IT'S A MATTER OF ARRANGEMENT: BEAUTY AND WELLNESS

AN INAUGURAL LECTURE

BY

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DEDICATION

First, it is dedicated to my Lord and Saviour Jesus Christ who has made this lecture possible. Second, I dedicate it to my Late Dad and Uncle – Pa Matthias Nkemakolam Onyeaso and Pa Samuel Nduche Onyeaso, as they would have been glad to witness this occasion.

APPRECIATION

The Apha and Omega, the Beginning and the End, the One who decided to love me even from my mother's womb; I bow before you and will continue to bow. You alone have made today a reality. I remain indebted to you.

May I specially thank my T., my Love, my beautiful wife and best friend for all you have been to me over the years. Your confidence in me, love, understanding, support and prayers have made all the difference. You are my darling. To the wonderful gifts of God to us – Onyedikachi, Chinyerem, Chibuotam, Chikamaram, Favour and Ugochi, I say you have indeed been blessings from God. Thank you for all the support and love. You make me happy.

Papa, Late Matthias Nkemakolam Onyeaso, I cherish your memories. Mama, Madam Grace Onyeaso, I thank you for all the love. I appreciate all your prayers over the years. My Uncle, Late Pa Samuel Nduche Onyeaso, I still remember some of your kind words to me showing how much you cherished little me then. You were a good uncle.

Dede (Mr John Onyeaso), your role in my educational pursuit will not be forgotten. You called me a 'good seed' and I still feel humbled by that. Thank you. Mrs Catherine Mgbeokwere (Dada), I still remember how you used to hold my hands on the way to my primary school years ago. I appreciate you. Brother, Dr Godwin Onyeaso, you contributed significantly in my academic quest. Thank you for being proud of me as your younger brother and all the support and encouragement. Engr. Richard Onyeaso and Mr Merije Onyeaso (Merchandise), I appreciate your contributions in my life. Thank you so much. Mrs Nkechi Mgbeokwere, Mrs Mary Ukaigwe, Mrs Faith Nnanna and Mrs Ebere Azubuike, I thank you all for your consistent love over the years.

Late Pa and Mrs S O Osho, I wish you were still alive today. Thank you. Rev and Mrs Abiodun Aladekomo you have over the years shown so much love to my family. May the good Lord reward you richly. The rest of my very dear family members from the Osho family, thank you for all the love and support you have given us.

Araka 1 of Ngodo, Chief Emeka Ogwuru, I appreciate you. Your 'prophecy' about me years ago has become a reality. Ogbuehi Murphy Madubuike, you have been a good elder brother and friend. Your house was always available to me en route to Ibadan as an undergraduate student. Thank you.

Professor Don Baridam (our highly respected former VC) you have left behind a wonderful impression. The love

you gave made Uniport too attractive to be ignored despite other attractions. Thanks a lot. Professor Nimi Briggs (a former Vice-Chancellor of Uniport) is also appreciated for the interest he showed when I was on admission in hospital. Professor E O Ayalogu and Professor B J O Efiuvwevwere, you have been such friendly elders. Thank you. Our current articulate and friendly Vice Chancellor, thank you for today and all you did for me before now. May I use this opportunity to thank the entire University of Port Harcourt Administration for her general good disposition towards me. In fact, I appreciate all members of this University community for their love. The Academic Staff Union of Universities (ASUU), Uniport Branch is specially appreciated.

My heart is full of gratitude to my teachers who contributed in making me what I am today. My special appreciation goes to Professor M C Isiekwe for being so nice. May God bless you all richly in Jesus name. I appreciate my Alma Mater (University of Ibadan) for the opportunities it had offered me from my undergraduate days as a student until my position as a Lecturer.

My former Provost, Professor B C Dibia, my Dean, Professor A E Obiechina, thank you for believing in me. I appreciate you. The Senate, all my senior colleagues and colleagues in the College of Health Sciences and other Faculties in the University of Port Harcourt, you are appreciated.

I want to say a big thank you to all the Hospital staff for the exceptional love and care I received from you in 2008 when I was admitted into the Hospital, especially Dr U S Etawo (former CMD), Professor A C Ojule (the current CMD) and Mrs Boma Amaomu-Jumbo (DA). Assistant Director of Nursing Services (Mrs. Weke) and the Nursing staff in the intensive care unit of UPTH deserve my appreciation. May I use this opportunity to appreciate Professor Richard King, the Chairman of the University of Port Harcourt Teaching Hospital (UPTH) Management Board and my distinguished colleagues in the Board for the wonderful time we have shared together.

My dear colleagues and non-academic members of staff in the Faculty of Dentistry, you have been wonderful. Mrs Gladys Amadi deserves special mention for her various positive roles in the Faculty of Dentistry since its inception. You have all meant a lot to me and we look forward to better days ahead of us in Jesus name, Amen. To all my colleagues and friends at Ibadan and other Universities and hospitals in Nigeria and in diaspora, I cherish you all.

My Pastors and brethren in the LORD, I thank you for your love and prayers especially those in the UCH Christian Fellowship Ibadan, Assemblies of God Church Family (Assemblies of God Church 1, Choba, Port Harcourt and Assemblies of God Church, Mokola, Ibadan), “Isuochi for Christ" family, Gideons International and Full Gospel Business Men’s Fellowship International (FGBMFI).

I give my special appreciation to all my friends from Ibadan, Lagos, Jos and other places outside this University who have travelled down to attend this inaugural lecture. You shall be celebrated soon. God will grant you journey mercies back to your different destinations.

I love you all.

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PROTOCOL

The Vice Chancellor
Members of the Governing Council
The Previous Vice Chancellors
Deputy Vice Chancellors
Registrar and other Principal Officers of the University
Provost, College of Health Sciences
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Dean, Faculty of Dentistry
Deans of other Faculties
Distinguished Professors
Directors of Institutes and Units
Heads of Departments
Other distinguished Scholars and Administrative Staff
My distinguished Friends and Guests
Unique Students of Unique Uniport
Members of the Press
Ladies and Gentlemen

1.0 INTRODUCTION

1.1 Preamble

The Vice Chancellor, Sir, it gives me great pleasure to stand before you today to deliver the 76th inaugural lecture of this University. Today is special to me for three reasons. First, as it goes down in history as the first inaugural lecture from the young Faculty of Dentistry of this University. Second, the month of June has become another special month in the life of my family, beside my birth day, when my wife and children remember with deep-seated gratitude to God my miraculous deliverance from the clutches of death on the 3rd of June 2008 when I survived the bullets from AK 47 gun(s) at the Delta Park gate of this University. Therefore, my choice of the month of June for this inaugural lecture is deliberate. Unfortunately, some other precious lives were lost in that incident. The sounds of the gun shots that morning could be compared to such in a warfront. May be, there would have been more shooting in that scene that morning but suddenly I heard one of the young men say that the bullets had finished as I lay on the ground in the pool of my blood. I, therefore,

celebrate God's deliverance and faithfulness over my life with you today. With the permission of the Vice Chancellor, may I request that the audience rise for a minute silence for those souls. May their souls rest in perfect peace. Amen. Third, today is a special day to me because I have been given the honour of giving this once in a life time lecture as a Professor by the Vice Chancellor to share with you briefly on my research activities so far as an academic.

1.2 Why the Title of this Lecture?

You will agree with me that every one appreciates receiving a complimentary remark from someone else such as "You are looking nice" or "You are looking beautiful or handsome". Such a remark can contribute in giving a good sense of social wellbeing or wellness to the one receiving it. The corollary is also the case in most instances. Health, as defined by the World Health Organization, is a complete state of physical, mental, and social wellbeing, not merely the absence of disease or infirmity. That means health is a quality of life that includes your physical, mental and social wellbeing. While physical health is the condition of the body, mental health is the condition of the mind

and emotions and social health is the way you relate with others. Wellness is another way to describe quality of life. The wellness approach to good health includes all areas of your life and their relationship to and effect on one another. It is written: “The spirit of the Lord GOD is upon Me, because the LORD has anointed Me, to -------- - - - - --, to give them beauty for ashes, the oil of joy for mourning, - - - (Isaiah 61:1-3). “

An important factor in social interaction is physical appearance. Major elements in the evaluation of physical appearance are the mouth and teeth (Eli et al., 2001). Dental aesthetics has great impact on the facial attractiveness. Of a truth the teeth and the face contribute so much to beauty, especially facial beauty and ultimately to the state of wellness of an individual. Facial attractiveness influences mating success, personality evaluations and performance and employment prospects. In fact, attractive adults and children are judged more favourably and treated more positively than unattractive adults and children in terms of friendship, marriage, etc (Geld et al., 2006). Even God the creator of man in underscoring the

importance of the tooth and its impact on man's life gave the law through Moses which says - - - "And if he knocks out the tooth of his male or female servant, he shall let him go free for the sake of his tooth (Exodus 21:27)"

The Vice Chancellor, Sir, as a Consultant Orthodontist, I have repeatedly heard the complaints concerning unacceptable teeth arrangement involving many children, adolescents and adults. This has caused many to be worried and depressed, affected academic performances in schools and attracted teasing. On the other hand, I have also assessed potential and real orthodontic patients professionally and categorized them into different orthodontic treatment need levels besides their perceived or desired needs. In addition, I have researched into the reactions of individuals in relation to their teeth arrangements (occlusions / malocclusions) vis-a-vis their perceptions of beauty (aesthetics) and their overall well-being. Therefore, these factors have informed the title of this lecture.

2.0 HISTORY OF ORTHODONTICS

Orthodontics is the branch of dentistry concerned with the study of the growth of the face, the development of the occlusion, and the prevention and treatment of dentofacial abnormalities (from the Greek Ortho-straight; odontos – tooth). That means the study of orthodontics includes factors such as variations in facial development and growth and orofacial function that may influence occlusal development; it also includes the effects of occlusal variations on facial appearance and on the health and function of the masticatory system.

History of man's attempts to straighten poorly arranged or aligned teeth to improve his smile goes back thousands of years. Crude appliances that seemingly were designed to regulate the teeth have been found as archaelogic artifacts in tombs of ancient Egypt, Greece, and the Mayans of Mexico (Moyers, 1988). For example, use of gold wires to align and stabilize mandibular incisors in an adult whose malocclusion had been complicated by periodontal disease was seen (Figure 1). Back in 400 BC, Hippocrates wrote: "among those individuals

with long shaped heads, some have thick necks, strong parts and bones. Others have strongly arched palates, their teeth are irregularly arrayed, crowding one another, and they are bothered by headaches and otorrhea." Adamandios wrote that "those persons whose lips are pushed out because of cuspid displacement are ill-tempered, abusive shouters and defamers."

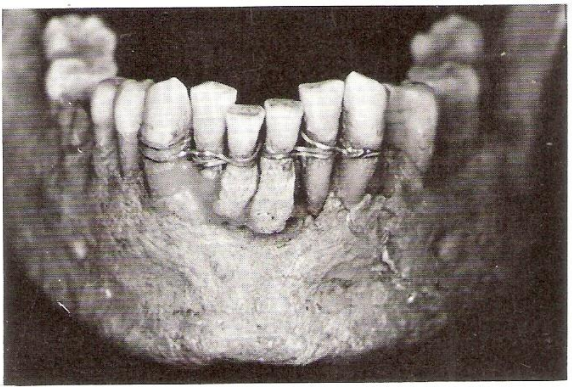


Figure 1: *Ancient Greek skull (circa 300 B.C.) shows use of gold wires to align and stabilize mandibular incisors in an adult whose malocclusion has been complicated by periodontal disease. (Excerpt from the Handbook of Orthodontics by R. E. Moyers*)

Pierre Fauchard, a famous dentist from France, made a significant contribution in the 18th century through an orthodontic appliance he described. In 1850 AD,

the first texts which systematically described orthodontics appeared and Dr. Norman Kingsley was among the first to use extraoral force to correct protruding teeth. Forty (40) years later, Dr. Edward Angle who is generally described as the "Father of Modern Orthodontics" was one of the first to emphasize occlusion in natural dentition. His interest in creating proper occlusion in natural teeth resulted in what is known as the specialty of orthodontics today. He started a school for training of dentists as orthodontic specialists. He also originated a classification of malocclusion into Class I, Class II (divisions 1 and 2) and Class III, which is still in use internationally till date. With Edward Angle's dominate role in the development of orthodontics, in 1900, along with other colleagues, the organization known as the American Association of Orthodontists (AAO) was established. Orthodontics became the first specialty in dentistry with Ophthalmology being the only specialty in medicine in existence then.

In 1940's AD cephalometric radiographs were developed to help orthodontists assess how the bones of the face contributed to malocclusion while

relatively recently (1970's AD) surgical techniques were developed allowing oral and maxillofacial surgeons to perform surgery on selected patients when growth is completed.

3.0 DENTAL / ORTHODONTIC EDUCATION IN NIGERIA – the past

Nigeria is the most populous black nation in the world with a population of 140,431,790 million and the majority of the population being children and young adults and relatively few over the age of 65 years (National Census, 2006).

There were four (4) Dental Schools in Nigerian Universities – University of Lagos, Obafemi Awolowo University (OAU), Ile-Ife, University of Ibadan, and University of Benin.

The first dental school in Nigeria (Dental School, College of Medicine, University of Lagos was established in September1966. Her first set of dental students 8 in number) graduated in June 1971. In 1970, when the Dental School of University of Lagos was preparing to graduate her first set of students, and

with the help of the British Council, arrangements were made for Professor Andrew Richardson of Queen's University, Belfast, to come and give one-month course of lectures in Orthodontics (Isiekwe, 1987). Andrew Richardson was subsequently invited annually to give what was termed "Famous February" lectures in Orthodontics to the final year dental students in Lagos. However, between the annual visits of Richardson, Dr Wayne Logan, an American Baptist Missionary Orthodontist to Nigeria gave courses of lectures, concentrating on delivery of orthodontic services (Isiekwe, 1987). Richardson, understanding the need for trained Orthodontists in Nigeria agreed to train an Orthodontist for the country.

Dr Michael Isiekwe was the lucky young dentist who was chosen to be trained and was sent to the Royal Victoria Hospital, Belfast, UK under the tutelege of Professors Andrew Richardson and Philip Adams. After his training, Dr Isiekwe returned to the Dental School, College of Medicine of the University of Lagos, Nigeria in 1979. Dr Isiekwe (who eventually became the first Professor of Orthodontics in Nigeria)

took over the teaching of Orthodontics in University of Lagos. He played a significant role in the training of dental students in all the four initial Dental Schools in Nigeria (Lagos, Ile-Ife, Ibadan and Benin).

In 1981, Professor Andrew Richardson was invited to give some courses of orthodontic lectures to the final year dental students at the University of Ibadan. Following this, Dr Michael Isiekwe initiated a two-week concentrated course of lectures and demonstrations at the beginning of each final year, with further instructions in the last term before the qualifying examinations. These arrangements still continued and were supplemented by two-month lectures and clinical demonstrations in 1984 by James Gardiner, formerly of University of Sheffield (Isiekwe, 1987).

In 1983, some graduating students of OAU, Ile-Ife were sent to Lagos for 6 months to have some exposure in all aspects of Dentistry especially in orthodontics. Professor Isiekwe was obviously too busy to attend to all the Dental Schools and could only visit Benin Dental School once for their

orthodontic lectures. However, Allen Bradbury of the University of Leeds Dental School was able to give the Benin students a one-month course of lectures and some clinical demonstrations (Isiekwe, 1987).

3.1 Orthodontics in Nigeria – the present

There are now seven (7) Dental Schools in Nigeria with the inclusion of Dental School, College of Medicine, University of Nigeria (Enugu Campus), Dental School, College of Health Sciences, University of Port Harcourt and Dental School, University of Maiduguri. Each of the Dental Schools has at least one Consultant Orthodontist except University of Maiduguri.

The training of an Orthodontist takes another six (6) years in Nigeria after the first six (6) years of undergraduate education. For any dentist to qualify as an orthodontic specialist, he/she must pass the final professional examination in orthodontics in the Faculty of Dental Surgery of either the West African College of Surgeons or the National Postgraduate Medical College of Nigeria. This process is tough and usually not all who start the race get to the finishing

line. Some effort was made to assess the effectiveness of this programme by Onyeaso et al (2004) and the outcome was encouraging. Although not yet perfect for obvious environmental limitations, this programme has received some favourable attention by the international professional community (Evans and Onyeaso, 2004).

With three Professors of Orthodontics in Nigeria – Isiekwe of University of Lagos, Otuyemi of OAU, Ile-Ife and Onyeaso (your Lecturer today) of University of Port Harcourt and other Consultant Orthodontists, Nigeria has moved far from where we started years ago. Indeed, the international orthodontic community has come to appreciate Nigerian contribution to knowledge in this first specialty in Dentistry. As at 2004, there were two Africans in the Editorial Review Board of American Journal of Orthodontics and Dentofacial Orthopedics (the leading orthodontic title in the world) – Professor Abbas Zaher of Egypt and Professor Chukwudi O Onyeaso of Nigeria. Recently, additional scholars from Egypt were included in the Board.

4.0 Few Definitions

Occlusion of Teeth: This can briefly be defined as the alignment and spacing of your upper and lower teeth when you bite down or the normal relations of the ooclusal inclined planes of the teeth when the jaws are closed.

Articulation of Teeth: Is the functional movement of the lower dentition in contact with the upper dentition. So while occlusion refers to a static position with the teeth in contact, articluation refers to a dynamic continuous range of contact of the upper and lower teeth.

Normal Adult Occlusion: This may be defined as that structural composite consisting fundamentally of the teeth and jaws, and characterized by a normal relationship of the so-called ooclusal, inclined planes of the teeth that are individually and collectively located in architectural harmony with their basal bones and with cranial anatomy, exhibit correct proximal contacting and axial positioning and have associated with them normal growth, development,

location and correlation of all environmental tissue and parts (Hitchcock, 1974).

Figure 2: Clinical Pictures of Normal Occlusion

Ideal Permanent Occlusion: This is an imaginary concept of the perfect example of occlusion of the teeth and the jaws.

a. Lower Jaw

b. Upper Jaw

c. The upper and lower jaws in occlusion

Figure 3: *Artificial Models showing the ideals of Occlusion in the Permanent Dentition (Produced by db Orthodontics)*

Malocclusion: This can also be briefly defined as the perversion of the normal relations (Angle, 1907). It is the degree of deviation that determines a malocclusion, and no human mouth is ever totally free of occlusal deviations. In view of this fact, a malocclusion of the teeth may be defined at the orthodontic clinical level as a variation in the occlusion of the teeth, sufficient to justify the hazards of orthodontic correction (Fischer, 1957).

The World Health Organization (WHO, 1962) included malocclusion in the group of handicapping dentofacial anomalies. These are anomalies which cause disfigurement or impede function and for which treatment is required when the disfigurement or functional defect is likely to be an obstacle to the patient's physical and emotional wellbeing.

Orthodontic therapy is directed to malocclusion, abnormal growth of the complex of craniofacial bones, and malfunction of the orofacial neuromusculature, which alone or in combination may cause any of the following:

- Impaired mastication.
- Unfortunate facial aesthetics.
- Dysfunction of the temporomandibular articulation.
- Susceptibility to periodontal disease.
- Susceptibility to dental caries.
- Impaired speech due to malposition of the teeth.

By means of suitable appliances, muscle function is improved and teeth are positioned more favourably to

provide better aesthetics, occlusal function, oral health, and speech. Correction of the craniofacial skeleton, however, is a different matter, since it is more difficult to alter the craniofacial skeleton than it is to position teeth. It is possible, however, to direct and alter favourably the growth of the craniofacial skeleton in young children. In older patients, whose facial growth is mostly completed, the teeth are positioned to camouflage disharmonies of the facial skeletal pattern. In most extreme cases, orthognathic surgery is utilised in conjunction with orthodontics (Moyers, 1988).

5.0 AETIOLOGY OF MALOCCLUSION

The aetiology of malocclusion is multifactorial. There are several possible approaches in discussing this but for the purpose of this lecture, Figures 4a and 4b will be adequate.

Figure 4a: Factors Implicated in Malocclusion

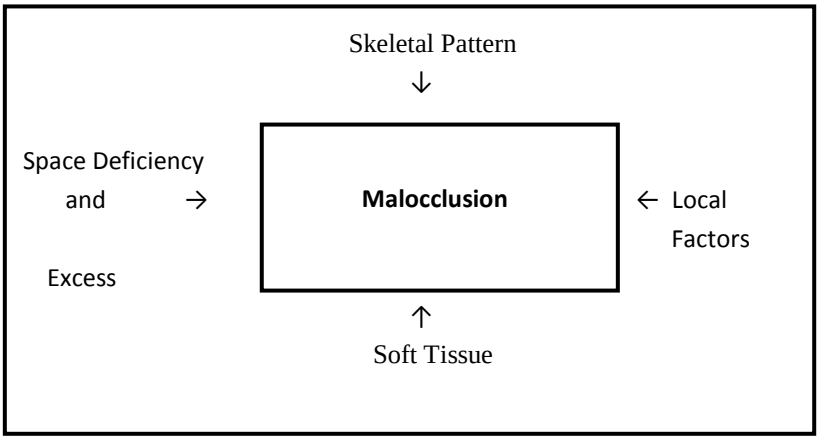


Figure 4b: Local Factors in the Aetiology of Malocclusion

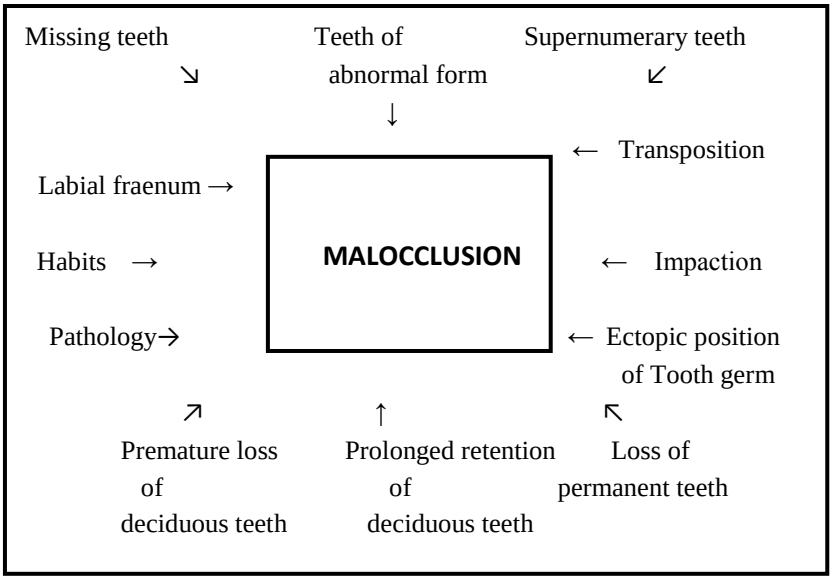
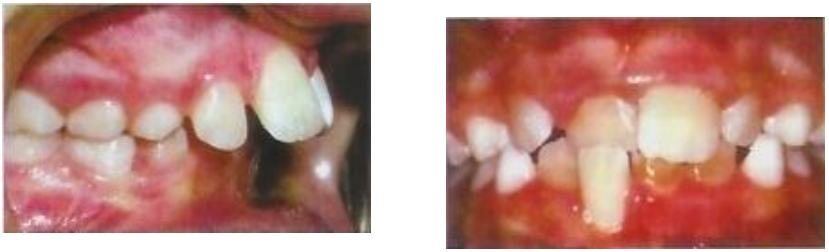


Figure 4c: Clinical Photographs showing some Malocclusions

A. B. C.

D. E.



F.

A. **Anterior Open bite**

B. **Displaced eruption of the upper right central incisor**

C. **Crowding of the lower anterior teeth with the left lateral incisor displaced lingually out of the arch**

D. **Protrusion of the upper anterior segment**

E. **Anterior crossbite of the upper right central incisor which also is pushing the lower right incisor out of the arch**

F. **Cleft Lip and Palate: The teeth are out of alignment due to the absence of the modelling effect of the soft tissue (this congenital condition is due to gene-environmental interactions).**

6.0 THE EPIDEMIOLOGY / PATTERN OF MALOCCLUSION IN NIGERIA

Isiekwe (1983) showed that Angle's class I malocclusion was found in 76.8% schoolchildren examined, 14.7% had class II while class III accounted for 8.4%. Onyeaso (2004a) reported normal occlusion in 24% of secondary school

students examined, 50% had Angle class I malocclusion, class II was found in 14% of the population while class III was seen in 12%. Onyeaso (2004a) also found that 20% of the adolescents had crowding of their teeth with 16% having increased overjet which could predispose the children to dental trauma. Midline diastema was reported in 37% of the study sample.

Even the clinical materials reported by Onyeaso et al. (2002a) which supported the epidemiological studies revealed the following: Angle's class I – 76.5%, class II – 15.5% and class III – 8.0%. These studies revealed some interesting differences between Nigerians and the Caucasians – Nigerians have better occlusion than the Caucasians (meaning more of normal occlusions and less of classes II and III, as well as less crowding of teeth). Another important finding from our studies is the different pattern of molar relationship between the Nigerians from the north (the Hausas) and the Yorubas in the western part of the country (daCosta, 1999; Onyeaso, 2004a). Nigerians in the southwest were reported to have more class II than class III while the northern

Nigerians had more of class III than class II molar relationships. This suggests need for more investigation and we shall do so.

7.0 THE PRIMARY (DECIDUOUS) DENTITION

The status of the primary dentition affects the development of the permanent dentition to the extent that certain traits and anomalies of the primary occlusion are often reflected in the permanent (Foster and Hamilton, 1969; Infante, 1975; Onyeaso and Isiekwe, 2008a, 2008b). Therefore, the primary dentition provides the basis for studying occlusion and for predicting the occlusion of the permanent dentition (Foster and Hamilton, 1969; Tschill et al., 1997; Onyeaso and Isiekwe, 2008a, 2008b). As a basis for understanding the occlusion of Nigerians, Onyeaso (2006a, 2006b) analysed the occlusion of 3-5 year-olds and found some statistically significant occlusal differences among the three major ethnic tribes in Nigeria. For example, generalized spacing of the primary dentition (a desirable occlusal feature in this age bracket for future development of the permanent dentition) was found more in the Ibo ethnic group and least in the Hausa ethnic group. This

finding seems to support the findings in the adult dentition (daCosta, 1999; Onyeaso, 2003a, 2004a)

It was reported that ideal occlusion in the primary dentition was not real but a figment of the imagination among the Caucasians (Foster and Hamilton, 1969). The features of ideal occlusion include the following:

- Generalized spacing in the anterior segment
- Flush terminal relationship of the second deciduous molars
- Anthropoid spaces
- Normal, shallow or deep overbite

Interestingly, however, Onyeaso and Sote (2001) discovered the presence of ideal occlusion in the primary dentition in 2.7% of the Nigerian pre-primary school children examined. This important finding suggests the basis for the better adult occlusion in Nigerians than the Caucasians.

Figure 5: *Clinical Photographs showing the Ideals of Occlusion in the Primary Dentition (The anterior teeth are spaced, there is a positive incisal overbite and overjet, the anthropoid spaces are present and the distal surfaces of the second molar teeth are in the same vertical plane)*

8.0 AWARENESS / PERCEPTION OF MALOCCLUSION IN NIGERIA

Orthodontic care is relatively new in Nigeria when compared with the developed countries, and the cultural setting is quite different from the western

world. The possession of obvious malocclusion is by no means the only factor which determines whether or not an individual will seek orthodontic treatment (Prahl-Anderson et al., 1979, Onyeaso and Arowojolu, 2003). Onyeaso (2004b) revealed that although many patients came for orthodontic care because they (children and their parents) felt they needed the treatment, some the patients came as a result of referrals. In the western world, societal forces define the norms for acceptable, normal, and attractive physical appearance (Strauss, 1980). Identification by children and their parents of abnormal, unacceptable, and disfiguring dentofacial characteristics is influenced as much by social context and cultural milieu as by objective criteria (Mechanic, 1974; Jenny, 1975; Shaw et al., 1980; Onyeaso, 2003b; Onyeaso and Utomi, 2004; Onyeaso, 2005a). The public equates good dental appearance with success in many pursuits (Samuel, 1973; Langlois, 2000).

Studies have shown discrepancy between lay and professional judgement of dental aesthetics and need for treatment (Prahl-Anderson et al., 1979; Shaw et

al., 1980; Onyeaso and Arowojolu, 2003; Onyeaso, 2003c; Onyeaso and Sanu, 2005a). Attractive children and adults are judged and treated more positively than unattractive children and adults (Langlois, 2000).

In Nigeria, although there were adolescents who needed treatment and agreed and wanted to have their teeth arrangement corrected, Onyeaso and Arowojolu (2003) found that some adolescents who needed orthodontic treatment did not want it while some who did not need treatment felt they needed it. Onyeaso (2003c) showed that some Nigerian parents did not express need for orthodontic care for their children who objectively needed treatment. The parental concern varied significantly across socio-economic class with parents from higher socio-economic class desiring treatment for their children than the rest. Majority of parents (87.1%) perceived dental aesthetics to be equally important for both girls and boys (Onyeaso, 2003c).

However, according to Onyeaso and Arowojolu (2003), most of the adolescents perceived the need for orthodontic treatment than those who felt otherwise.

Meanwhile, there was no significant association found between their perceived needs and their normative needs. It was the same finding for their desire for orthodontic care and their normative needs. These findings were found consistent with some related studies in other parts of the globe (Ingervall and Hedergard, 1974; Prahl-Anderson et al., 1979; Espeland and Stenvik, 1991).

Onyeaso and Sanu (2005b) looked at the relationship among Nigerian adolescents' awareness of malocclusion, their satisfaction with personal dental appearance, and the severity of their occlusal irregularities normatively determined. It revealed statistically significant negative, weak correlations between awareness of malocclusion and satisfaction with dental appearance at the various levels of malocclusion. Age did not show any significant effect on this. Also, the association between socio-economic status and these variables was not significant.

However, one major socio-cultural difference is that Nigerians and other Africans regard midline diastema as a sign of natural beauty and never as a malocclusal

trait unlike the Caucasians. Even among the Caucasians, some clinical experiences of the author in the USA seem to indicate that some of their patients want to retain their midline diastemata like that of Nigerians. In fact, a Dental Conference in Lagos in 1999 revealed that many Nigerians especially ladies had been to different Orthodontists and General Dental Practitioners requesting for creation of midline diastema for beauty enhancement. The only unfortunate aspect of this development is that many of such clients become victims of quackery with the resultant consequencies such as undue pain, dentoalveolar abscesses and sometimes unnecessary loss of tooth or teeth.

FIGURE 6: *Clinical picture showing upper Midline Diastema*

9.0 QUALITY OF LIFE AND MALOCCLUSION AMONG NIGERIAN ADOLESCENTS

Contemporary concepts of health suggest that dental health should be defined in physical, psychological, and social well-being terms in relation to dental status. Therefore, disruptions in normal physical, psychological, and social functioning are important considerations in assessing oral health (WHO, 1962; Engel, 1980; Cohen and Jago, 1976). The inadequacy of the normative approach in measuring oral health has been recognised and led to the development of measures of oral health-related quality of life (OHRQoL) (Allen, 2003). Onyeaso (2009) found that 42% of the secondary school children studied had

objectively determined orthodontic treatment need while 62.4% suffered one oral health-related impact or the other. The relationship between the oral health-related impacts and orthodontic treatment need was statistically significant showing that the adolescents who suffered some impacts were mainly those who had teeth arrangements that needed orthodontic treatment. The study revealed that outside the highest oral health-related impact which came from physical pain, impacts from psychological discomfort and psychological disability due to unsatisfactory dental appearance followed in that order. The study also revealed that the boys significantly had more complex malocclusions and suffered more impacts than the girls.

Adolescence is a period of rapid physical, social, and cognitive growth as well as changes in self esteem. Self-esteem, also called self-worth, is a major predictor of outcomes during adolescence and adulthood. Higher levels are associated with several positive outcomes, such as occupational success, social relationships, well-being, positive perceptions

by peers, academic achievement, and improved coping skills (Trzesniewski, 2003; Biro et al., 2006). Significant correlations were found between self-esteem and orthodontic concerns among Nigerian adolescents as well as between self-esteem and their normative orthodontic treatment needs (Onyeaso, 2003). Research efforts concerning children have shown that physical appearance is important in biasing judgements of social acceptability, personal ability and whether the judges are adults or children (Aloia, 1975; Clifford, 1975; Rich, 1975). Children themselves see peers who are physically attractive as more socially attractive and unattractive children are more likely to be the victims of bullying (Cavior, 1973; Kleck et al., 1974; Dion, 1977; Lowenstein, 1977). Onyeaso and Sanu (2005) examined the psychosocial implications of malocclusion among Nigerian children and found that interestingly the teeth relative to other body features attracted a significant attention from both boys and girls. In fact, teasing about perceived poor dental arrangement was as high as that reported in the western world such as Denmark (Helm et al., 1985). The observed schoolmates' teasing occurred significantly more

often in the presence of malocclusion (Onyeaso and Sanu, 2005).

Onyeaso et al. (2005) further assessed the emotional effects of malocclusion in Nigerian orthodontic patients and the findings were very informative. Due to their malocclusions which brought them to the hospital for treatment, 44.3% of them were less confident, the choice of food was affected in 16.3%, 15.4% found it difficult to eat in the public, 5.4% found it difficult to go out in the public, 47. 1% was finding it difficult to laugh in the public, 13.1% had problems forming close relationship, and 13.1% could not enjoy food. These findings attracted the attention of professional colleagues in the international community resulting in many desiring to duplicate the study.

Considering the possible impacts of malocclusion on the health status of periodontal tissues and the impact of periodontal health on the quality of life of orthodontic patients, as well as the related controversies in the literature, Onyeaso et al. (2003a,

2003b) contributions have been considered as very significant in the orthodontic literature.

10.0 QUALITY CONTROL IN CLINICAL ORTHODONTICS (ORTHODONTIC INDICES)

The Vice Chancellor, Sir, my distinguished audience, it is my pleasure to inform you that outside my contributions to knowledge mentioned before now, my contributions in this aspect of orthodontics have been acknowledged internationally with numerous requests of my works being made till date. While still acknowledging the contribution of Dr Edward Angle in the classification of malocclusion, it must be mentioned that some limitations of his classification have been noted. Modern orthodontics demands more. Orthodontic indices are useful for purposes of audit, practice management and quality assurance. It is known globally that orthodontic treatment is expensive and in publicly funded programmes the resources are usually limited. Internationally, there is an increased demand on health care professionals to demonstrate that health services including orthodontic care are appropriately delivered (Richmond et al., 2001a, 2001b). This applies much more to the

developing nations like Nigeria where the economic climate is not too favourable. Also, orthodontists must have an acceptable means of objectively grading severity levels of malocclusion for decision making, proper planning and counselling of intending patients and their parents, as well as assessment of treatment outcomes. Therefore, the international orthodontic community had for so long looked for orthodontic indices acceptable across nations for objective assessment of orthodontic treatment need, as well as complexity of the cases. The Dental Aesthetic Index (DAI) was finally accepted by the World Health Organization (WHO) as a cross-cultural index for objective (normative) assessment of orthodontic treatment need. The challenge of having an index that can measure treatment complexity of orthodontic cases was only recently met.

The products of my research efforts have not only given the baseline data for both potential and real patients, but orthodontic patients can now be classified according to their objective treatment needs as well as ascertaining the level of their treatment complexities (anticipated difficulty) before embarking

on such treatments. Indeed quality control in clinical orthodontics has been enhanced (Onyeaso and Aderinokun, 2003; Onyeaso, 2004b, 2004d; Onyeaso and BeGole, 2006a, 2006b, 2006c; Onyeaso and Idaboh, 2006; Onyeaso and BeGole, 2007; Onyeaso, 2007, 2008; Onyeaso and BeGole, 2008).

Beyond giving room for international comparison of data and standardization of different facets of orthodontic care, our work (Onyeaso and BeGole, 2006c, 2007; Onyeaso, 2007) have shown convincingly the cost-effectiveness of using Index of Complexity, Outcome and Need (ICON) not only in Nigeria but also in the western world instead of using different indices for different facets of clinical orthodontics.

Table 1: *Distribution of objective treatment need of Nigerian adolescents according to the Dental Aesthetic Index (Onyeaso and Arowojolu, 2003)*

Normative Need DAI score	Severity levels of Malocclusion	Gender Male n %	Female n %	Total n (%)
≤ 25	Normal or minor Malocclusions with no or slight treatment need	164 (29.9)	162 (28.6)	326 (57.5)
26-30	Definite Malocclusion with treatment elective	59 (10.4)	49 (8.6)	108 (19.0)
31-35	Severe Malocclusion with treatment highly desirable	30 (5.3)	25 (4.4)	55 (9.7)
≥ 36	Very severe or handicapping Malocclusion with treatment considered mandatory	39 (6.9)	39 (6.9)	78 (13.8)

Table 2: *Complexity grades of orthodontic patients (demand population) in Nigeria and North America*

Score Range	Complexity grade	Nigeria* %	USA** %
< 29	Easy	1.8	5
29-50	Mild	23.2	13
51-63	Moderate	14.3	22
64-77	Difficult	21.4	20
> 77	Very Difficult	39.3	40

Nigeria*: Onyeaso and Idaboh, 2006

USA**: Onyeaso and BeGole, 2006c

Table 3: *Distribution of orthodontic treatment need and outcome according to four (4) different Orthodontic indices (Onyeaso and BeGole, 2007)*

Index	Treatment Need		Treatment Outcome	
	Present	Absent	Acceptable	Unacceptable
ICON	86	14	94	6
DAI	85	15	-	-
PAR	-	-	97	3
ABO-OGS	-	-	86	14

ICON: Index of Complexity, Outcome and Need

DAI: Dental Aesthetic Index

PAR: Peer Assessment Rating Index

ABO-OGS: American Board of Orthodontics Objective Grading System

11.0 POTENTIAL (EPIDEMIOLOGY) / REAL (DEMAND POPULATION) ORTHODONTIC PATIENTS IN NIGERIA

It is interesting to note that while no significant differences have been found in the orthodontic treatment need and complexity with respect to gender in epidemiological studies, demand populations have shown that significantly more females seek orthodontic care than males (Onyeaso, 2004a; Onyeaso et al., 2005). In addition, very severe and handicapping malocclusions were seen significantly more in male than female patients (Onyeaso, 2004b). In fact, Onyeaso (2009) found higher oral health-related impacts in the males than females in an epidemiological study. Meanwhile, most of the patients who came for orthodontic treatment by themselves without referral were females (2004c). This trend could be attributed to a reflection of the so-called *'sex role stereotyping,'* wherein the society places greater emphasis on the possession of high physical attractiveness in the female (Shaw et al., 1991).

Onyeaso (2004b) showed that almost 3% of the children and young adults (6-18- year-olds) had no / little need for orthodontic treatment, 20% had treatment need for which treatment was considered 'elective,' 15% had a 'desirable' need for treatment and 35% had mandatory need for treatment. In another report (Onyeaso, 2004d) on adult orthodontic patients aged 20-55 years, 32.6% had very severe or handicapping malocclusions with treatment considered mandatory with the same percentage of the patients having little or no need for treatment. Those with severe malocclusion where treatment was considered as desirable accounted for 20.4%. Elective treatment need was found in 14.3%.

No significant association has been found between socio-economic class and prevalence of malocclusion in epidemiological studies (Onyeaso, 2003a; Onyeaso, 2004a), but Onyeaso (2004b) in the demand population found a statistically significant association between the orthodontic treatment needs and the socio-economic class of the patients with more handicapping treatment needs found among the children and adolescents from the lower socio-

economic class (semi-skilled and unskilled occupations) than those in the higher socio-economic class. Also, well over two-third of the adult orthodontic patients reported to have sought orthodontic care were from the higher socio-economic class. It was concluded that significantly more adults from higher socio-economic class came for treatment partly as a reflection of their better economic power because orthodontic treatment is usually expensive and partly due to their better awareness and attitude to aesthetics than those adults from the lower socio-economic group.

It was concluded that not all who came or were referred for orthodontic treatment needed such treatment based on professional assessment but their perceptions of the dental appearance needed to be considered in order to satisfy the patients / parents. Meanwhile, most of the patients from the lower socio-economic class presented for treatment because of handicapping malocclusions with severely affected aesthetics (beauty).

Onyeaso and Idaboh (2006) found that 60.7% of the clinical cases had malocclusions that belonged to the difficulty / very difficult complexity groups while Onyeaso (2008) in an epidemiological study revealed that 2.6% belonged to the difficulty and very difficulty complexity groups.

Figure 7: Clinical photographs showing pre-treatment, during treatment and post-treatment stages of a 30-year-old Nigerian

12.0 THE SPECIAL POPULATION (THE CHALLENGED INDIVIDUALS)

The United Nations General Assembly in its declaration of the rights of the child affirmed the right of children who are physically, mentally or socially

handicapped to special treatment, education and care required by their particular condition. Children with disabilities need functional and aesthetic consideration comparable to that of 'normal'children or persons. This is even more so due to the increasing trend toward normalization of such children in home environments (Onyeaso, 2002a). Malocclusions with severe aesthetic implications can compromise already difficult social relationships and potential employment opportunities.

The Vice Chancellor, Sir, and my esteemed audience, Onyeaso (2003d) produced the first work on the objective treatment need of mentally handicapped children in orthodontics which has since then been the major literature on the subject globally. This was first acknowledged by the then Editor-in-Chief of the Journal of Dentistry for Children in Chicago, USA, while congratulating him on the work. The study revealed that 32% of the studied population had severe or handicapping malocclusions qualifying for publicly funded orthodontic care. A related study (Onyeaso and Arowojolu, 2003) gave 13.8% with such needs in the 'normal' children. Onyeaso (2004e)

further analysed this facet of orthodontic treatment among different groups of challenged children in Nigeria and found that their needs doubled that of the 'normal'children. Earlier, Onyeaso (2002a) showed that such children could be susceptible to fracture of their anterior teeth thereby worsening the already unfavourable dental aesthetics resulting from poor arrangement or positioning of the teeth. Now, the question is this: Can these percentages of our children with such handicapping malocclusions with the associated psychosocial implications be able to access orthodontic care in Nigeria today without Government or publicly-funded programme? Your guess is as good as mine.

Onyeaso and daCosta (2009) further investigated into the orthodontic treatment need and complexity of sickle cell anaemia subjects and found that 50% of them had poor dental aesthetics and this correlated strongly with their severe and handicapping orthodontic treatment needs and the difficult and very difficult complexity grades. This was concluded to be a reflection of the degree of craniofacial abnormality found in these special subjects. Realizing that this

disease is peculiar to the black race and the high level of inconveniences they go through along with their parents in their overall medical care; it would seem reasonable to have such patients under publicly-funded programme(s). Meanwhile, the campaign for the prevention of this deadly disease (sickle cell anaemia) must continue while the victims should be helped to receive free or highly subsidized treatment.

13.0 ATTITUDE TO ORTHODONTIC APPLIANCES

Although orthodontic treatment has its associated inconveniences such as regular visits to the orthodontists (usually at 4-6 week intervals), some discomfort, restrictions on food habits, and others, orthodontic appliances (braces) are still regarded as a 'symbol or badge of social class' globally. Children undergoing orthodontic treatment usually show off their braces as they derive some sense of fulfilment or satisfaction from the wear of orthodontic braces. The reason is obvious because it is often the children from the relatively comfortable homes that can afford the cost of an orthodontic appliance. This trend is already emerging in Nigeria.

Onyeaso and Utomi (2007a) found that 69% of the patients were happy to look at the mirror with their appliances on and admiring them while 63.1% were glad to let their friends see their appliances. Concerning some worries over their appliances, the 'cumulative orthodontic appliance worry score' revealed that 80.3% belonged to moderate worry group while 17.9% and 1.8% belonged to low and high worry groups, respectively. The worries had to do with some of the restrictions on food and some unavoidable discomforts associated with teeth movement.

Realizing the importance of communication in achieving the desired orthodontic treatment outcome and in an attempt to contribute to quality assurance in orthodontics, especially in Nigeria, we investigated into informed consent among orthodontic patients (Onyeaso and Utomi, 2007b) The findings showed that 76.7% claimed they asked their Orthodontists questions during the decision-making process and 87.3% described the communication between them and their Orthodontists as very satisfactory.

14.0 PREVENTIVE / INTERCEPTIVE

ORTHODONTICS

The Vice Chancellor, Sir, and my distinguished audience, I have intentionally left this part of my lecture last so as to draw your special attention to it. *Preventive orthodontics*, as the name implies, is action taken to preserve the integrity of what appears to be the normal occlusion at a specific time (Graber, 1966). *Interceptive orthodontics*, which is similar in purpose and virtually synonymous with the term preventive orthodontics, may be defined as that phase of the science and art of orthodontics employed to recognize and eliminate potential irregularities and malpositions in the developing dentofacial complex or the art and science of fostering developmental changes which are favourable, and halting or minimizing those which are not (Richardson, 1995). Richardson (1995) further said that there is no doubt that for individual children, skilful, timely and knowledgeable interceptive treatment alone can produce a satisfactory result and for others early interception will simplify appliance therapy at a later stage. This philosophy of orthodontic care requires the services of well-trained general dental

practitioners, especially in a developing economy like Nigeria (Onyeaso and daCosta, 2000).

Internationally, despite earlier debates on the ideal timing for early orthodontic treatment, there is now a growing interest in this treatment philosophy. The American Board of Orthodontists (Bishara et al., 1998) came out so strongly in support of this treatment philosophy, which also has the blessings of Europe and others.

Although the work of interceptive orthodontics demands being ever vigilant, there are particular times when developing malocclusions can most readily be identified in growing children: first, shortly after completion of the primary dentition (baby teeth) at about 3 years, the second is about 7-9 years when the first permanent molars will normally have erupted and the permanent incisors should be erupting and the third is about 11-12 years when the premolars, second molars and canines should be coming into the oral cavity. According to Richardson (1995), the fact that these ages of special vigilance do exist has led to the proposal that the child population should be screened

at these ages and interceptive measures applied where appropriate.

While the main challenge to the introduction of this measure on a large community basis in Nigeria is finance, Onyeaso and Sote (2002) reported that 40.5% pre-primary Nigerian school children (aged 3-5 years) had one form of malocclusion or the other and some benefitted from the survey. Earlier, Onyeaso and Sote (2001) showed that 13.1% (6.7% males and 6.4% females) in a sample of 3-5-year-olds were involved in oral habits with resultant malocclusal traits already present. Digit sucking was the most prevalent oral habit reported in the study. Onyeaso et al. (2002) and Onyeaso (2003a) also reported on some of the observed needs for preventive / interceptive orthodontics in epidemiological studies.

In addition, Onyeaso et al. (2003) and Onyeaso (2005b) reported significant proportions of patients who sought orthodontic care at the UCH, Ibadan that benefitted from interceptive orthodontics. About 77% of the patients needed extractions of retained primary teeth obviously causing poor alignment or

arrangement of the permanent set, 9.1% had proclination of the maxillary anterior teeth with moderate crowding. Over 7.4% were involved in oral habits, 5.8% had anterior crossbite and 0.8% had supernumerary teeth.

Onyeaso (2004f, 2004g) reported some serious effects of oral habits among Nigerian children aged 7-10 years, among other interceptive needs in the age group. Some of the children could not concentrate on their school works because of the intensity and frequency of some of the habits. Onyeaso and Onyeaso (2006) reported high interceptive needs (51.8%) among 11-12-year-old Nigerian children with increased proclination of the upper anterior teeth that could predispose them to accidental trauma, among other malocclusal traits including other marked deleterious effects of oral habits.

It should be mentioned here that research efforts in Nigeria (Onyeaso and Sote, 2001; Onyeaso et al., 2002; Onyeaso, 2004c, 2004f, 2004g; Onyeaso and Onyeaso, 2006) have shown that a reasonable percentage of our pre-primary, primary and even

some secondary school children are involved in some deleterious oral habits such as thumb or finger sucking, tongue thrusting, etc, which if seen on time in the clinic could be helped before their bad occlusal consequences. Moreover, Onyeaso (2004a) reported that 76% of studied adolescents had some malocclusions suggesting an increase in the prevalence of malocclusions with increasing age.

Our preventive work and campaign against malocclusion was also extended to the field of sports (Onyeaso and Adegbesan, 2003a, 2003b; Onyeaso, 2003e, 2004h, 2004i; Adegbesan and Onyeaso, 2004; Onyeaso et al., 2004), which actually created increased awareness and was considered as a major contribution with the subsequent commendations and recognition by the international community (www.SportsDDS.com/Nigeria). The Vice Chancellor, Sir, besides the numerous reprint requests from researchers across the globe and before the inclusion of my profile in the website, I was particularly thrilled when I received a letter from the Information Centre of the British Dental Association,

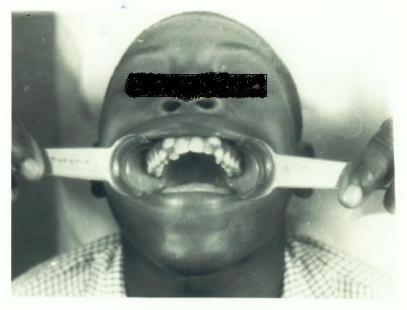
UK asking for a copy of one of the papers for their archives.

Figure 8: *Clinical pictures below are examples of the cases that could be prevented and would benefit from interception:*

A.

B.

C.

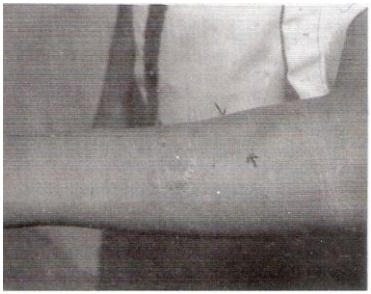


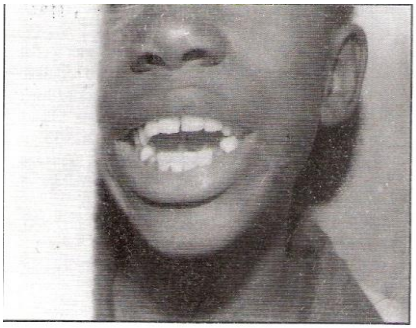
D.

E.

F.

G.





A and B: Showing retention of deciduous teeth while the permanent successors are erupting inside in the wrong places that result in poor teeth arrangement. C and D: Showing the same problem occurring in the upper teeth. This problem is common in our environment but can be prevented by early visit to the Orthodontist. E: This is called anterior crossbite involving one upper tooth and one lower tooth. Note that the lower tooth involved is being pushed out its support in the ridge. This could cause future problems with the joints (Temporomandibular Joints) joining the upper and lower jaws together. Such associated problems would be prevented by early visit to the Orthodontist. F: Protruding upper anterior teeth. Note

that child can not close the mouth at rest and such a child is usually prone to trauma to the teeth, especially while playing with other children. Again, this can be prevented by orthodontic interception.
G: An 8-year-old girl who was sucking her left forearm and the resultant severe (10mm) open bite.

14.1 The Right Time to Visit the Orthodontist

According to the American Board of Orthodontists (ABO), **the right time for an orthodontic check up should not be later than age 7**. The reasons are as follows:

- Orthodontists can spot subtle problems with jaw growth and emerging teeth while some primary (baby) teeth are still present.
- While your child's teeth may appear to be straight, there could be a problem that only an Orthodontist can detect.
- The check up may reveal that your child's bite is fine. Often, the Orthodontist will identify a potential problem but recommend monitoring the child's growth and development, and then, if indicated, begin treatment at the right time for the child. In other cases, the Orthodontist might find a problem that can benefit from early treatment.

- Early treatment may prevent more serious problems from developing and may make treatment at a later age shorter and less complicated.
- In some cases, the Orthodontist will be able to achieve what would not be possible once the face and jaws have finished growing.
- Early treatment may give your Orthodontist the chance to:

1. guide jaw growth
2. lower the risk of trauma to protruded front teeth
3. correct oral harmful habits
4. improve appearance
5. guide permanent teeth into a more favourable position
6. improve the way the lips meet

- Through early orthodontic screening, you will be giving your child the best opportunity for a healthy, beautiful smile that is good for life.

Other advantages of interceptive orthodontics include:

- being relative less expensive
- no decalcification
- no root resorption

- no soft tissue problems
- reduced chances of relapse
- no iatrogenic caries

However, you can still visit your Orthodontist at any age instead of not showing up at all. It is true that orthodontic treatment is expensive but it is not expensive in comparison with the cost of dealing with untreated problems. Orthodontic treatment may bring long-term health benefits and may contribute to the avoidance of costly, serious problems later in life.

15.0 MALOCCLUSION IN PORT HARCOURT

Some of our clinical materials about to be published show that the pattern of malocclusion here in Port Harcourt is not different from those reported from the south west and south east parts of Nigeria (Onyeaso et al., Eigbobo et al., in press). A recent work by my postgraduate student (Aikins, 2010) has revealed that the objective treatment need and complexity of the potential orthodontic cases from Port Harcourt are consistent with earlier reports (Onyeaso, 2008, 2009). Although my experience so far in Port Harcourt shows that many children including adults need orthodontic treatment, the dental awareness here

when compared to the south west Nigeria is understandably poor and needs to improve. Our recent work (Eigbobo et al., in press) shows that only 4.1% of the children who have received treatment in our clinic at the University of Port Harcourt teaching Hospital came for routine check while the rest showed up due to one problem or the other. We shall work more to change this situation and also provide the necessary data through more research activities both for academic purposes, as well as for an organized and systematic planning of orthodontic care in this environment. With availability of fund, we hope to look into some other aspects of modern orthodontics that have not been studied in Nigeria.

16.0 CONCLUSIONS AND RECOMMENDATIONS

- The art and science of orthodontics will assist you in improving your smile at any age but early presentation toy our orthodontist will facilitate early diagnosis and best possible outcome for enhanced beauty and wellness.
- The prevalence of malocclusion and desire for orthodontic treatment are expected to be on the increase with civilization or modernization and

this is the expectation in the Nigeria of tomorrow. Although many Nigerian adults have been able to cope with their malocclusions without receiving orthodontic treatment, more of our younger population and the future generations will certainly demand orthodontic care.

- Our Governments (Local, State and Federal), Oil companies in the Niger Delta Region, banks, other organizations and wealthy Nigerians should as a matter of urgency assist in the crusade for increased awareness and prevention / interception of malocclusion in Nigerian children due to the obvious advantages such as cost-effectiveness and better treatment outcome.
- Generally, Nigerian Government should really give more attention to medical /dental research as no amount of money can be too much for the health of our people. This will eventually impact on the quality of healthcare services in our country. Nigerians can get in Nigeria what they are looking for abroad once the local atmosphere is encouraging.

- The introduction of some publicly funded facilities for the management of the very severe / handicapping malocclusions so as to enable those involved (whether special or the 'normal'populations) access treatment more readily in order to reduce the negative psychosocial effects and improve wellness or the quality of life of our people deserves the support of all.
- One way individuals, organizations or governments can be more involved is by setting up an ***"Orthodontic Research Foundation"*** in the Faculty of Dentistry, College of Health Sciences, University of Port Harcourt. University of Port Harcourt will be glad to name the Foundation after the name of the donor whether an individual, organization or government. You can also donate towards the programme ***"Subsidy for Orthodontic Care"*** which will be strictly for those who qualify for it based on professional assessment of their orthodontic treatment needs. The latter will be based in the University of Port Harcourt Teaching Hospital (UPTH).

The Vice Chancellor, Sir, my distinguished audience, permit me to end this lecture here believing that by the grace of God we shall see again in some years to come when I hope to give my valedictory lecture. Let us prayerfully imbibe the attitude of hard work as we attempt to *arrange things better generally in this country because therein also lies the beauty and wellness of our nation.*

Thank you for your kind attention.

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CITATION OF PROFESSOR CHUKWUDI OCHI ONYEASO READ AT HIS PROFESSORIAL INAUGURAL LECTURE IN THE UNIVERSITY OF PORT HARCOURT, PORT HARCOURT, RIVERS STATE NIGERIA ON 30TH JUNE, 2011.

BY

PROFESSOR O. AKARANTA

This is the citation of an erudite scholar, an astute pursuer of excellence, an accomplished mentor, an epitome of academic distinction; Professor Chukwudi Ochi Onyeaso. I feel so honoured, highly privileged, and extremely delighted in my appointment for this assignment.

Like the rising of the Sun from the East, the child, Chukwudi was born in Umuanda –Ngodo, Isuochi, Umunneochi Local Government Area of Abia State, South- Eastern part of Nigeria. His arrival on the very first Nigerian Independence day Anniversary (i.e. October 1st, 1961), was the earliest notification of the significance of this child, but not many people took

notice of this. Today, that little sun that rose from the East is now felt all over the world. Chukwudi Ochi was born to Late Pa Matthias Nkemakolam Onyeaso and Madam Grace Uwalekwu Onyeaso in Onyeaso Compound, Umuanda-Ngodo, Umunneochi LGA, Abia State. His birth brought joy and today we share in that joy as we celebrate Professor Chukwudi Ochi Onyeaso.

Chukwudi had his primary education at Ngodo Central School and partly at Umuokpara Primary School, Umuahia, Abia State. He then proceeded to Methodist College Uzuakoli, Abia State (1974–1979) where he got his ordinary level certificate. He moved on to the advanced level at the Federal School of Arts and Science, Aba (1981 -1982) and finally he bagged a Bachelor of Dental Surgery degree from the premier University of Ibadan in January 1990. In search of more knowledge and expertise, Professor Chukwudi Ochi Onyeaso pursued postgraduate fellowship training in Orthodontics and graduated a Fellow of the West African College of Surgeons in October 1999.

At this juncture, permit me to note the unusual foresight of Professor Chukwudi Ochi Onyeaso. Despite being equally qualified, he chose Dentistry (then a less popular course) when most of his mates wanted Medicine and Surgery. At the postgraduate level, he chose Orthodontics, a rarer and less developed specialty of Dentistry in Nigeria (at the time) despite external persuasion to divert to a more appealing specialty. Today, while Dentistry and its specialties have brought honour to many, we can boldly and unarguably assert that Professor Chukwudi Ochi Onyeaso has brought both honour and glory to Dentistry and Orthodontics.

After his Fellowship of the West African College of Surgeons (FWACS), Dr Chuks (as fondly called by colleagues, friends and other admirers) took up an appointment as a Lecturer I in the University of Ibadan, an institution where he had earlier worked as a Lecturer II in the Faculty of Dentistry before discontinuing to pursue his postgraduate studies. He rose to the rank of a Senior Lecturer at the same institution before transferring his service to the

Unique Uniport; the great citadel of learning where many of us are proud to belong.

Due to his insatiable appetite for knowledge, Dr Chuks partook in a miniresidency programme in Oral Implantology organized by the Faculty of Dentistry, University of Ibadan in collaboration with the University of New York, USA. He was successful in the training and was made eligible for the award of the fellowship of the International Congress of Oral Implantologists (FICOI) in 2004. Further on, he went to bag the Fellowship of the World Federation of Orthodontists (FWFO) in 2005.

Despite other offers within and outside Nigeria for a professorial chair, Chukwudi Ochi Onyeaso opted for University of Port Harcourt because he was convinced that Unique Uniport is the place for him. Considering his several contributions to knowledge through numerous scientific researches and publications, training of both undergraduate and postgraduate students, scholarly contribution at scientific conferences locally and internationally, and his impeccable dedication to institutional assignments

and administrative responsibilities, he was appointed a Professor of Orthodontics in 2008. This merited elevation made him the third to be so appointed in his field in any Nigerian University.

His Family, Faith and Personality

Professor Chukwudi Ochi Onyeaso is happily married, and I mean, happy indeed. His wife, Mrs Adedamola Oluwatoyin Onyeaso (nee Osho) is a prodigy of virtue, a pillar of support, a fountain of succour, a wife through thick and thin, a wife indeed, the type every man would desire. I have known Professor Chuks and Aunty Toyin for 18 years. Since then, and till now, I have not seen a couple more glued together in love. In them I found a mathematical expression, simply put; ***"The success of Chuks is a function Toyin".*** This holy union is blessed with 6 children namely; Onyedikachi (19 years), a medical student at the University of Port Harcourt, Chinyere (18 years), the twins: Chibuotam and Chikamaram (17 years), one of them is a dental student and the other a basic student also at the University of Port Harcourt, Favour (14 years) and Ugochi (10 years).

Professor Onyeaso is a Christian by faith, a servant of God who has been an inspiration to many younger believers. He is a down-to-earth person, forthright on all occasions and ever willing to help the younger colleagues climb the same ladder on top of which he stands.

Ladies and gentlemen, I must admit; the most difficult task in this assignment is for me to reel out the various contributions, recognitions, awards and achievements of Professor Chukwudi Ochi Onyeaso within the little time allotted. Nevertheless, I will try my best.

His Contributions

Like the sun, rising from east and within 24 hours has been felt all over the world, Professor Chukwudi Ochi Onyeaso's influence rising from Eastern Nigeria has been felt across virtually every continent of the world. Charity, they say, begins at home, so did Onyeaso who has contributed as a lecturer and counselor to the training of several dental students and dentists. He has supervised postgraduate theses for Master degree in Dental Surgery at the University of Ibadan and for

fellowship awards at the National Postgraduate Medical College of Nigeria and the West African College of Surgeons. He is an external examiner to the first dental school in Nigeria (Dental School, University of Lagos).

He has been a reviewer to many local scientific journals including Nigerian Dental Journal (NDJ), African Journal of Medicine and Medical Sciences (AJMMS), Postgraduate Medical Journal of Nigeria, West African Journal of Medicine and our own Port Harcourt Medical Journal (PMJ), just to mention a few. But, like the biblical Jesus, this "prophet" has made more impact abroad than he has done at home. Besides the impact of his research works across the globe, please note the following:

In Europe, he is a reviewer to the following international journals: Oral Health and Preventive Dentistry, BMC Oral Health, European Journal of Dentistry, and International Journal of Dentistry. In addition to being a member of the Editorial Board of Odonto-Stomatologie Tropicale (Tropical Dental Journal) which is a bilingual journal published in

French and English languages with the Head Office in France, he is the Editor in-charge of all English manuscripts submitted to the journal.

In North America: He reviews for the Journal of National Medical Association (JNMA), Washington DC, The Angle Orthodontist, Journal of Public Health Dentistry, Medical Science Monitor, and a member of the Editorial Review Board of the American Journal of Orthodontics and Dentofacial Orthopedics (AJO-DO), all in the USA.

In South America, he is a member of the International Editorial Board of Pesquisa Brasiliera em Odontopediatria e Clinica Integrada (Brazilian Research in Pediatric Dentistry and Integrated Clinic).

In Asia, he is an international reviewer for Indian Journal of Dental Research, and International Journal of Oral Science, based in India and China, respectively.

In the year 2010, Professor Chukwudi Ochi Onyeaso was warmly invited by his international colleagues to

be part of the World Congress of Orthodontists **in Australia,** which he honoured and presented a paper. So, mention it in any of the major continents of the world, the name Chukwudi Ochi Onyeaso has been heard.

Recognitions

As a result of his immense and invaluable contributions and penchant for excellence, Professor Onyeaso has earned both recognition and respect from individuals, institutions and organizations at home and abroad.

He was awarded a **Letter of Excellence** by the National Medical Association (NMA) Washington DC, USA. in 2004. He was recognized and invited into the membership of the Society of Industry Leaders (SIL) / Vista Research as a Professional Consultant for clients. He was recognized as a significant contributor to the development of Sports Dentistry through research from Nigeria (This recognition is posted on www.sportsDDS.com/Nigeria). He earned a **Letter of Commendation** from the Vice Chancellor,

University of Ibadan in 2005 for excellent discharge of a special administrative assignment. He got another **Letter of Commendation** from the Provost, College of Medicine, University of Ibadan for a good team work in the planning of the 25th Anniversary Celebration of the College.

Many of his publications have been requested and displayed in the libraries of some international institutions such as the British Information Centre and other libraries in Spain, USA and South America.

Professor Onyeaso was an awardee of the MacArthur Foundation Scholarship for staff development at the University of Ibadan. This scholarship was spent at the University of Illinois, Chicago (UIC) in the year 2004. While at UIC, he was celebrated and was the only visiting scholar invited by the Department to deliver a lecture. In addition, he was recognized and invited to review an orthodontic textbook titled "Orthodontic Concepts and Strategies" authored by Frans P.G.M. van der Linden for the World Journal of Orthodontics.

Distinctions

Good, we may say, but Professor Onyeaso is not only good but has been the best on many occasions and at different fora. He was the best behaved student at the Federal School of Arts and Science, Aba, Abia State for 1981/82 session.The best student in Biology at the same school in the same academic year. He was voted the **Best Lecturer** by the students during the 2001/2002 academic session at the Faculty of Dentistry, University of Ibadan. One of his publications titled "**Perception of personal dental appearance in Nigerian adolescents"** published in the American Journal of Orthodontics and Dentofacial Orthopedics was recommended by **'ScienceDirect'** as the best scientific paper for the Month of June, 2005. Note that Science Direct is an international collation and publication network for first class peer-reviewed scientific Journals and Books.

Apart from being the best, Professor Onyeaso is also the first in a few things: He is the first Head of the Department of Child Dental Health, University of Port Harcourt, the first person from the Dental

Faculty to be elected a member of the UPTH Hospital Management Board by the Senate of University of Port Harcourt, the first indigenous Professor of Dentistry of the University of Port Harcourt, and the first inaugural lecturer from the Dental Faculty, College of Health Sciences of the University of Port Harcourt. He was also the first Consultant Orthodontist at the University College Hospital, Ibadan before moving over to Port Harcourt.

Ladies and gentlemen, here is an academia per excellence, one who does not only read but writes as well. Professor Chukwudi Ochi Onyeaso has over 77 publications in peer-reviewed scientific journals, the larger proportion of which are based abroad. Yet, he has not stopped; many articles are currently under review. He has presented top class scientific papers in many international conferences including but not limited to the Congress of the International Association of Dental Research (IADR) at Goteborg, Sweeden, Annual Conference of the West African College of Surgeons, Abuja, Nigeria, Quadrennial Conference of Illinois Orthodontic Alumni Association, Chicago, and the 2004 Combined

Annual Session of Great Lakes Association of Orthodontists (GLAO) and Midwestern Society of Orthodontists (MSO) in Hyatt Regency, Chicago, and the First African Middle East Federation Conference (AMEF) in Kuwait.

Professor Chukwudi Ochi Onyeaso is a Lecturer with a difference. Besides the special lecture he gave as a visiting Orthodontist in Chicago, USA in 2004 titled "Orthodontics in Nigeria," he had on two occasions delivered special lectures on behalf of the Nigerian Medical Association, Oyo State Chapter. He is a man laden with several responsibilities in the University, in the church and in every community where he belongs. Amazingly, this man is ever so reliable, always delivering without a compromise of excellence.

On this epochal occasion, I present an astute professional, an epitome of academic excellence, a man who loves the Lord with a passion, a highly respected and impeccable Fellow of the West African College of Surgeons, Fellow of the World Federation of Orthodontists, Member, Nigerian Medical

Association, Member, Nigerian Dental Association, Member, Medical and Dental Consultants Association of Nigeria, A regular resource person in Orthodontics for the West African College of Surgeons, Member, International Association for Dental Research (IADR), Member, Research Board of Advisors of American Biographical Institute, Member, Society of Industry Leaders / Vista Research, and Member, Index Copernicus Scientists. Ladies and gentlemen, join me to welcome Professor Chukwudi Ochi Onyeaso as he delivers the 76th inaugural lecture of the University of Port Harcourt.