for Medical and Dental Education www.med.monash.edu.au/enrolmentsmbbs and two dental schools, the Faculty of Dentistry of the University of Western Cape in South Africa www.uwc.ac.za/downloads/yearbooks/umc_yearbook_2008_dentistry_23 and the University of Minnesota School of Dentistry www.dentistry.umn.edu/prod/groups/sod@pub/@sod/documents/asset/24

Above all, why can we not also sell our own intellectual properties instead of always importing?

Advantages of CUS

1. In the present system, most students who want to continue their Medical/Dental studies abroad often

have problems in the medical/dental schools they are transferring to, in interpreting transcripts issued in Nigeria.

2. The operation of integrated medical/dental education is relatively easier with CUS
3. It keeps students relatively busier because their assessments will be on a regular basis in form of summative-in-course assessments as opposed to the traditional summative end-of course assessments.
4. Our current method of one or two In-course assessments and a Summative Assessment at the end of the session encourages rote learning.

Advantages of CUS 2

1. It is currently difficult to calculate mathematically students and lectures workloads because we do not assign courses with any number of credit units.
2. Flexibility in students designing their individual study programmes because within four weeks of a semester, students can make changes in respect of their original selection of optional courses if any.
3. Increased transparency in relation to course outlines and evaluations.
4. There will be uniformity of results presentation at the Senate such that it will be possible at a glance to compare the performance of students in MBBS/BDS programs with other students in other programmes of the University.

Appropriate Financing of Dental Education

The number of dentists produced in Nigeria is grossly inadequate (1:29968 in 2007 with a teeming population of Nigerians adding up to 131,859,731; in June 2012 it was

1:62,960 with the population of Nigerians now adding up to 170 million.

The needed workforce by WHO prescription for countries with developing economies is 1:7000 which is the minimum ratio required to meet our Oral Health Needs.

It is this very poor dental workforce and palpable decaying infrastructure in our 8 dental schools vis-a-vis the oral health needs of 170 M Nigerians that prompted me to take a look at how tertiary education is financed worldwide. This is because I strongly attribute these deficiencies to the current poor state of funding from Government with very meagre contribution from parents/students (\$70/year).

Findings

1. There is no country in the world that fully finances its tertiary education; rather, contribution comes from parents/students.
2. The Higher education expenses borne by parents/students in Nigeria is \$71.66 whereas in Brazil , Germany, Romania, Ghana, Uganda that also have a tuition-free policy like Nigeria, the contribution of parents/students is \$3090, \$3347, \$2315, \$2160 and \$8131 respectively.
3. Parents/students worldwide source their contribution through loans.
4. Dental students buy their dental instruments and materials.
5. The two tables that follow are for Nigerian parents/students to study but not a recommendation that I am making for other programmes of the University.

Higher Education Fees borne by Parents/Students globally

Country	Instructional expenses	Student living expenses	Total
S. AFRICA	\$3.385 (tuition/books/misc)	\$6690 (lodging/food/misc)	\$10075
NIGERIA	\$ 70 (misc)	\$1.66 (lodging)	\$71.66
GHANA	\$385 (books/misc)	\$1771(lodging/food/misc)	\$2166
UGANDA	\$103 (books/misc)	\$8028 (Transport/misc)	\$8131
TANZANIA	\$1383 (tuition/books/misc)	\$1224 (lodging/food/misc)	\$2607

Higher Education Fees borne by Parents/Students globally 2

Country	Instructional/ Expenses \$	Student living/expenses \$	Total
UK	4910 (tuition/books)	9330(lodging/food/ transp/misc)	14240
BRAZIL	567 (books/misc)	2522 (food/transp/misc)	3090
US			7256
ROMANIA	530 (books/misc)	1660 (food/transp/misc)	2315
GERMANY	357 (books/misc)	2990 (food/trans/misc)	3347

Costs of Training Dentists

The diminishing federal and state support has created a financial pressure for medical and dental education that there is now a slogan "public universities", they say, "were state-supported, then they were state-assisted, and now they are state-located".

Average cost/year in US

Tuition and Fees \$31,246

Books and Lab Fees \$4,518

Instruments \$5,095

Living Expenses \$33,107

Total \$73,966

www.jdentaled.org/content/72/12/1440.full
education.costhelper/per.com/dentistry-school

Latin American Countries

Tuition - Tuition free policy like Nigeria

Books and educational expenses – 450

Lodging 0 (when in hostels) off campus – 3,600

Food – 900

Transportation – 900

Instruments – 1000

TOTAL = \$3250

gse.buffalo.edu.org/inthigheredfinance/files/country_Profile/Latin_America

Ghana's cost of training Dentists was as from 2013 to be borne by parents and students – \$3000-Dr Adu-Ababio, Dean, Dental School KNUST Ghana.

Recommendations for Appropriate Financing of Dental Education in Nigeria

1. Government, Parents/Students should contribute and the contribution is to in the ratio of 2:1.
2. The contribution of the parents/students who cannot afford their share, can apply for loans from banks, and the Federal and State Governments will act as guarantors.
3. The loans are to be interest-free.
4. The students are to repay the loans in 5 - 10 years. The amount of interest should be the contribution of the banks to education to replace the education tax government levies banks.

5. I recommend \$3000 for the training of Dental students in Nigeria, out of which \$1500 is to be the cost of Dental Instruments and Consumables.

Recommendation 2

5. Automatic employment of dental Graduates and they are to be posted to local government areas of all the States of the Federation. In this regard, each local government will be responsible for the salary and provision of well-equipped dental surgeries.
6. The governments are to put in place very stringent legal instrument that will prevent beneficiaries to evade repayment.
7. The loan programme is to be voluntary but non-beneficiaries MUST pay the appropriate share of the contribution.
8. Just like Ghana, these recommendations are only applicable to Dental Students because of the capital-intensive nature of their training.
9. Each Faculty is to determine the appropriate fees for their programmes.

Bedroom Teaching and Learning

Why do I christen my style of movable E-Learning devices 'BEDROOM TEACHING AND LEARNING'?

Mr Vice Chancellor Sir, it is because I produce my audio and video-assisted Course Wares in my bedroom.

The students are most likely to use the audio and video - assisted Course Wares in their bedrooms where it will be more comfortable to use them.

My Movable E- Teaching Method - contain clips for MP3, WMV, AVI formats

Mr Vice Chancellor, please permit me to present the following videos as illustrations. Audience stay tuned. Clip of MP3 format exported into Handsets of the Students



B lect knust max canine s 4-7.mp3

Clip of the WMAV (Window Media Audio Video) exported to CD for students to use for small group discussion using PC



B lect knust max canine s 4-7.wmv

Video clip of AVI (Audio Video Interface) format Exported to VCD for larger group seminar using DVD player/TV monitor



B lect knust max canine s 4-7.avi

Video clip of a student listening to lecture in his bedroom through his handset

Video clip of group of 5 students in a seminar in the bedroom of one of them using WMAV format

Video clip of group of 15 students in a seminar using AVI format

Video clip of clinical demonstration of H and Neck Lump

Why E-based Learning model should be the Sine Qua Non in our Medical/Dental Schools

Studies show that electronic-based learning appears to be effective as teachers- led methods such as lectures in medical diverse education as in classrooms, clinical demonstration at chair side, in the wards or theatre. For example, a study carried out in two universities in Ghana revealed that E- learning is more effective compared with other methods of learning.

Giving the rotational limits clinical students have to direct teaching using real patients and the difficulties of accommodating large students during rotation, the e-learning can assist the teaching of clinical skills.

Online materials designed with texts, audios and videos can allow for complex and many dental cases, which students can obtain through video conferencing.

My model for clinical skills acquisition - the 3 options

- Use any available patient for clinical Demonstration

AND/OR PROBLEM-BASED LEARNING

- clinical scenario 1 from internet
- clinical scenario 2 from internet
- clinical scenario 3 from internet
- review of cases from case notes library for local samples

OR USING

Images of relevant patients for e-clinical demonstration using life images and asking students to take history as if from life patients request for investigations, list DD and to suggest treatment planning. The exercise is to be interactive involving the participation of other students and to be videoed for replay learning.

THIS LECTURER'S SPECTACULAR ACHIEVEMENTS

This lecturer is the first FMCDS holder by examination, which is something for the history book of the Faculty of Dental Surgery of NPMCN.

He is the first academic staff in the clinical departments of CMUL/LUTH to be the only staff on ground to shoulder the responsibilities of the academic, clinical and administrative functions of both CMUL/LUTH between the period 1990/1992 when his senior colleagues relocated to Gulf States to seek greener pasture. So, I need to be credited for laying a very good foundation of staff strength for the department. It is very strong from the perspective that the department can now be proud of 3 full professors, one associate professor, 2 senior lecturers and 4 lectures one.

Mr VC Sir, it gives me profound joy and fulfilment to declare that I supervise the greatest number of dissertations for the Part 11 Fellowship Examinations of NPMCN and WACS relative to any other specialist of the Jaw-Breaking Words Specialty. Some of those whose

dissertations I supervised are already Professors spread over the six of the 8 Dental Schools in Nigeria.

Mr Vice Chancellor, Sir, I want to believe that attaining a Chair marks the beginning of greater contribution to research, the University and the country and it is not to go to sleep academically. In pursuit of these agenda, since I became a Professor in 2001, I had added 25 publications.

This lecturer is the first Dean to accomplish the processes leading to the establishment of the first School of Basic Dental Nursing in Africa including South Africa and this is with unflinching support of the CMD, Prof Akin Osibogun and Prof. Gbenga Ogunlewe.

This Lecturer is the Chairman of a Curriculum Committee of FDS that considered for the first time in the life of the CMUL, adaptability and adoptability of CUS for Medical/Dental Education.

As far as I have been to check, the first Nigerian Oral and Maxillofacial Surgeon that had been a Visiting Professor to the prestigious Leeds Dental Institute, UK where I delivered the following Guest Lectures:

- Class 1 Oral Manifestations of HIV/AIDS in Adults: A Comparison between two Circumstances.
- Orofacial Tumours in Nigerians: The Prevalence and Image Gallery
- Class 1 Oral manifestations of HIV/AIDS in Children: The Global Perspectives
- African (endemic) Burkitt's lymphoma: Is it a Dying Phenomenon in Nigeria?

ACKNOWLEDGEMENTS

My unalloyed and profound appreciation goes to my late father **Pa Tihamiyu Aiyedun Akinwande** and late mother Madam **Muniratu Aduke Akinwande** for bringing me to this world, nurturing me very well so that I can prosper in life. Posthumously, I dedicate my **movable OER Course Wares** to them.

I also thank very greatly my uncles and their spouses, my cousins and their spouses for being there for me anytime I need their assistance.

My Mentor-Professor Joel Olakunle Akinosi

In a country of marooned standard and destruction of values, the search for reliable mentors is very difficult these days. Such was not the case in our undergraduate years, making it possible for me to find a mentor who I consider a giant in the field of Oral and Maxillofacial Surgery in Nigeria. Who is this giant? He is Prof Joel, Olakunle Akinosi. It was his case I earlier showed that, in fact, inspired me to choose the Jaw-Breaking- Words Specialty. Prof Akinosi is a mentor extraordinaire. I salute you Sir.

I also need to thank my Colleagues: Professors Arotiba, Ladeinde, Ogunlewe, Dr Adeyemo, other lecturers in the Department, all the Senior and Junior Residents past and present for lifting the Department to a very iconic, enviable and highly credential status in the comity of African Dental Schools. This is through their efforts in the establishment of Vascularised Free Fibular Bone Transfer Strategies for Mandibular Reconstruction in Nigeria, thereby stemming down the tide of medical tourism to Europe and saving our foreign exchange.

To my Co-Researchers too numerous to mention, I am indeed very grateful. I also acknowledge Drs Wright and Obileye of LASUCOM/LASUTH, for three of the four photographs on BL belong to them.

To my numerous friends of the ACAOBA 604, The League of Gentlemen, TEM-D Pavilion, Rotary Club, Idiaraba, Abegi Social Club, The Mouse, Medical Centre Staff Club, Idiaraba, I must express my deep appreciation for giving me the opportunity to be a friend to you all and for gracing this occasion.

To JWs worldwide, I acknowledge them for making available to me huge amount of literature that sharpens my knowledge on alternative strategies to blood transfusion. I also thank them for gracing the occasion.

I also appreciate my Dental Undergraduates and Postgraduates in Nigeria and Ghana, Dental Nursing Students for stimulating my appetite to develop a movable Open Educational Resource (OER) Course wares to complement my classroom face to-face teaching which I have christened for the purpose of this lecture "Bedroom Teaching and Learning"

My appreciation also goes to the ICT crew of CET of the Faculty of Education UNILAG for offering the technical support needed in the preparation of the Power Point Presentation for this lecture.

Although, the three images that I sourced through the Internet are from "Open Commons" platform, I hereby acknowledge their owners.

My Children/Grandchildren

My sincere gratitude also goes to my 6 children and 11 grandchildren who took to the moral and religious upbringing we gave them and continue to give them. Mr Vice-Chancellor Sir, it is not by my power but it is by the will of Allah that both my male and female children continue to take to both the moral and religious pathways and we pray that Allah reward my wife and me abundantly. In fact, according to one Islamic cleric, the holy Quran 16; 58 & 59 says that the reward we shall get for training female children to be righteous believers is twice that for the male child. I believe this should discourage most of us from the unbridled and almost paranoid preference for male children i.e. male-child preference syndrome www.genderandme.blogspot.com/2009/03/male-child-preference

About Labeke

Mr Vice Chancellor, Sir. People say that what touches us most we serve last. That is in respect of my wife of 40 years. Mr Vice Chancellor Sir, Ladies and Gentlemen, please, please, and please help me in appreciating my wife, Taslimat Mosunmola Omolabake, a retired Permanent Secretary/Tutor General in the Ministry of Education, Lagos State. She is an outstanding wife in a million of wives. I can attest to the fact that Omolabake is a very religious woman and I have often told my friends that her prayers have been in no small measure supportive to me, children, grandchildren, relations and friends even in those days when my car used to direct my way home sometimes in the wee hours of the night!

Mr Vice Chancellor, Sir, I shall end this lecture by thanking the Almighty Allah for blessing us with great and

promising children/grandchildren and in-laws of signs and wonders.

I THANK YOU ALL FOR LISTENING.

REFERENCES

- Adanu, R. M. K. et al 2010. Electronic learning and open educational resources in the health sciences in Ghana. Ghana Medical Journal 44 (4) 159-162 (ref ipad bookmark saved as e-learning very good article from Adanu).web.knust.edu.gh/oer/components/getdow.php?download&pdw=10&puc
- Adelola, O.A., Management of Jehova's Witnesses in Otolaryngology, Head and Neck Surgery. American Journal of Head and Neck Medicine and Surgery 2008; 29: 270-278.
- Adewole, R.A., Akinwande, J.A., Public awareness and professional perception of oral and maxillofacial surgery (a pilot study). Nigerian Quarterly Journal of Hospital Medicine 2007; 17: 8-12.
- Adewole, R.A., Ojini, F.I., Akinwande, J.A., Danesi, M.A. Oro –Dental and Maxillofacial Trauma in Epilepsy at a Tertiary Hospital in Lagos West Afr J Med 2011; 30: 114-117.
- Adeyemo, W.L., Akinwande, J.A., Bamgbose, B.O., Evidence-based Dental Practice: part 1. Formulating clinical questions and searching for answers .Nigerian Quarterly Journal of Hospital Medicine 2007; 17:58-62.
- Adeyemo, W.L., Akinwande, J.A., Bamgbose, B.O., Evidence-based Dental Practice Part 11. Levels and Quality of evidence and Research Designs. Nigerian Quarterly Journal of Hospital Medicine 2007: 12: 120-125.
- Adeyemo, W.L., Oderinu, H.O., Oluseye, S.B., Taiwo, O.A., Akinwande, J.A., Indications for extraction of permanent teeth in a Nigerian Teaching Hospital. Nigerian Quarterly Journal of Hospital Medicine 2008; 18: 128-132.

- Ajayi, O.F., Akinwande, J.A., Odukoya, O. Argrophilic nucleolar organiser regions (agnors): study of the epithelium of some odontogenic cysts. National postgraduate medical journal in press 2010.
- Ajayi, S. O., Malignant Orofacial neoplasms in Nigerian tertiary hospital. Int.J. Paediatric Otolaryngol 2007; 71: 959-63.
- Akeredolu, P.A., Akinsipo, A.O., Akinwande, J.A., Abnormal Gag reflex treatment in dental practice- case reports. Nigerian Quarterly Journal of Hospital Medicine 2003; 1329-31.
- Akeredolu, P.A., Ufomata, D., Akinwande, J.A., Conservative management of patients with gross morphological changes following complete loss of teeth: case reports The Nigerian Postgraduate Medical Journal 2004; 11: 301-309
- Akinwande, J, A., Oral and maxillofacial surgery (OMFS): Its Evolution, Growth and Controversies. The Nigerian Postgraduate Medical Journal 1996; 3: 28-32.
- Akinwande, J. A., Taiwo, E. O., Ogunlewe, M., A case of massive mandibular fibromyxoma using acrylic implant post- subtotal mandibulectomy for reconstruction. Nigerian Postgraduate Medical Journal 1996; 3:85-88.
- Akinwande, J. A., Ogunlewe, M.O., Taiwo, E.O., Acanomatous ameloblastoma recurring extra-osseously twenty-seven years after total mandibulectomy. Case report. Nigerian Medical Journal 1996, 31:79-88.
- Akinwande, J.A., Appropriate Financing of Dental Education. Paper presented at FDS Conference April 2013.
- Akinwande, J.A., et al Committee Report on the revised curriculum for the Bachelor of Dental Surgery

Programme Faculty of Dental Sciences, College of Medicine of the University of Lagos January 2013.

Akinwande, J.A., Guidelines for advanced education and training of oral and maxillofacial surgeons in Nigeria. Proposal for phase 2. Nigerian Medical Journal 1995; 29: 72-75.

Akinwande, J.A., Is Burkitt's lymphoma: Is it a dying phenomenon and why is this question necessary? A guest lecture presented at Leeds Dental Institute UK in 2008.

Akinwande, J.A., Odukoya, O., Nwoku, A.L., Taiwo, E.O., Burkitts lymphoma in Lagos. J Max-Fac-Surg 1986; 14: 323-8.

Akinwande, J.A., The practicability of the use of alternative blood transfusion in major oral and maxillofacial surgery. Paper presented at conference on blood transfusion alternative strategies August 8, 2012.

Alo, B. I., From the enigmatic to the metaphoric transactions with heterocycles and environment. An Inaugural Lecture. June 25 2003.

Aregbesola, S.B., Ugboko, V.I., Akinwande, J.A., Arole, G.F., Fagade, O.O., Orofacial tumours in suburban Nigerian children and adolescents. British Journal of Oral and Maxillofacial Surgery 2005; 43; 226-231.

Bamgbose, B.O. Akinwande, J.A., Adeyemo, W.L., Ladeinde, A.L., Arotiba, G.T., Ogunlewe, M.O., Effects of co- administered dexamethasone and diclofnac potassium on pain, swelling and trismus following third molar surgery. Head Face Medicine 2005; 7: 1-11.

Bamgbose, B.O., Akinwande, J.A., Adeyemo, W.L., Ladeinde, A. L, Arotiba, G.T., Ogunlewe, M.O., Prospective randomized open-label pilot clinical trial comparing the effects of dexamethasone co

of the parotid gland. A case report of a patient disease-free after nine years follow-up. The Nigerian postgraduate Medical Journal 2002; 9:243-247.

Ladeinde, L.A., Ajayi, O.F., Ogunlewe, M.O., Adeyemo, W.L., Arotiba, G.T., Bamgbose, B.O., Akinwande, J.A., Odontogenic tumours: A Review of 319 cases in a Nigerian Teaching Hospital. Oral surgery, Oral Medicine, Oral Patholog Endodont 2005; 43: 226-31.

Ndukwe, K.C., Okeke, I.N., Akinwande, J.A., Aboderin, A.O., Lamikanran, A., Bacteriology and antimicrobial susceptibility profile of agents of oro-facial infections in Nigerians. Journal of Clinical Experimental Microbiology 2004; 5: 272-277.

Oginni, F.O., Akinwande, J.A., Fagade, O.O., Arole, G.F., Odusanya, S.A., Facial dog bites in Southwestern Nigeria children: an analysis of eight cases. Trop Doct 2002; 32 : 239-40.

Oginni, F.O., Fagade, O.O., Akinwande, J.A., Arole, G., Odusanya, S.A., Pattern of soft tissue injuries to the oro-acial region in Nigerian children attending a teaching hospital. Int J Paediatr Dent 2002; 12: 201-6

Ogunlewe, M.O., Akinwande, J.A., Ladeinde, A.L., Adeyemo, W.L., Spontaneous regeneration of whole mandible after total mandibulectomy in a sickle cell patient. J Oral Maxillofac Surg 2006; 64: 981-4.

Ogunlewe, O., Akinwande, J.A., Obisesan B. Unusual injury to the tongue from human bite Nig Qt Journal Hosp Med 1996; 6:272-274.

Ojesina, A.I., Akang, E.E., Ojemakinde, K.O., Decline in the prevalence of Burkitt's lymphoma relative to other childhood malignancies in Ibadan, Nigeria. Ann.Trop.Paediatr. 2002; 22 (2): 159-63.

- Okoturo, E.M., Arotiba, G.T., Akinwande, J.A., Ogulewe, M.O., Gbotolorun, O.M., Obiechina, A.E., Miniplate osteosynthesis of mandibular fractures at the Lagos University Teaching Hospital. *Nigerian Quarterly Journal of Hospital Medicine* 2008; 18 45-49.
- Oredugba, F.A., Akinwande, J.A., Preparedness of dental undergraduates for provision of care to individuals with special health needs in Nigeria. *J Disabil Oral Health* 2008; 81-86.
- Shutti, Y.O., Agbelusi, G.A., Akinwande, J.A., Oral health knowledge, attitude, and practices of pregnant women in Lagos State. *Postgraduate Medical Journal* Nov. 2002.
- Takeuchi, K. Prevalence of Epstein- barr virus seropositivity amongst Japanese children. www.ncbi.nlm.nih.gov/pubmed/16497243
- www.cnefr.net/yjdh/wxlb/qt/images/2009/1/17/356.pdf
- www.dawodu.com/educ1.htm.
- www.dentistry.umn.edu/prod/groups/sod@pub/@sod/documents/asset/
- www.genderandme.blogspot.com/2009/03/male-child-preference
- www.jdentaled.org/content/72/12/1440.full
- www.med.monash.edu.au/enrolmentsmbbs
- www.uwc.ac.za_downloads/yearbooks/umc_yearbook_2008_dentistry_



University of Lagos Press