TRADITION, THE DEVIL AND THE DOCTOR: THE MAGIC OF THE CHEST SURGEON

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DEDICATION

This lecture is dedicated to my wife **Dr. (Mrs.) Felicia I. Ofoegbu** and our six children and, the entire OFOEGBU family.

INTRODUCTION AND DEFINITIONS

The exercise of reviewing and discussing ones academic as well as professional contributions in a preferred area and possibly in preferred directions faces some obvious and critical setbacks. It may be an exercise which highlights ones good points by transforming otherwise marginal edges into pyramids of achievements. It also faces the criticism of wittingly converting an otherwise simple enlightening discussion into a session of unprogrammed exegesis on matters which may not lend to common appreciation. There is also the likelihood of deliberation of issues which appeal to common interest and skating through those which are really measurable contributions in time and for generations. In the circumstance, one is expected to act as the fair judge of one's own merit and in any case it is difficult to act as one's own jury in a discourse that deals with medicine or a medical specialty such as Surgery.

The Vice-Chancellor, members of the University Council and Senate, the Academic and hard working communities of the University of Benin and the University of Benin Teaching Hospital in particular the Provost, Deans, Directors and staff of the College of Medical Sciences, Great Uniben Students, and in a special way the medical students, our distinguished invitees and Guests, Ladies and Gentlemen, the difficulty here is not that of explaining myself but that of finding adequate words to express my gratitude to the Vice-Chancellor and the University community for granting me this opportunity to address such an August gathering using the forum of my inaugural lecture. I thank you most sincerely.

This is the 7th from the Faculty of Medicine and the second of these lectures by the Department of Surgery but it is the first by a Chest, Heart and Lung Surgeon and the

first by an alumnus of St. Patrick's College, Asaba, the Versity on the Niger. Since there might be none by such Surgeons in the near future as a result of the scarcity of such personnel, the lecture will focus on some aspects of the work of the Cardiothoracic Surgeon with a view to encouraging their stay in our system. In the year 2000 issue of the international register of the Society of Thoracic Surgeons only one is listed as being resident in Nigeria and that is your humble Lecturer today but there are several Nigerian Chest Surgeons who are listed under foreign countries where they are doing excellent work. A nation like ours which is in search of development all round cannot be default continue to encourage her best professionals and brains to leave the country thereby giving the wrong impression that Nigeria sees the situation as part of solving the unemployment problem. Some other countries in similar economic difficulties are known to have, by deliberate policies, ensured that their best remained at home while the less skilled were encouraged to emigrate even in large numbers for improved personal welfare and foreign exchange earnings to aid development at home. Those countries as we see daily have continued to achieve reasonable economic growth with continuously improved infrastructure including uninterrupted and steady electric power which is the cornerstone of modern development and civilization. Sadly, I am not sure if any citizen of ours is in the position to say the same for our country. Such underlie our inability as a nation to ensure meaningful and continuous improvement in several areas including health care, we plan well but we do not achieve the desired objectives and the impression is given that Nigerians want to win without scoring goals. The right incentives must be put in place if we are to attract back our very high caliber professionals. The call to national and selfless service, no matter how intense, without

quantifiable recognition for hard work and respect for merit will only service hypocrisy and so deceive the people. It will be like those who make beautiful clocks and watches and yet are unable to tell the time.

Since good health is a fundamental and natural human right, everyone is equipped not only to seek good health but to talk about it and even practice Medicine on oneself and sometimes on other people including the performances of advisory roles. There is the story of a man who during an illness prolonged the poor appetite stage in order to save on food but as the drug bills arrived, he quickly found out that it was cheaper to eat well and maintain good health. Good health is so taken for granted that to some extent, everyone claims to be an expert in health practices. My discourse will therefore deal with those aspects of our work that served to maintain good health through Surgery but, such may not be within the reach of everyone even in advisory capacity.

Even though Socrates (the Greek Philospher, (470-399 BC) has told us that a teacher who is so knowledgeable that his students fail to understand him, such a teacher would need a primer course in effective communication, it is necessary at the outset to state that certain words like Thoracotomy, Lobectomy, Oesophagectomy, Pericardiectomy, Valvotomy, Aneurysmectomy, Sympathectomy and similar latin and greek derived terminologies can only be explained and not substituted by simpler words. It is however that patent which makes Medicine a trade for all and by all (the democracy of Medicine) that makes discourses on medical subjects open to easy assessment since everyone to an extent is an expert on some aspects of medical

diagnosis and treatment especially in personal matters; even the instinct of self preservation is an aspect of preventive medicine.

At this point some definitions become necessary; Surgery is defined as the art and practice of a Surgeon, that is, one who treats injuries or diseases by manual operations. But, what are manual operations; is it mere movement of the hands? It is the co-ordinated movement of the hands directed by sound knowledge with a view to attaining a cure or amelioration of an ailment through direct handling and reshaping of the areas affected, often achieved with the aid of appropriate instrumentation. The concept of a surgical operation in the context of the definitions above may not be altogether comfortable but our working definition is the art of treating injuries and diseases through the practical removal, physical addition, increase or reduction and replacements of naturally occurring structures. This definition has the effect of excluding Sorcery, Herballing, Magic, Witchcraft and Divination from Surgery. It is however in place to state that all these things did make their contributions in the development and advancement of Surgery. Infact, it is difficult in some situations to distinguish or dissociate some of these from Surgery and sometimes it is convenient not to make the distinction.

A few illustrations using the ULCER, a basic surgical condition will surffice. Hippocrates (460-377BC), in his book “De Ulceribus” advocated keeping the ulcer open to let out evil humours and if necessary press it and squeeze out the blood. In 200BC, the Indians added the use of special maggots to eat up and clear away dead tissue from the ulcer (biological debridement) and found that compression using Chinese inelastic bandage aided healing by being more effective in pressing out the evil humour. It was

Celsus (about AD 25) who in distinguishing wounds from ulcers introduced the use of antiseptics in ulcer treatment and applied bandage not to drive out evil humour but to bring the edges together in order to facilitate healing. The notion that ulcers should be kept open for the continuous escape of evil humours (spirit) continued to hold sway for more than 100 years until Henri de Mondeville, who in 1306 while still driving out the evil humours by exposure and compression discovered that bandaging actually allowed the ulcers to heal. Thus, it took several centuries to develop what is now the simple practice of wound care with dressings, bandaging and recourse to skin grafting to cover the ulcer when the edges are far apart. That was the mixture of Sorcery and surgical practice. It was simply ignorance but it took 1,460 years to quash that ignorance.

Again, Dr. Franz Anton Messmer (1734-1815) from whose name Mesmerism was derived advanced the theory that as the planets attracted one another so also they had direct effects on the tissues of the body. Hitherto, Rev. Fr. Johann Joseph Gassner (1727-1779) who preceded Dr. Messmer had held that diseases were due to natural causes or the devil; he practiced exorcism and drew large crowds whom he cured by the laying of hands and commanding the diseases to leave them, a process which Messmer ascribed to animal magnetism and not miracles. Messmer improved on the situation by putting on lilac (strong purpole) dress which influenced his blindfolded patients to react in unusual ways when their eyes were opened; thus, he added a tough of magic. Again, Rene Descartes (1596-1650) of the famous dictum “cognito Ego sum” (Ithink and so I am), distinguished between life of the soul and that of the body and Georg Stahl (1660-1734) of the famour Phlogiston theory held that “anima” the supreme life principle regulated all functions of the living body but disappeared at death. This

anima principle or “physis” (of Hippocrates) states that man has his Physician within him and so nature is the Physician of diseases. The role of the Physician accordingly is to support the anima. Thus, Fever is ascribed to increased activity of the anima and so should not be treated since it is a natural attempt to restore health. Other activities of anima were expressed through blood letting such as nose bleeding and haemorrhoidal bleeding. Hence, when anima fails the Physician could assist through venesection, purgatives, emetics to induce vomiting and strong sweating which was seen as a sign of successful treatment. Thus, inspite of the efforts made since Hippocrates to fight superstition and separate Medicine from Philosophy the admixture of the known with what appear to be super or unnatural have continued to intermix with Surgery sometimes deliberately put in to complete the surgical image and aura.

Since the Lecturer may focus on those professional and academic interests in Surgery which merited him and the University recognition, it becomes necessary to offer further definitions which will ensure a better comprehension of the presentation. My specialization is Surgery but my subsepecialty is Thoracic and Cardiovascular Surgery. The American Board of Thoracic Surgery defines the Thorax or Chest as extending from the base of the neck to the adbdomen and contains the principal organs of the circulatory, respiratory and upper gastro-intestinal systems (The American Board of Thoracic Surgery, October, 1984). The Specialty of Thoracic Surgery according to the Society of Thoracic Surgeons includes precisely the surgical treatment of congenital abnormalities, malfunctions, diseases and injuries of the heart and great vessels, the tracheobronchial system and lungs, oesophagus and other mediastinal contents, diaphragm and circulatory systems in all age groups (The Society of Thoracic

Surgeons, February, 1986). Therefore, the Cardiothoracic Surgeon has within his jurisdiction and (human) control the very elements and connotation of on-going life, that is, the heart and the circulation, the lungs and breathing, the gullet and the swallowing mechanism and of course the cornerstone of the body's immune defence system, the thymus gland. Thus, the Thoracic Surgeon sees and works comfortably with the most essential and vital make-ups of the living body more than anyone else and really more than anyone.

Specialization has been described as an attempt to cope better with uncertainty and nowhere is this more applicable than in Thoracic and Cardiovascular Surgery. This attempt to cope better in Chest Surgery has taken almost the whole of known history. Suffice it to remember that God, the author of life is the first Thoracic Surgeon, he performed the first perfectly successful Thoracic Surgery through the creation of the woman from the resected rib and flesh of Adam. A match performance is out of the question but progress was slow towards safe operations on the heart, the great vessels and other intrathoracic structures.

The heart represents many different things in various cultures and all agree that it represents life. Many symbolisms and beliefs refer to the chest as being the residence of the heart and therefore, life. This belief that the heart is the centre of life had much to do with the delay in mustering enough confidence and courage to approach the intrathoracic organs. The cage of ribs was seen as an extra natural guard and protection that must not be violated and so only sporadid and timid forays were made at the chest.

Here is an area where acknowledgements give pride of place to the human race and confirm that God has indeed allowed us to develop at our own pace. History is the foundation to move forward with some measure of certainty otherwise everything is uncertain. True acknowledgement authenticates and reinforces history. Hence, on an occasion like this one should not be carried away by the desire to give credit to one's own contributions without visibly giving due credit to honoured Ancestors, Pace setters, Originators and Pioneers.

On the 9th of Sepotember 1896, Ludwing Rehn sutured a two day stab wound in the beating heart of a young gardener named Wilheim Justus at a hospital near Frankfurth in Germany. This is the first recorded successful surgery on the beating heart and that was barely 100 years ago. Unfortunately, there was no further development until the institution of positive ventilation and controlled anaesthesia through endotracheal intubation which gave more security to thoracic operations and indeed to operations elsewhere in the body. It became possible to counteract the collapsing effect of atmospheric pressure on the organs contained in the open chest especially the lungs. Progress was however slow as experimentation with human beings was not only unethical but also criminal. Further work was carried out in Germany by Ernst Ferdinand Sauerbruch (1875-1951) the Master of 20th Cntury Thoracic Surgery. He was the first to work successfully in the open human chest; he used people who were already in the terminal stage of chronic tuberculosis. In 1928, he was able to remove a lung for the first time although it took him and his team two weeks to bring the operation to completion but the patient unfortunately died.

It became the lots of Nissen in Sweitzerland and Graham in the U.S.A.; they independently in 1931 and 1933 safely removed a while lung, the former for infection and the latter for cancer in rather fit patients. Nissen's patient died later but Graham's survived and lived longer than the Surgeon. By then the operation took one week to complete (we now do it in three to five hours). These were the beginnings of major pulmonary resections. Your humble Lecturer is a second generation descendant of Professors Valdoni and Dogliotti of Italy and Mr. Wingfield and others of the United Kingdom who learnt directly from Sauerbruch and his accomplished apprentices and so I can rightfully claim the heritage of that great Master.

Parallel developments also took place in the cardiovascular sector and by 1925 Henry Souttar in London, had carried out the first closed mitral valvotomy but he could not get any other patients to operate. His colleagues would send him none. Souttar wrote "I did not repeat the operation because I could not get another case; it is no use to be ahead of one's time". In 1939, Robert Gross ligated a patent ductus arteriosus, an abnormal connection between the major blood vessels arising from the heart when his Chief William Ladd was away in Europe. He was fired when Dr. Ladd returned and was told of the unauthorized operation. Others followed and by 1948, on the 10th of June, Charles Bailey performed the first anatomically guided mitral valvotomy and that was the beginning of operating within the heart chambers even though the event was at the time regarded as a most foolish adventure. Infact, Bailey lost his surgical privileges and for a long time he could not operate in any hospital. The pioneers were not many but they suffered humiliations in the course of demystifying the heart and the chest. Earlier in 1933, Forsmann passed a hollow rubber tube (on himself) from an elbow vein into his

heart and for this he was not only expelled as a mad fellow from the hospital in Heidelberg (Germany) but he could not get a job anywhere in Europe. He ended up a mendicant until 1948 when several years later that experiment on himself had won him a nobel prize for Medicine; it had led to important break throughs in the study of the living heart, the foundation of cardiac catheterization.

Here at home in Benin City recognition must be accorded especially to Professor Mathias Obiaya, with his stalwart team of Anaesthetists which includes Doctors Okechukwu, Onugha, Akele, Ukponmwan, Iyasere and Dakaraju. Without their mastery of cardiothoracic anaesthesia and encouragement and sometimes bravery we would not have gone too far. Matrons Agbokonkon and Igbinedion and the various theatre and intensive care Nurses who went out of their way to provide the care and commitment that met the perioperative needs of our work, I acknowledge with due humility and gratitude.

There are also many who may not be involved directly with ones work but whose relationships have had tremendous and salutary influence in getting one settled and making one believe in what one has to offer through service to ones people and nation especially in an obviously difficult terrain. These are represented by Dr. Benji A. Oni-Okpaku and Bishop P.E. Ekpu (now Archbishop). I never met them before but they made our coming into Benin City in 1974 like a return to an ancestral home after a very long sojourn abroad. The numerous Residents who have had parts of their training through me and who believed in my work are represented by the families of Doctors I. Evbuomwan and V.C. Onuora. No less have I been spurred by the friendliness and support by the many couples whose marriages we have sponsored; they are

represented by the family of Chief and Barrister (Mrs) Odion. To my classmates who organized my coming to Benin City and who encouraged me not to worry about any progress or material things they have acquired while I was undergoing the necessary long apprenticeship, I say thank you. They are represented by Mr. F.A. Chukwumah and Prof. G.I. Akenzua. The same to the numerous friends whom we have met here on campus; these are represented by the family of Professor and Dr. (Mrs) Nwagwu.

The work of the Thoracic Surgeon was not made simpler by the fact that he needed a minimum of 10 years of training after graduating as a Doctor in order to acquire the knowledge and skill necessary for him to begin practice as a Cardiothoracic Surgeon. However, since the 1980s a few schools in North America which prides itself of a large number of Cardiothoracic Surgeons have reduced the training period to 8 years by providing a separate programme for Vascular Surgery. In addition to all these areas of great difficulties still persists thereby impeding more forward gains inspite of the eye catching achievements of the Spoecialty in the last 30 years. For example we are yet to acquire the ability to maintain pulsatile flow during heart operations. The body requires pulsatile blood flow to function but (since 1955) we have been operating in relative safety because the ideal is yet to be found. Notwithstanding the various limitations great successes have continued to be recorded in this very wonderful area of human endeavour. These historical angles on the development of Chest Surgery are necessary to enable the audience appreciate some of the difficulties which we who practice in the undeveloped world have had to face in order to project the Specialization of Thoracic and Cardiovascular Surgery by affording our people the opportunities which they otherwise would not had here at home.

PERSONAL CONTRIBUTIONS

May I turn to the areas of my personal interest and contributions. These, I will discuss under the following headings:

1. The Ordinary Things
2. The Extraordinary Things
3. The Wonderful Things

Each group spans the heart, the lungs, the gullet, other thoracic organs and blood vessels but they vary in their import and pay load. Many of the personal experiences in this section have been published in reputable journals in Nigeria and Abroad among which are the Nigerian Medical Journal, the Nigerian Journal of Surgical Sciences, the Journal of the Royal College of Surgeons of Edinburgh, U.K., the American Journal of Surgery, the Nigerian Journal of Surgery, the Thoracic and Cardiovascular Surgeon and Surgery and so access to more detailed information is readily available.

1. The Ordinary Things

(i) Redefining Haemoptysis

For many years I was interested in the clinical significance of haemoptysis, that is, coughing out sputum which is mixed with blood or altogether frank blood from the respiratory passages. Cough in itself is a common and very familiar non specific symptom of varied chest conditions but when mixed with blood it becomes a pointer to more specific and important situations. However, this self conferred priority significance varies from region to region. In the countries boardering the Mediterranean Sea and in parts of the South American continent the Hydatid Cyst (a type of worm infestation) is the commonest cause of blood in the sputum. In Europe and North America the

commonest cause is Cancer of the lung followed closely by Cardiac Conditions. In the developing countries of Africa, Pulmonary Tuberculosis is the most commonly called into question and in Nigeria it is assumed that Tuberculosis is the dominant cause of haemoptysis but is that the true situation?

In 1983, we (Ofoegbu, Jarikre, Anah and Ojogwu) found that the commonest causes of haemoptysis (coughing out blood) came not from cardiac causes but from non-tuberculous conditions of the lungs (Table I). Hitherto, it was the common knowledge that tuberculosis was incriminated. Figure I shows a case which was treated for tuberculosis for over 10 years before I arrived on the scene. The girl was then 8 years old. Behold the mistaken identify; there was an office pin inhaled into the lung ten years previously. We removed the pin together with the adjacent lung segments and the result was a beautiful girl who got married three years after the operation. The conscious inhalation of foreign bodies (Fig. II) is of common occurrence especially in children, carpenters and tailors and the problem posed is that of early and urgent removal before complications set in. What is being conveyed is the fact that there are some people, in particular children who inhale foreign bodies without being aware of the situation. But several years later they present with cough often mixed with blood and are treated for tuberculosis especially when the need for x-ray investigation is underestimated.

The second picture (Fig. IIa) shows a case that was treated as tuberculosis by the traditional doctor, his method of treatment only delayed diagnosis and accelerated death as a result of ignorance. The man continued to cough out blood until death for when in his last days he came to us the cancer which had been mistaken for

tuberculosis was very advanced. The native doctor gave his own treatment for the haemoptysis the way he understood things but of course what he was treating was only a complication of a more devastating situation. This picture (Fig. III) is that of Bronchiectasis, a situation in which the fabric of the lung had been destroyed by infection including tuberculosis. It manifests by haemoptysis sometimes really massive and exsanguinating. Lung abscess has a similar presentation (Fig. IV). These are only illustrations of how some non cardiac causes of haemoptysis are misinterpreted in our environment. The message is that cough mixtgures and similar agents have no place in the treatment of chest conditions unless the patients have been duly examined by competent authority with the necessary precautions including relevant diagnostic aids.

Earlier in 1969 (Biancalana, Actis-Dato and Ofoegbu) we had shown that arterovenous fistula is a leading causes of haemoptysis apart from cardiac causes in Europeans. Thus, I have participated both in Europe and here at home in redefining the implications of haemoptysis as pulmonary tuberculosis became better controlled. I must add here that information available and hospital statistics are beginning to indicate that once again tuberculosis is a re-establishing itself as the prime cause of haemoptysis. The poverty in the country is being translated into a resurgence of an otherwise controlled disease that has been responsive to well tried out drugs. The warning here is that even though Tuberculosis is usually associated with the poor, its dissemination does not spare the rich because it is an air-borne disease.

(ii) **Describing a New Syndrome**

In 1979, I described a new syndrome; what I called “The Encased Spleen Syndrome” a new disease entity, something hitherto known but undescribed.

Many here are familiar with people who claim to have (stomach) peptic ulcers. We are also aware that special diagnostic x-rays taken at the (medically) right time fail to confirm the presence of such ulcers and yet the people continue to suffer the pains of ulcer and take “loads” of antacids and anti-ulcer drugs without earning other than very temporary relief. The hall mark is that such pains are not seasonal unlike what obtains in the classical history of (duodenal) ulcer. These patients fascinated me and through an incidental operative finding and the subsequent removal of a small fibrotic and adherent spleen, the very first patient achieved a cure. I went on to carry out similar surgery in 8 consecutive cases and after some 6 years of detailed study had published in the American Journal of Tropical Medicine (Ofoegbu, 1980). To my greatest surprise the findings were hailed in the world surgical literature; resumes of the article were later published as digests. Unfortuntely, as happens with such events, it has not received the desired publicity in Nigeria. There appears to be less knowledge of it in the country. Probably after our time, further studies as are being carried out in the U.S.A. and Europe on what I christened the “Encased Spleen Syndrome” will further document the syndrome and hopefully change its name to the Benin or Ofoegbu splenic syndrome since I described it here in Benin City. There are many sufferers of this ailment who can be cured using the appropriate operation. Many in desperation have sought remedies from Psychiatrists and native Doctors and Healers especially when available x-ray investigations do not reveal the cause of their illness. The characteristics that differentiate it from the peptic ulcer complex (proper) have been detailed; the diagnosis of the Encased Spleen Syndrome is not by exclusion (Ofoegbu 1979).

(iii) **Characterizing Gastro-oesophageal Reflux in Africans**

In 1978, I advanced reasons to show that sustained heart burn which may give rise to narrowing of the gullet, a term better known as benign peptic stricture has some peculiar characteristics in the African with special reference to Nigerians. It is a well known fact that the condition is associated in Caucasians (the White) with free movement (herniation) of the proximal end of the stomach into the chest (hiatal hernia). Some earlier studies (Bassey et al, 1975) tended to doubt though not unequivocally the occurrence of hital hernia in Nigerians since it was not seen even in those who appeared to have the full blown manifestations associated with the condition. That is, the patients had the symptoms of the disease without radiological evidence of the disease (Figs. V & VI). My finding shows that the Africans who did not have herniation had more severe symptoms and that narrowing of the gullet was more severe in those whose stomachs remained in place. I was able to show that the valve at the cardio-oesophageal junction, that is, at the opening of the gullet into the stomach tended not to work well in those Nigerians who had symptoms with or without part of the stomach pushing itself from the abdomen into the chest (Ofoegbu, 1979). I went on to show that in Nigerians symptoms of heart burn and later difficulty in swallowing were unlike what obtains in Causasians; they are worse in the absence of a herniation (Ofoegbu, 1982 and 1984). I was also able to demonstrate through what I have rechristened as “Sphincter Enhancement” that the condition could be improved by operative surgery just as in the case with herniation (Ofoegbu, 1982). I also modified an old operation which I refashioned and presented to the world after making it more suitable, in my view, for the condition (Ofoegbu, 1981). Thus, in this area of the management of reflux oesophagitis, I made three important contributions.

(a) That the gastro esophageal reflux syndrome which presents with heart burn and difficulty in swallowing is significant in Africans though not as common as in the Caucasians and that it is due mainly to dysfunctional valve system in the absence of hiatal hernia unlike in the Caucasians where it is invariably associated with hiatal herniation.

(b) The terminology “Sphincter enhancement” was popularized to a large extent by me and has been accepted universally as one of the best ways of representing the operations for the condition.

(c) I refashioned the “Composite Operation” for the condition.

(iv) **Understanding Achalasia**

There is another condition which affects the gullet and presents with difficulty in swallowing generally between the age of 2 years and 50 years. Even those who present later are said to have either been born with the disease or have acquired it quite early in life (Fig. VII). Very well tried out operations have been handed down to us by some Great Masters (Heller, 1913, Valdoni, 1949). But we have found that many cases recurred after these famour operations. I studied the situation and in 1983 published my experience in which I showed conclusively that the so-called recurrences were in the main due to bad execution of the operations without due rgard for some necessary anatomopathological considerations. This has remained a classic and very much quoted reference on the proper management of the disease known as Achalasia of the Cardia (Ofoegbu, 1983). I have carried out 135 operations on Achalasia, the largest series in this part of the world, some of these have become graduates of this University.

The very first one is a long distance heavy truck driver who beacons to me from time to time by shouting his name.

I had also shown that Achalasia is not only the second most common cause of inability to swallow in Nigerians but that it manifests in about 30% of cases with swollen cheeks which mimick Mumps but the swellings are painless (Ofoegbu, 1979)

(v) **Fixing the Burst Lung**

While man continued his search for the means of safe operative handling of diseases of the chest, the search was rewarded along the way by certain non operative breakthroughs. There are certain people whose lungs do burst spontaneously through no fault of theirs but as a result of some local deficiency in the consistency and make up of their lungs. These patients suddently find themselves very short of breath for seemingly unexplained reasons. The same condition does occur in some Asthmatics, a situation which makes worse their rather poor respiratory states. The patient may be treated operatively so that the condition is controlled and more importantly, recurrences avoided. But some may not be found fit for the surgery given their poor respiratory reserve and the poor condition of their hearts. Several non-operative methods with some disadvantages and advantages have been devised to treat the ailment. After some experimental work using rats here in Benin City (Courtesy of the Department of Pharmacology, then under Professor Obianwu), I was able to demonstrate in 1980 that olive oil when introduced into the chest cavity does seal off the diseased areas so well that the lung was prevented from bursting again thereby preventing recurrence (Ofoegbu, 1980).

This work which was published in the American Journal of Surgery was also enthusiastically received by Researchers many of whom have since repeated the procedure successfully. These oridinary things may appear easy but once a thing has been accomplished even a fool will see it (Hormer in the Odyssey).

(vi) **Clarifying the Correlation Between the Blood Vessels, Longevity and Sudden Death**

It is perhaps correct to state that God made man to last as long as his arteries are patent. No matter how young or old one might appear one's life span or longevity is determined by the state and condition of the blood vessels. Except for the unexpected interventions and circumstances the natural life rests, as it were, on the blood vessels. Ignorance of this basic fact has, even to this day, led human beings to seek various ways and methods for achieving rejuvenation and more longevity with some success which is limited by the fact that though life could be usefully prolonged, death can neither be cured nor wished away.

It is useful at this point, to recall a few land mark events that influenced the understanding of the importance of blood vessels as the wonder of our being. Alcmaeon of Croton (600 BC) thought that sleep was induced whenever blood "retreated to veins and awakening as its forth pouring" and death ensued when there was total retreat of blood to the veins (Confer Georg Stahl's Anima). Hippocrates (460-377 BC) in his book "De Carnibus" writes about two vessels, an artery and a vein leaving the heart. It was, however, Praxagoraqs (355 BC) who is credited with the first identification of the differences between arteries and veins; however, to him the veins contained blood whereas the arteries contained air or spirit. We of course now know

that both types of blood vessels contain blood, the main difference being the level of oxygen in the particular blood vessel. To the great Egyptian, medical school of the University of Alexandria is credited (in 270 AD) with the first operations on blood vessels even though the Surgeons Herophilos and Erasistratos did not dare to open the arteries for fear of letting out the spirit (air) contained in them. In 391 AD the library of the medical school of Alexandria was burnt and so research and advances in this area of Medicine and Surgery was stalled for over 100 years.

Though Leonardo da Vinci (1452-1519) produced very good drawings and paintings of superfician veins nothing concrete was known about the arteries because they are relatively more deep seated than the veins in the body. Perhaps, the greatest revolution since the systematic study of Medicine came in 1628 when William Harvey presented his paper entitled “Exercitatio anatomica de motu cordis et sanguini in animalibus” which became the foundation of scientific studies of the circulation. Thus, it took some 2,228 years (from Egypt to Harvey) to establish what is now common knowledge that both arteries and veins contain blood and that blood flowed from the heart to the tissues in arteries and returned to the heart through the veins. The (very wrong) notion of air circulating in arteries or evil humour being expressed from ulcers (Henry de Mandeville, 1306) had the definitive execution of their death sentences with the publication of Harvey’s findings in 1628.

The pioneering and daring vascular operations by the Russian Surgeon, Von Eck (1879), the principles of blood vessel anastomosis by Alexis Carrel (1973-1944) who received a Nobel Prize for his work, progress in other areas of Medicine especially Radiology (Roentgen, 1895) and the discovery of Heparin in 1916 have made possible

the various high profile surgical and imaging techniques and procedures which are available today. We can now see arteries as they are and more importantly, we can also see much of the heart as it is without necessarily invading the body.

Several studies and experience have shown that the arteries narrow progressively with age and that since all tissues in the body, no matter how seemingly inert, depend on the adequacy of blood supply, it stands to reason that the performance of the various tissues will dwindle as their blood supply decreases with the reduced caliber of the arteries. The same is true of the heart since it is nourished not by the blood in its chambers but by that in the system of arteries which supplies the heart muscles and related structures. It is through the steady but progressive narrowing of the lumen of the arteries with the attendant reduction in blood flow that Nature controls the life span of the tissues and organs and consequently of the individual. Hence, we are as old as our arteries are. Ageing of the arteries translates into ageing of the individual, notwithstanding external embellishments.

Although the pathway to the vascular narrowing process is by degeneration manifesting as atheroma and arteriosclerosis, it is known that the progress of the process is not the same in the Africans (Blacks) as obtains in Caucasians (Whites) and when present, it is less severe in women.

The arterial narrowing process which has varied presentations. The forgetfulness especially of recent conversations and events seen in the elderly and the sluggish tuition and decernment as well as unreasonable doggedness to one's opinion, even if irrational, are often not peoples dispositions but manifestations of inadequate blood supply (ischaemia) to the brain. The heart may respond by slowing down its rate

(a situation which may be mistaken for epilepsy in the elderly) and may fail entirely and so result in outright sudden death. The latter is particularly important in a country where sudden death even in the most predictable circumstances including excessive physical exercise, child birth and cardiac disease must be imputed to some convenient fractors even if nebulous and unscientific. Expressions like “home trouble”, “the work of the demon”, “na bad wife cause am” are commonly used to explain off such situations.

Some 15 years ago, Dr. Guirguis (an Egyptian lady) and I set out to study the peculiarities of blood vessel narrowing among Nigerians with a view to finding explanations for certain clinical observations. Obviously the study could not be carried out in asymptomatic people even when there was evidence of the narrowing process since the presenting features could be made worse by the method of investigation and study. Using the results of observation on people in whom the narrowing process had become a terminal disease process and also 104 cadaver specimens we have been able to show that the process of ageing of arteries in Nigerians (Blacks) takes the same pattern as occurs in Caucasians (Whites) up to the age of 40 years with the deposition of fat on the inner surface of the blood vessel as the main feature (Ofoegbu & Guirguis, 1985). We also found that thereafter the process slowed down in the black while comparatively it rather accelerated in the white.

Between the age of 40 and 50 years the degenerative process begins to add on more severe changes in both races as evidenced by the increased wear and tear of the inner surface of the blood vessel but this is particularly so in the white race. Hence, age for age, after the age of 50 years the arteries are narrower in whites than in blacks due to a more severe thickening of their inner surface in the white. Theoretically therefore,

the natural life span of the African (as conveyed in this Nigerian study) should be longer than the Caucasians's (White) but the converse is true (as at today) since unfortunately other factors come into play, factors associated with the state of the environment and standard of living including excessive noise levels and stressful incidentals like poor nutrition, unemployment and undue social pressures. During the same studies we found the case of an 18 year old Nigerian girl who died suddently from the complications of very advanced narrowing of the arteries of her heart, a rare event generally; such exceptions are expected.

In a separate study spanning a period of 15 years among non diabetic patients suffering from distal limb ischaemia due to advanced arteriosclerosis (primary reduction of the caliber of the affected vessels) I found that many Nigerians did not associate their symptoms of limping, heaviness and pain in the leg during ambulation and in some cases incessant pain at rest to anything other than rheumatism. Many self medicated themselves and a few talked their Doctors into prescribing antirheumatic drugs for them. Others consulted the Pharmacist (better known in Nigeria as Chemist) who of course armed with the knowledge that there are more drugs available for rheumatism than for any other single ailment, takes the patient through an array of an inexhaustible list, the cost of each determining the patient's choice. Still, some move on to the so-called alternative medicine practitioners who have ready answers for any situation. The various Consultors fail to appreciate a simple fact; since there is a natural delay in the development of the arterial narrowing process in Nigerians, the features of ischaemia that is insufficient circulation of blood tend to coincide (in Nigerians) with the age of peak incidence of osteoarthritis (rheumatism). Again, since many Nigerians do not

smoke (cigarettes), a pleasure which is associated with the aggravation of the ageing of arteries both the Doctor and the patient may be absolved from misdirecting each other.

The well-known and well-founded negative influence of dietary factors especially fatty food and cholesterol rich food have been de-emphasized in this discuss since the multifactorial disease of Arteriosclerosis is not the direct subject of our discussion. Suffice it to state that in spite of the dietry habit of the Caucasian which favours degeneration and early ageing of blood vessels and that of Africans which is regarded as rather indifferent to the promotion of ageing, both racial groups show equal and similar propensity to ageing up to the age of 40 years (Ofoegbu & Guirguis, 1985). The essential of the message is that even though the end stages of degenerative arterial obstruction are relatively uncommon among Nigerians there is however abundant evidence that they do occur; therefore factors like Western style diets and smoking which predispose to the condition should be discouraged.

It is noteworthy that even though these deleterious changes may be slow in their onset and progress, the final outcome may be sudden death or sudden severe life threatening vascular disaster like the loss of a limb or stroke is similar in both races. It is equally important to appreciate that repeated occasional pain in the chest or in the calf and leg may be heralds of impending disastrous situations. This is especially important in Nigeria where among most of the ethnic groups stroke or sudden death is generally imputed, sometimes on oath, to an otherwise innocent person. Evidence will be found in a quarrel or a near disagreement to justify the accusation. This picture (Fig. VIII) is that of a young man of 42 who was seen in the clinic for pain in the left leg during ambulation, otherwise he appeared very well. He collapsed and died in the car park of

the hospital as he was opening his car in preparation for a journey back to Warri in the presence of his friend, some Doctors and Nurses. Post mortem findings confirmed myocardial infarction and narrowing of the two major coronary arteries. What matters is that a woman will always be found to bear the brunt. Some accused will even "confess" (that is, own up) to what they do not know let alone undertand in order that their ordeal may be shortened. Women may console themselves in the fact that even the great Greek Doctor, Asklepios, was killed because his cures had reduced the number of deaths. This angered Hades, the god of the underworld because the good work of Asklepios had reduced the number of his clients. Accordingly, Zeus the father-god sent a thunderbolt which killed Asklepios. So, good and innocent people do also suffer.

(vii) **Identifying Major Obstructive Venous Disease**

In collaboration with some colleagues I also made some significant contributions in the study of acute obstructions of major veins. Deep vein thrombosis is a potentially deadly condition in which blood becomes solid in some veins as a result of sluggish circulation, changes in blood flow pattern, changes in the wall of the affected vessels and changes in the composition of the circulating blood. The situation is seen more frequently in post-operative and long stay cases where mobility is impaired or restricted, in pregnancy and those whose occupation is sedentary or stationary for long hours including frequent long distance economy class air travelers. When more active movements resume some of the solidified blood (thrombus) are dislodged and propelled upwards towards the heart until they block a major vessel in the cardio-pulmonary circulation. The outcome may be catastrophic with death ensuing within 15 to 30 minutes.

It was held, written and taught that such situations were rare if not non existent in Africans (Burkitt, 1972). Since the various predisposing factors are existent, namely, surgery, obesity, known venous diseases and facilitatory occupational factors are not lacking in the African, I decided to investigate the situation further in collaboration with Prof. U. Osime. Using radioactive iodine (1-125) supplied by the Radiochemical Centre, Amersham, England, U.K. with Pitman isotope localization monitor (Fig. IX) in a study of 38 consecutive cases we were able to diagnose deep vein thrombosis in 29% of the cases where clinical diagnosis yielded only 2% (Ofoegbu & Osime, 1981).

We reached the conclusion that not only was deep vein thrombosis not uncommon among Nigerians but the thrombotic stages were missed because attention was focused on clinical and physical signs more so in the absence of diffuse swelling of the affected limb. In addition to proving the fallacy of bed side clinical and physical examination we showed that in at least 43% of cases, the main focus of disease was in the thighs and upwards where it is not usually sought. The condition has ever since become better appreciated diagnosed and treated at the University of Benin Teaching Hospital (U.B.T.H.) but also at other Hospital Centres including private clinics.

Before we go on to the professional extra-ordinary and wonderful things, may I introduce to you my wonderful family to whom this lecture is dedicated.

Dr. (Mrs.) Felicia I. Ofoegbu, M.Ed., Ph.D

Dr. Bibian N. Ofoegbu, MB;BS, MRCP (U.K).

Dr. (Mrs.) Simone C. Ofoegbu-Otoibhi, MB;BS

Dr. Hadrian O. Ofoegbu, MB;BS

Miss Stephany E. Ofoegbu, B.Sc. Accounting

Miss Theresa N. Ofoegbu, Accounting Student

Miss Regina A. Ofoegbu, Computer Engineering Student

Dr. Emmanuel O. Otoibhi, MB;BS, My son-in-law.

I am very grateful for their support, encouragement and dedication even in the face of financial difficulties that are associated with full-time engagement in academic work in Nigeria.

May I at this point also express my sincere gratitude to my colleagues and staff of the Department of Surgery including the period when Ophthalmology was part of the Department. I am grateful for the understanding I have received; special thanks to my Secretary, Mrs M.T. Adejumo, whose output continues to rise inspite of high demands.

2. The Extraordinary Things

The air passages:- The importance of the air passages and the lungs as a system that sustains life has been well known before Modern Medicine expressed the functioning heart in terms of healthy lungs and free air passages. In Book 22 of Homer's Iliad, Hector's death was ascribed to an injury to "the throat where the death of the soul comes most swiftly". Earlier in Book 13, Menelaos after praying to Zeus for inspiration inflicted a mortal blow on Pathos through an injury which "caught him in the pit of the gullet". All these point to the anatomic position of the trachea, the main airway. As we saw earlier, God after creating man as narrated in the story of creation (Genesis 2: 21-23), put Adam to sleep, removed a rib from him in a procedure which we now call thoracotomy with rib resection and then he breathed life into the new creation, the woman. Also, in the Second Book of The Kings, the story is told of how Elisha carrying out what is effectively, mouth to mouth breathing resuscitated the son of the woman of

Shunem and brought him back to life (2 Kings 4:33-35). Somewhere also in the Holy Bible, it is stated that after flesh and all that was necessary had been restored to dry bones, there was no life in them until they were breathed into and given life from the four winds of the earth (Ezekiel 37: 4-10).

This link of the airways to the essence of life made the study of their state difficult since every aspect was almost inextricably tied to superstition and speculations. Although, oxygen was discovered in 1774 by (Joseph Priestly, 1733-1804), the manner by which air was utilized by the body was not appreciated for a long time hence the wrong notion (propagated by Galen) that free air circulated with the blood stood ground for quite a long time. The secrets for advances in Chest Surgery were, as it were, locked up until the physiology of respiration became established through the very notable prioneers like Antoine Lavoisier (1743-1794). J.S. Haldane (1860-1936) and Sharpey-Schafer (1850-1935). Homage is to be paid to the giant pioneers so that whatever may have been the contributions of our generation, it should be appreciated that we, the Cardiothoracic Surgeons of today are standing on the Shoulders of Giants. Some like Lavoisier lost his life as an enemy of the people as the Academics of whom he was one were seen during the French revolution. He was beheaded by the guillotine in 1794 for his academic work and research. In the 100 years (1850-1950), the Secret box of Surgery of the Lungs was unlocked through the efforts of such people who analysed the gaseous content of air and explained the basic principles of tissues respiration. The advent and diagnostic possibilities offered by X-rays (1895), the discovery and categorization of blood groups (Landsteiner 1900 and 1940) which made blood transfusion safer and the introduction of effective antibiotics all combined to raise

Surgery of the Lungs from mysticism and occultism to everyday reality. However, in this area too, we have tended to retain some of the sense of myth as a comfortable protection for any errors which other Surgeons and the people might have otherwise cared to question.

When finally pulmonary diseases became subject to resective surgery, it was found that Tuberculosis offered the greatest challenges but very soon cancer of the lung joined. In Europe, Tuberculosis was responsible for shortening the average life expectancy to less than 30 years and in those who survived it, lung cancer kept the average life span around 45 years. However, in the last 40 years, improved drug treatment for tuberculosis and radiation as well as drug treatment for cancer have not only chaned the indications for Surgery but the frontiers have been extended in their surgical management. My areas of interest include the following:

(i) **The Trapped Lung**

One of the residual effects of tuberculous infection of the (pleural) covering of the lung is the trapping of the lung of the affected side by a fibrous coat which then limits the respiratory motions. It had been assumed that the condition was invariably the result of previous tuberculous infection. We have shown that it is misleading to assume that TRAPPED lungs are necessarily dependent on previous or chronic tuberculosis infection. I have been able to demonstrate that some of what is regarded as trapped lung is really cancer of the covering surface (of the lung) otherwise known as Mesethelioma (Ofoegbu, 1982). This type of cancer which has been associated with asbestos crystals in quarries, industries and building construction work is generally under-diagnosed as a primary disease in our environment. We have shown that

trapped lung should not necessarily be attributed to tuberculosis contrary to what we have been made to believe (Ofoegbu, 1982). This is an opportunity to examine more curiosly the hazards to which we are exposed through the use of ASBESTOS materials in the construction of the buildings. While it is true that living in houses which have pipes, ceilings and roofs made from materials that contain asbestos does not expose one to inhaling asbestos crystals to the same extent as one who works in an asbestos factory, nonetheless the long term effects of using such materials will take some time to ascertain. This is particularly true for those whose work involve cutting asbestos sheets and pipes and those in the immediate surroundings.

It took some 40 years for textile workers in Poland to realize that the high frequency of Cancer of the Urinary Bladder among them was due to long exposure to industrial dyes in their factories. The deleterious effects of the dyes were not seen in the passages or portals through which they entered the body rather the cancer developed in the areas and passages through which the dyes left the body. Similarly, for asbestos the ultimate outcome of exposure may not necessarily be limited as it is now known to the lungs, their covering and the air passages inspite of inhalation being the main mechanism of entry of asbestos crystals into the body. Even though there is satisfactory evidence to show that the asbestos used in Nigeria does not contain much of the lethal type of crystals, nonetheless “how harmful” is measured not necessarily in terms of the quantity of the material concerned but, rather and quite importantly, in terms of the duration of exposure to the substance. Our experience shows that more studies should be carried out not only among those exposed to Asbestos particles but

also among those who are exposed to silica in glass making factories for they have similar problems.

(ii) **Lung Cancer and Pulmonary Resective Surgery**

Cigarette smoking which predisposes to the development of lung cancer is not a prominent habitual practice among Nigerians and so a high incidence of primary cancer of the lung is not expected among Nigerians. However, there are quite a good number of Nigerians who have smoked up to 20 cigarettes and more daily and for more than 20 years. These are susceptible to developing such cancers even if they have stopped smoking. There are also those 5% of the general population who may develop lung cancer even if they have never smoked.

My local Nigerian experience and contribution in this area of high profile surgery has been limited not only by the rather insidious presentation of cancers of the lung generally but also by the very fact of the stance of many Nigerians in the face of severe illness. For a recurring variety of reasons they present late especially when there is no associated haemoptysis or severe pain.

In the past 22 years, we have seen more than 100 cases of what appeared from all indications as Cancer of the lung (Ofoegbu et al, 2000). Of these, 34 were proven scientifically and of these, only 7 benefited from Surgery. The others were seen when the disease had advanced beyond any reasonable surgical consideration. Eght (8) of the 34 were women and on the whole 19 of the 26 men had smoked heavily (Table II). The incidence will increase as smoking becomes more acceptable to the population. Unfortunately, cancer of the lung does not induce externally appreciable distortions of the chest wall and so symptoms of cough, chest pain, breathlessness particularly on

effort and change of voice should be given due evaluation. When the face becomes swollen, the eyes puffed up and red, and visible large veins appear on the anterior aspect of the neck and chest, the world time is coming to pass for the individual, it is then too late to obtain useful treatment.

Consequent on the low incidence of lung cancer pulmonary resection rate is also low when compared with the experience in Europe and North America where the incidence of lung cancer (and cigarette smoking) is high. Table III shows our resection rate for the period July 1976 to December 1996. One will note that for even PTB the resection rate is equally low since it is subject to drug treatment. We are consoled in the fact that all those whom we caught early and operated for lung cancer gained two or three years of useful life, a result which compares favourably with world statistics (Ofoegbu, 2000).

(iii) **Others**

I have also made major contributions in the areas concerned with surgical diseases of the chest wall, soft tissue tumours one of which is the 68th in world literature and in compressive pathologies of the gullet and airways (Actis-Dato, Grande, Ofoegbu et al 1968, Ofoegbu 1981, Ofoegbu 1994). These have been left out for brevity of this presentation not because they lack merit or devoid of cynosure.

3. **The Wonderful Things**

With the conquest of the lung and respiration and further understanding of the heart and circulation, the practice of Anaesthesia was able to make very concrete advances especially with the introduction of drugs that paralysed the body and so

enable the abolition of pain through the controlled depth of sleep. Operations on the heart itself and the gullet that may last several hours then came within pleasing reach.

(i) **The Heart and its Challenges**

That the heart is at the centre of life and that it has been the least understood part of the human body needs little or no introduction. Jeremiah the Prophet did at a point state that the heart is so devious and pervious an organ that no one could pierce its secrets (Jer. 17:9). Perhaps in the tradition of Job (Job 42:2-3) who said "You have told me about great works that I cannot understand, about marvels which are beyond me, of which I know nothing" a highly reputed British Surgeon in his days (Souttar, 1925) did say that Surgery had attained its Zenith and that it was foolish for anyone to contemplate operating further on the heart. He had then in 1925 tried a closed heart valve operation and got no more patients from his colleagues.

Theodore Billroth (1829-1894) the father of gastric surgery and Stephen Paget were reputed to have said that the heart was outside the realm of Surgery and that it was foolhardy to cross that threshold. Billroth is said to have added that whoever operated on the heart would lose the respect of his colleagues; he had thought such operations would result in disasters. He was right because it appeared unthinkable then that the heart could be made to stand still for operations to be carried out since the beating heart is synonymous with active life.

The opinion held sway that the heart was invicible, "vulnerato corde homo vivere non potest". The early operations were carried out in the most difficult conditions: poor understanding of the physiology of the procedures and very poor operating room practice; in some cases, kerosene lanterns supplied the illumination. It is necessary to

recall some of these facts so that our urge for improvisations in the face of all round inadequacies does not glory in the compromise of basic modern surgical principles; we may want to walk the way less traveled but not necessarily barefooted.

The possibilities and frontiers have been so extended and success recorded beyond all expectations that one hundred years since the first heart operation was carried out by Rehn (1896) Surgeons are beginning to dissociate Billroth and Paget from the unscientific statement which was credited to them. For not only are we now able to operate on the heart muscle but we are able to modify, change and replace the various valves, correct several complex abnormalities and also surgically change the direction of blood flow in some of the chambers. We now even arrogantly arrogate the qualification of open heart to those operations in which the heart is opened while circulation is maintained without the action of the heart and ascibe as “closed heart” operations those in which the procedures are carried out while the heart is beating.

A diseased heart may be affected in the following ways:

(a) Congenital Abnormalities intrinsic to the heart and the great vessels;

(b) Diseases of the heart muscle, the valves, the inner walls and the chambers;

(c) Diseases of the pericardium (the housing of the heart);

(d) Disorders of the heart rate and rhythm, and

(e) Diseases of the blood supply of the heart.

Many of these diseases do respond to non surgical (Medical) treatment even if such treatment may last throughout the life time of the individual. This presentation will be confined to those situations in which Surgery is either the definitive treatment or a supportive treatment that renders the prescribed medical treatment more successful.

Focus will be on the areas where we have made some contributions bearing in mind that Cardiac Surgery though not exactly in its infancy in Nigeria, the scope and spread is still much less than what obtained in Europe and America up to about 1960 when Cardiopulmonary Bypass (CPB) became a routine accessory in heart operations. Advances in cardiac surgery are concurrent and are inspired with advances in material technology and instrumentation. Our practice has therefore been confined to those areas where the heart-lung machine (CPB) is not a mandatory assisting device.

(a) **Diseases of the Heart Valves**

In 1978, I carried out the first mitral valvotomy in this part of the world and as a rare event it was widely discussed then in some newspapers. The patient suffered from rheumatic heart disease and ever since a few more cases have been successfully handled. In the absence of the heart-lung machine we have not been able to carry out the more intricate and more complicated valve replacement procedures even though the indications abound since more than 500,000 Nigerians suffer annually from rheumatic heart disease and its complications; among these about 300,000 will need some form of valve correction surgery. That many die not only undiagnosed but unnoticed is a sad story for the Nigerian Health System.

(b) **Disorders of the Pericardium**

The housing of the heart otherwise known as the pericardium may suffer from shrinkage as a result of tuberculosis and other infective processes. In this situation the heart is restricted in its movements and therefore fails to fulfil its pumping functions satisfactorily and in some cases it might fail altogether. Sometimes the carving out of this shell in the process known as Pericardiectomy is harzadous since it is carried out

while the heart is beating. We have carried out several quite successfully and in so doing restored normal function to many hearts.

(c) **Congenital Abnormalities**

There are several and some are compatible with only the first 6 to 24 hours of life (after birth). Some may not also manifest until late in adult age sometimes in the 6th decade of life when a congenital origin might not come readily to mind. Many of these abnormalities concern either abnormal connections or abnormal direction of blood flow in the hart and the great vessels. We have also corrected those that have come our way since most of these abnormalities need CPB for their correction.

(d) **Disorders of Heart Rate and Rhythm**

Patients who have complete heart block present with blackouts, momentary absentmindness and brief fainting episodes all connected with lost heart beats. The situation arises from an interruption of the transmission of electrical impulses generated by the heart. The condition is corrected by the implantation of an external pulse generator which will stimulate the heart at a fixed rate or comes into action spontaneously whenever the natural stimulation fails. We have installed pace-makers and replaced the “batteries” (a requirement every ten years) in 8 patients including one in an 84 year old man. The number who are able to purchase the equipment determine the number done.

The possibilities in heart surgery today are amazing, recent advances have tended to eclipse the fact that all these became possible in less than 50 years. It will be our pleasure to offer our skill to our people and humanity. Due to lack of the proper facilities I believe we have not been able to apply any more than 10% of our cardiac

surgical skills and so other areas have received more attention than would have otherwise been their due.

(e) **The Gullet**

Serious conditions affecting the gullet and which necessitate its complete excision and replacement had been regarded as formidable. The extent of the Surgery is such for both the patient and the Surgeon that the surgical setting has been variously described as the “Ascent of Mount Evarest of Surgery”. We have particularly taken interest in Cancer of the gullet and in extensive strictures due to corrosive (acids and alkali including caustic soda).

(a) Cancer – Cancer of the gullet otherwise known as carcinoma of the oesophagus is not uncommon in this part of Nigeria (Midwestern Nigeria). What is really interesting is its distribution. My casual observation which necessitated detailed research studies has confirmed an interesting distribution of the disease in our area of study, the Midwest (Edo and Delta States). Whereas every ethnic group and Local government area was affected to some extent most of the patients involved were found to be from Delta, in particular Isokos and Urhobos and from Edo Ishans and Binis in particular among those who have lived rather continuously in those areas for up to 20 years (Table IV). We have also had patients from the same areas who have resided in other parts of the country, these were also found to have spent several years previously in the Delta or Edo North areas before moving to their present abodes. The question is, if all are susceptible why are these three groups more susceptible than the others who live in the same environments?

Since certain known preconditions or predisposing factors may favour the development of such cancers, our search led us into considering in detail the diets of the various people as presented in their medical histories voluntarily obtained without any reference or pointer to the particular disease process.

The findings are as follows (Ofoegbu, 1999):

(i) The free use of dry undenatured alcohol drinks and eating of smoked fish was common (although expected) among the patients from the riverine and Delta areas;

(ii) Hot food and meals in terms of their heat and pepper content were conspicuous among the same patients.

(iii) If the medical history were to be relied upon combinations of (i) and (ii) were found to be very facilitatory towards developing the disease;

(iv) The size of the bolus of meal may be contributory in terms of continued local trauma on the mucosa of the oesophagus but this is difficult to prove as what is large or average sized bolus is a most variable.

We have in the last 22 years studied well over one hundred cases before coming up with the conclusions. We are in the process of carrying out more detailed analysis of the types of food that may be involved and the contributory factors in the localities concerned. The study does not dissuade us from the delicary of dried fish; rather it suggests that heavily smoked fish and dry alcohol consumption is not a recommendable diet (Ofoegbu, 1996). Our contributions in the treatment of the condition will be treated along with that for corrosive strictures for this is an area where surgery for the benign fuses with that for the malignant.

(a) Corrosive Strictures – Accidental swallowing of corrosives, namely, acids and caustic soda was mainly for suicidal reasons and the occasional domestic accident but our recent history of economic hardship has extended the range to include hungry young children who accidentally ingest these substances, in particular, the solid form of caustic soda. Only the mothers can tell the tale of some of these children who spend up to 12 months and sometimes more in hospital while the corrective surgery is carried out. This discourse concerns the several children who have had their entire gullet replaced between 1977 and 1999, a procedure which in certain respects may be more extensive than that which is carried out for cancer. For these we use the colon (large bowel) of the individual preferably as a transplant organ to replace the gullet in its entirety from the neck to the stomach. Sometimes the entire stomach is used but such practice is preferably reserved for the more adult patients (the over 18) for various clinical and technical reasons. In the months preparatory to surgery the patient fed directly into the stomach or small intestine through an operative contrivance (Fig. X).

We have in our experience of 57 children aged between 1 and 16 years and in 18 adults aged between 17 and 25 years shown the easy adaptability of the large intestine as transplants for the substitution of the gullet (Ofoegbu, 1998). It is true that the surgery is highly exerting for the patients, surgeons and operating staff. Hence, commonly two teams of Surgeons with full complements of staff carry out a single procedure in order to shorten the operative time to about six to eight hours. When a single team operates as happens in our practice the duration of surgery is on the average 12 hours. In one case the surgery lasted for a total duration of 23 hours at two sittings as a result of the various complications caused by the corrosive liquid, that

patient was then 13; she now works at a General Post Office very well and healthy; she has married and has had three children since the surgery in 1978.

It is also necessary to state that of all the 75 patients so treated two died in hospital; the remaining 73 are in touch with us and are well. Some are now studying in various Universities and some of the smaller ones are in various schools and colleges. The youngest who was operated at the age of 18 months in 1996 is just beginning to take her first steps to the kindergarten. We have since ascended the Mount Everest of Surgery and have safely encamped, as it were, with the children and their parents (Ofoegbu, 1995, 1997, 1998 and 1999). Congratulations to the many little patients who have undergone the ordeal especially the rather intimidating immediate post-operative period on the Intensive Care Unit. In this area our results are as best as the best anywhere in the world.

MATTERS ARISING

Quite a few things have arisen from the discussion. The following areas will be highlighted as being worthy of further examination since the quality of cardiothoracic surgical service offered will depend on how they are handled.

At 40 years from independence the World still refers to us as a Nation with great potentials. When shall these potentials be turned into real constructive energy? Certainly, we cannot develop while sitting on our great potentials. At present we as a people, for example, are like the resident of Forcados who continues to sit on his canoe obvious of the fact that no real progress is made when he converts his canoe to a motor boat by fitting it with an outboard engine. Meanwhile the civilization which

manufactured and sold him the engine has sophisticated battle ships and floating aircraft runways on high seas.

We have seen the place, importance and some of the amazements of Surgery of the Chest. We have also seen some of the contributions which have been made locally, here at home. We have also seen or learnt of the tremendous progress which has been made over time in the more advanced world. We have seen that the progress made in the more civilized world was not hindered by the unwillingness of the people to advance with scientific knowledge or by financial constraints. If anything, progress was slowed down by Doctor colleagues who while the ignorance lasted acted to protect the people from undue experimentation. Let us therefore examine some of the factors that will, if harnessed in good faith, enable us, at least in matters concerned with health care delivery, transform us from a Nation that rests on her great potentials to one burstling with creative and constructive energy with orderly modern developments.

1. Medical Leadership and the Specialist
2. The people and their expectation.
3. The level of technological development
4. Relevant and appropriate funding
5. The activities of regulatory bodies including the catchment (the people served).

1. **Information Disciplined Medical Leadership:**

The Specialist

A disciplined, coherent and continually self assessing leadership is necessary for advancement and improvement in health care. It is said that the Doctor owns his

profession and rents it temporarily on his own terms to the patient. Since he, the Doctor, determines his role including its direction at any given time, then all the more reason why he should ensure that his decisions, within the most reasonable doubts are the best for the patient at the particular time and at his level of competence. Truly, the Physician (Doctor) has been ordained by God to serve humanity. In the book of Sirach (Ecclesiasticus) we read as follows in Chapoter 38 “Treat the Doctor with the honour that is his due in consideration of his services. The Doctor’s learning keeps his head high, and the great regard him with awe”. The Doctor’s leadership role in matters of health is as old as the organized society and this has been recognized by the people. Up to the time of the Reformation (the period in the 16th Century which saw the establishment of Protestant Churches) medical degrees were awarded by the Catholic Church in the presence of (usually) a Bishop or other very high ranking church officials. This was to ensure that the Doctor worked in concert with Church laws and regulations, but above all, to show that his work was ordained by God. There was the Hippocratic Oath to the Civil Authority and the Religious Oath to the Church. What is important is that the professional errors of Doctors were regarded as acts of God.

Hence, deaths from medical errors and other certifiable errors are not to be condoned. Missed diagnosis, failure to treat promptly, the wrong administration of drugs, wrong operations, failure to refer to Doctors of acknowledged higher preparation and better knowledge and taking refuge in the patients ignorance of his rights in matters of health are certifiable errors which call for appropriate sanction in order to get rid of Practitioners of dubious quality. No Doctor should therefore yhield to pressure; matters beyond his avowed level of competence are to be referred to those who are known to

possess the necessary knowledge and skill otherwise known as Specialists. Self conferred or society imposed expertise as commonly obtains in Nigeria do not make up for the lack of a programmed formal system of training and examinations in a Specialty.

The Cardiothoracic Surgeon who is in focus in this discourse offers a good example. After the initial graduation and housemanship it takes another 10 continuous years to train and attain proficiency in the Specialty of Thoracic and Cardiovascular Surgery. Nothing less is expected of the Doctor who will see, handle freely and operate on the heart, lungs and major vessels, the very attributes of life in human understanding. The highest level of competence is therefore expected of this category of Doctors. In the more advanced nations the importance of the service and leadership role of the Thoracic Surgeon is expressed not only in the complexity and length of his training but also in the very favourable differential remuneration accorded him together with modern facilities.

At present there are about six (6) fully accredited Cardiothoracic Surgeons in Nigeria. But, there are many who have preferred to settle in the more advanced countries where remuneration and facilities are by far more attractive. The necessary incentives need to be provided so that more Doctors may be encouraged to take up the Specialty and those away from home may find patriotic reasons to return. At present only very few young Doctors are willing to contemplate embarking on the long training programme which of necessity needs to be completed in different hospitals and institutions with the attendant inconveniences since no particular local institution has all the necessary facilities.

But, first, there must be very much improved basic pay for all Specialists so that whatever extra is allotted to compensate the Cardiothoracic Surgeon and other Superspecialist will not be the source of disagreement or outright envy. There is no justice in recognizing the Specialist (in words at best) only when there is a desperately urgent need for his service.

2. **The People and their Expectation**

To many, the healing of an illness is the most convincing demonstration that the living God is with them and cares for them. The expectation is that illness must be cured as proof of continued association with the goodness of God. Even then, this divine intervention in healing has not been taken for granted and so it has been the humans lot to search unreminttingly for remedies for life threatening and comfort disparaging ailments. The search may involve forays into submission to traditional and spiritual or supernatural elements. Since many of our people see Tradition and Spirits as custodian and vehicles of remedies, it becomes necessary that we have a common understanding of the essentials of tradition and culture.

The terms Culture and Tradition are commonly misused in accordance with the needs of the particular time especially when it is suitable to gain an advantage. Thus, that which is primitive has been retained in that context. Culture and tradition should be understood and so defined that what is primitive or attributable to ignorance may not continue to bedevil us in the name of tradition and so perpetuate ignorance. Culture according to Social Scientists “is a uniquely human attribute, it is the distinctive achievement of a human group including their embodiment in artifacts. Hence, culture is also described as the civilization of ideas, beliefs and practices. It is the human

means of adjusting to nature and utilizing its powers in the service of mankind and so culture reflects the development and interest of the particular society" (Malinovisky 1944, Maquet 1964).

Tradition on the other hand, is that aspect of culture that consists of historically derived and selected ideas and especially their attached values which may include elements that may be conditioned for further action (Tylor 1871, 1958). Therefore, traditions can be improved and changed in order to become part of a culture. The inference is that what is primitive and unacceptable could be part of primitive tradition but when it is refined and improved it becomes part of a civilization and new culture. We must therefore carefully prune away those practices which have remained as a result of ignorance and inadequate education so that we may interprete better the various elements and events that concern our health; conjectures will then give way to scientific reasoning and injurious misapplication of information derived from incogent narratives of experiences by others will give way to enlightened consultations. The prayer houses, herbalist homes and their likes are representations of ignorance in matters concerned with disease processes. Illnesses and diseases may be cured but death cannot be cured hence, it is necessary that we understnand the pathology and natural history of diseases so that we can appreciate better the forces of nature and the very extensive reaches of the human intellect while appreciating the limits of human prowess so that we may not continue to fumble beyond what is reasonable. Further definitions are necessary in the context of the title of this lecture. Tradition may appear straightforward and so are the issues connected with the Doctor, but that which concerns the devil appears to elicit not only curiosity but also some elements of fear as

if the name is not to be mentioned except in connection with what is evil even in humorous situations. In Shakespeare's King Lear, the king speaking to Goneril, was afraid of Darkness which he associated with the presence of the devil and various evils. The same applies to most people in disagreeable and fearful situations. Even when the devil is represented by the female folk, the gentility and motherly charisma which are innate and natural to the woman are denied the woman devil. Francis Thompson, a Victorian verse writer in his contribution entitled "To the dead Cardinal of Westminster", describing the devil and the man who may admire her writes thus:

"The impitiable Daemon,
Beauty to adore and dream on,
To be perpetually
Hers, but she never his?
He reapeth miseries,
Foreknows, His wages woes
He lives detached days,
He serveth not for praise;
For gold, He is not sold

But to the Doctor, the devil may have some good sides which may be found useful to offer some advantages. The Oath of Hippocrates to which all Doctors are sworn derives from Apollo, the god of sunshine, health and music and his supreme physician, Asklepios. But observed the staff of Asklepois, the most prominent element is the snake which connotes all that may be useful in the devil; energy cleverness unpredictability as similar situations may receive different treatments depending on the

environment and taking blame for human errors when such are suitably arranged. It appears that the Doctor taps to advantage some of the angelic qualities of the fallen angel, that is, the sociology of the devil to which references will be made in the proper contexts, the theological opinion on the evil and the supernatural world being outside my competence. However, it is worthy of note that it is on this theological or spiritual aspect that the traditional doctor hinges his practice. Hence, his claim to telepresence, the occult, translocations and diabolisms not of they themselves but of their practice and products. They arrogate to themselves the power or the ability to invoke the power to make the devil carry out their bids, in particular evil instructions, that is like the natural controlling the supernatural. This is an obvious antithesis but in Africa a great many still consult them and expect cures from drugs and medicinals whose active ingredients are unknown to the native doctor but are believed to be programmed by the devil in their action. Hence, one compound in their methods can take care of more than 20 pathologies at the same time.

However, the Nigerian knows what he wants and reaches out for it using the means and processes that will achieve the preset goals. First, the native doctor is consulted not by the sick but by his relatives. He (the native doctor) is reputed to possess the ability to diagnose ailments and initiate treatments from a distance sometimes beyond interstate boundaries without even seeing the patient concerned. When he fails, the devil will need to be appeased. Palliation or acceptance of a failed status is entirely strange to him; rather it is an opportunity to ask for higher favours from the spirit world. Next, the prayer houses become handy since they are known to bind the devil and demons and so put them out of function for an unspecified time. The

question is not asked as to the number of such celestial beings in Nigeria. The number of bindings going on daily and simultaneously in so many churches and gatherings should make one see the inefficacy of the method. When failure is starkly present, recourse is again found in the devil that has done his worst.

At the point when all has failed, the Doctor is consulted with anamnestic anecdotes and not the full story of all that has happened so far. The Doctor in practice is seen as the doorkeeper to the house of the sick where there is little confidence in every act of the personnel who at best are viewed with suspicion especially when there has been no salutatory exchange with financial gratification. So, the Nigerian patient has Tradition, the Devil and the Doctor as alternates for effective health care. To him all are interchangeable and may be consulted within the same framework depending on the social background of the client. Much of this is the result of ignorance but ignorance, it is said, becomes manageable when it is accepted. Unfortunately, the educated Nigerian tends to consult the traditional doctor rather more often than the less educated. The conclusion is that Education does not necessarily rid one of ignorance; only civilization does. More efforts are to be made to civilize our tradition; that is the way forward to scheming out ignorance from our culture, that is the way to meet the expectation of the people.

3. **The Level of Technological Development: Modern Technology in the Service of the Health**

The realities, sometimes marveling, of modern technology abound so much so that computer knowledge and systems are the talk of everyone including small business outfits. However, contemporary up-to-date advances in technology belong to those

countries that appreciate, encourage and fund research together with the related manufacturing outfits. Since we do not belong there at present but to the technology consumer group we can at least fit the proceeds of modern technology into our health services.

Two areas suitable for the application of modern technology immediately come into focus; the preventive and the curative aspects of medicine. Recourse to prevention is effectively limited to areas where the cause of disease is known and where such causes can be controlled, especially where a single factor is involved. These are mostly system based. This is the case, for example, in infective diseases, tuberculosis, smallpox, poliomyelitis and some hereditary states. In this area there is need for up-to-date computerization facilities for the storage, retrieving and generation of data on disease processes and related matters in the population. Ready access to reliable data is foundational to successful planning in health care.

The non-preventable diseases are, in the main, organ based and are multifactorial in their aetiology. Curative Surgery essentially takes on the non-preventable diseases and it is capital intensive, hospital based and its procurement expensive. What is important to appreciate is that the beneficiaries of prevention yesterday are the victims today and tomorrow of the non-preventable ones. Thyphoid may be preventable but thyphoid perforation of the intestines if it occurs will need curative surgery. Undue emphasis on prevention in the absence of abundant portable water supply and in the presence of overt poverty only begs the question. Thus, it becomes unfair that the child who has survived to adulthood thanks to active preventive measures is allowed to succumb later to curable conditions. The necessary facilities

should be put in place to enable the man to survive such conditions at the time (adulthood) when his contributions are most needed in his family and Society; it is the adult who raises the standard of living and the GDP of the nation. While determined efforts should be made in the area of prevention the same must be extended to curative Medicine and Surgery which includes early detection and diagnosis.

At present there is no hospital, teaching or otherwise in the country that is manned and equipped sufficiently to manage comprehensively for example, the Head of State or any Senior Nigerian Citizen in a multi system emergency situation. The necessary manpower is available including here at the University of Benin Teaching Hospital and in at least three other locations but the requisite facilities in good working and functional condition are hard to find. Real emergencies will not give the system the 8 to 16 hours necessary to fly the victim and initiate treatment in the United Kingdom (U.K.), Germany and the United States of America. Those who have been flown abroad successfully are people who would have survived in our system after the successful emergency treatment administered. Subsequently, treatment abroad only assured a more speedy final assessment and recovery. Thus, many Nigerians who ought not to have died, die daily for lack of the necessary facilities to handle their cases even in the presence of the requisite personnel. What is being pointed out here is that Nigerians, all, tend to admire the high level of capitalization and maintenance of health facilities and the discipline in work and service ethics elsewhere abroad but fail to capitalize on opportunities to provide same here at home.

4. **Appropriate Funding**

It follows that Government needs to put in more funds for specific and defined objectives in health care. The amount voted for Health in the Federal Budget has varied from 3.4% to 5.02% in the last 5 years (Table V). Specific budgetary allocations should be made for the improvement of facilities which should in the first instance cover mainly the areas of specialized radiology as well as cardiovascular, respiratory and renal diseases. These are not matters for nominated Centres of Excellence. In the absence of specialized institutes excellence should be left to evolve in the context of the quality of the outputs and the personnel in the institutions.

The Professionals in the areas of priority should be consulted appropriately not as a favour but as an obligation towards a proper identification of the necessity and propriety of the equipments envisaged well before the anticipated expenditure. The practice whereby purchases are made without appropriate consultation with the expert users should be discouraged. What we find generally is either undue delay in supplies (usually by contractors who lack the know-how of what they are supplying) or the supply of badly refurbished or “varnished” obsolete equipments. It is not kept in mind that the same equipment may be called into service most unexpectedly for the management of some highly placed people including the purchasers themselves. Money should not be “made” (gained) at the expense of the sick and the dying; money voted for improved facilities should be so spent for genuine projects especially improvement related ones.

Thus, equipments should be up-to-date, well maintained and in usable conditions at all times to enable easy access to anyone at the time of need. It is illusory to try and make equipments functional only when they are needed to serve the very important citizens; they might fail to the woeful disappointment of all concerned. Since illness is

no respecter of personage, vital equipments should be in readiness for use at all times. The Heads of Hospitals and Medical institutions and infact, any Chief Executive have (for the unselfish nationalist) enough and very satisfactory fringe benefits of office to enable them abstain totally from the financial gymnastics of justifying undue personal expenses and the supply of failed or substandard equipments.

Matters related to the health of the citizens should occupy a more significant part of government's concern. It is true that good roads, abundance of consumable water together with easy access to nourishing food do translate into poverty alleviation measures and therefore impact positively on good health. However, the direct allocation of funds to Health has remained very much below what is needed to achieve even what is reflected in the Government's programme of action. The great Byzantine Emperor Justinia (Flavious, Petrus, Sabbatius Justinianus 482 – 565) in setting up his 12 tables of the basic principles of good governance stated "Salus Populi, Suprema Lex" (the health of the people is the first (supreme) law. That is still true for all nations. The administrators of Health should rise up courageously and demand for more funding by pointing tall to what has been achieved with their previous allocations. It is not acceptable that the Nigerian worker on the honest minimum wage below grade level 14 cannot afford to pay for a first time heart valve or lung resection surgery which on the average cost between eight and twenty-two thousand dollars (repeat operations cost more). It is obvious that a financing system must be put in place to ensure access to such surgery by as many citizens as possible.

5. **The Regulatory Bodies**

The medical regulatory body of Surgery is the Nigerian Medical and Dental Council (MDCN). Others like the Nigerian Medical Association and the various Societies of Surgeons are Associations whose norms and regulations may have restraining influences on their membership but such bodies are not juridical. Although the MDCN sets the standards and ethics of practice, it has no control over the perceived civil awareness of the Surgeon and Doctors within its legal framework, neither does it go out of its way to inform the people of their right to Accountability from the Surgeon or from the Medical Administrators and their Institutions. Mistakes must be made since the only way to avoid mistakes is to do nothing but when they cost life or reduce life expectancy, such mistakes need to be condemned or at least exposed and analysed ciritically. Punitive medico-legal actions may make practitioners hide their mistakes but such events improve their overall awareness in the interest of the population. In the more advanced parts of the world, Surgeons and even Hospitals are being required to provide specific information with regard to the quality and efficiency including the effectiveness of the services rendered. Such postures if devoid of unnecessary exaggerations could result in positive changes and improvements in health care.

Fortunately for Doctors, in the Nigerian setting, relatives may question situations of mismanagement or failed treatment but very few question the circumstances of death particularly when it occurs in hospital except for the purpose of apportioning blame not on medical personnel but on targeted relatives. This situation may wane as people become more aware of their rights with the benefits of the scientific confirmation of the causes of death. That Africans tend to endure largely untenable situations is not peculiar to Nigerians. According to a Liberian Government Minister, (in a recent BBC

interview) the African does invariably look for ways to get used to unacceptable situations. He may not question to find solutions. “A glaring pothole on the road may not be filled; rather ways are devised to circumvent it while it gets larger and deeper”. The same goes for accountability in the handling of health related matters. The people tend to extol the one in authority while at the same time trying to get used to normally intolerable discomforts. The misdeeds may be played down or even encouraged as nothing unusual while in the privacy of our minds vituperous condemnation is meted out. The best regulatory body is the court of the people but when that court fails to perform its function by not speaking out, the Society fails to grow and learn from its mistakes. So, until the people begin to question rationally the activities of Doctors and all concerned with the care of the sick very little improvement will be made. Nigerians should take courage and show more legal consciousness in their clientage with Doctors and medical workers.

REMARKS

In this discussion we have seen how the art and science of Surgery of the chest grew gradually and advanced steadily over time in centuries. The practice has risen far above conjectures, imaginary and visible animations, incantations and claims of the spirit world. The manifestations of cardiothoracic conditions are, in the main outside the chest area, causing visible changes in the head especially the face, neck, the abdomen and the limbs or a general involvement of the person including the psyche. Nowhere is the situation as true as in the chest that pains may be felt but nothing is available, as it were, for the examining hands and fingers to appreciate. Yet, it is still fashionable to see in the year 2000 people who have been treated traditionally by blood letting,

mediated through scarifications, for pains attributed to ailments in intrathoracic location. Blood letting may be prescribed and carried out for a species of cancer of blood in a well reasoned and organized scientific and aseptic manner but certainly not for routine treatment of chest pain.

A young man, a graduate of Nigerian University, had a rib destroying cancer of the lung when we saw him some months after he had been the client of traditional healers. He refused curative surgery and preferred being managed at a prayer house. He has since died. The fight against ignorance in the context of Health is really difficult because everyone is free to take decisions on matters concerning his health in particular where surgical operation is involved. The problem is that the ignorant finds the way to dominate the minds of the so-called englightened through the wrong invocation and recourse to some tradition which at best is part of an ignorant uncivilized culture. In an extensive study of Native African Medicine, George Harley (1970) reminds Africans and the readers that Divinations and Magical treatment should be distinguished from Religion; Medicine obeys natural laws while Religion goes with supernatural laws. The Western World made the distinction more than a century ago, hence their wonderful progress in Medicine and Surgery. They have Education with Civilization, the former may come easy but the latter is acquired more slowly. All of us are snared to our immediate ancestral environment. We pray that we make speed hastily to extricate ourselves. Alexander Pope in his Essay on Criticism (line 215 and 216) states “A little learning is a dangerous thing, Drink deep or taste not the Pierian spring” and further on (line 296) states “They hide with ornaments their want of Arts”. This description aptly fits those in our environment who in ignorance in matters of health

(concerned with Anatomy, Physiology and Pathology) willfully persist in their delusory incompetence through external showmanship, noise and disfigurements with items of various colours akin as we heard earlier to the theatrical movements of Dr. Messmer in purple clothing. The ingenuity of Cross Circulation of Charles Drew by which in 1954 a mother's circulation sustained her child during a heart operation before the advent of the heart lung machine can still be repeated in other areas provided we excommunicate ignorance and those parts of our national orientations that trive on ignorance.

Cardiothoracic Surgery, as practiced today, appears to encompass the climax of the application of the best scientific and technological development and advances as they apply to Medical Practice. Here in Nigeria we are not asking for Computer Enhanced Telemanifestation System of Diagnosis and Monitoring but support for the basics which will be built up and improved upon as the Economy can truly support until we become the manufacturing country of our needs. Up till the early 1990s statistics showed that over 80% of University Departments of Surgery in Europe and America were chaired by Cardiothoracic Surgeons. The situation is not referable just to the esteem of such Surgeons but to the fact that a good cardiothoracic service uplifts and stimulates at the same time many other important and ancillary Departments in the hospital complex; namely Anaesthesia, Cardiology and Care for Stroke Renal service, Radiology, Chemical Pathology, Haematology, Intensive Care and Transplantaqtion Service. True excellence will therefore emerge when the right (Surgeon) Practitioners are given the necessary opportunities to perform their duties to their nation and country irrespective of their creed, associations and places of origin. Progressive ideas have no ethnic or demographic bias.

The Thoracic and Cardiovascular Surgeon as a Doctor may be assisted by Tradition and the Devil when convenient. Of these, the Devil is the least dangerous because he needs to be invited; you offer yourself to enable temptation. Tradition on the other hand, lives with you and so discarding wrong and needless ancestral beliefs, and practices becomes difficult since true to a saying, a person does not suddenly become left handed in his old age. The break through for medical progress will be made not through the importation of automated diagnostic installations but when the Traditional Doctor or Herbalist and the prayerful miracle working churches cease to be seen as alternatives to standard scientific surgical practice. The seed of civilized practice is sewn with education but it needs to be watered by purified tradition and culture and true understanding of religion. Then the alternatives will be reduced to one, the modern Doctor Specialist.

CONCLUSIONS

"Health is Power; Nigeria cannot afford to toy with the health of her citizens" (News Analysis, Radio Nigeria, 4.00p.m. 21st October, 1996). But how much are we doing about our health. The aphorism "health first before any other thing" is on the lips of everyone. Whenever a life threatening situation is brought under control, we usually thank God that life or good health has been spared but what contributions are actually put in place to sustain that good health. What the world's mllion lips are thirsting for must be substantial some where (Foregeal speaking in "The Shaowy Waters" by Yeats). The nation and people must think seriously of making the provision of good health facilities one of the prides of Nigerian Citizenship.

I have tried to show you that the Devil or the Spirit Tradition and the Doctor can exist not as alternatives but the first two as measured integrals in the formation of the third, the Cardiothoracic Surgeon. He is the one Doctor who understands all three. I have also tried to bring home to you through a few historic medical facts that as contained in the advertisement on St. Jude's Medical Prosthetic cardiac valves "the strength of the past gives meaning to the future". Thus, we must as a people draw strength and discernment from our past rather than live in the repetitive recreations of our past. In ancient Egypt he who could not swallow was allowed to die peacefully since their medical knowledge at the time fell short of the capability to reopen or replace the gullet. They consoled themselves in their traditional belief that their Ancestors, that is, the dead, ate very well since on all occasions libation with strong drinks and food sacrifice were offered first to the ancestors and so there was not much regret since what they had missed out during life were given to them in abundance after death. It is however known that the Great Medical School of Alexandria (Egypt) did experiment in the reopening of closed gullets and failed but today from other civilizations the Egyptians like many others have learnt how to cure those who are unable to swallow. They have moved from the speculative and superstitious tradition to modern Surgery. They did not continue to wait for people to be fed as ancestors.

A few years ago I removed one half of the right lung of a fellow country man. He had believed quite strongly what he had been told by divining traditional doctors that his wife had caused that (resected) illness to be harboured within him. I agreed with him when I saw that was the surest way of obtaining his consent for Surgery. On his discharge, I threatened him that being a more powerful Juju, than his native doctor's I

was going to cause the illness to return if he failed to recall his wife whom I had found innocent of any wrong doing. He did but not without offering sacrifices to the Spirit which I had removed from his chest. However, he presented me with the animal (dog) of the sacrifice since according to his native doctor, the surgeons juju was indeed far stronger than the one removed. Little did I know then that his case being the sixth in my experience would be one of the largest series in the world to be referred to severally after my publication of the cases in the Thoracic and Cardiovascular Surgeon (Ofoegbu, 1987). That patient represents the average Nigerian of the 2nd millennium. It is my hope and prayer that the first 100 years of the third millennium sees us really educated with objective scientific reasoning-out of medical situations and their implications.

Truly other nations and people have been through the same road of grisly superstitions, convenient vaticinations and guessestimated therapies but that should not be an excuse for remaining far behind modernity in the logistics of our thoughts. We should begin to question some of what we have inherited. The slogan may no longer be "health for all by year 2000" but "Eye-opening for all by the year 2020" through positive education that will raise everyone above Talismans and similar mimicries of the intellect. We as a people must not continue to defend primitive elements and practices and make them seem die-hard in the guise of coveted tradition. It was Paracelsus the Swiss-German Physician and Philosopher (1493-1541; real name: Phillipus, A.T. Bombastus Von Hohenheim) who advocated that men should research into the workings of nature by themselves. His work changed our understanding and knowledge of the human body in normal functions and in disease from what was the CANON handed down by Hippocrates, Galen and Aicenna, a canon which though wrong in several respects was

regarded as sacrosanctly un questionable and it dominated medical practice for about 500 years. There was therefore no progress (as we have it today) until Paracelsus demolished the myths of the canon while at the University of Basel (Switzerland). In our contemporary time, Mr. Blair, the British Prime Minister, in discussing his forward looking policies stated "with courage we can revere our history without living in it and build a dynamic society" (refer the third Way, 1998). Nigerians, in particular the Educated, should refrain from upholding what is neither proper nor civilized for a people in the 21st Century.

The challenge should be taken up even if it may prove inconvenient in the context of the comforts derived already from the prevailing ignorance of the people. Our cultures and traditions should be opened up for critical scanning since the generality of the people have no hope when the educated stall for "what greater task falls to a man than to help other men with all he knows and has (King Oedipus speaking to the Seer Tiresias in Sophocle's Oedipus Re)". Our people must think and constantly examine things and events around them including the observances and customs which are not rooted in civilization for as Pope, the Poet puts it somewhere.

"Know then thyself, presume not God to scan. The
proper study of mankind is man"

Distinguished Compatriots, Distinguished Guest, the Vice-Chancellor and all Constituents and people of the University system, the French/Algerian Psychiatrist and Sociologist, Frantz Fanon (1925-1961) in his work "the Wretched of the Eart", states that "every generation out of its relative obscurity discovers its mission, fulfils or betrays it". Let us fulfil our mission so that progress in health may be Nigeria's through:

1. Informed Separation and Enlightened Discarding of what is primitive and uncivilized from our Cultures and Traditions.
2. The acceptance of natural and human limitations to indefinite extension of life expectancy, that is, the reality that life has a terminal point for each person. But, unfortunately, the civility of the Nigerian does not, on the average, include principled assertions of ones rights since such efforts are either scuttled or at best misinterpreted to the advantage and protection of the offending might. Even when legal redress is sought the rather cumbersome police and judicial processes tend to discourage the parties from working with the law. Hence, Government should put in place those measures that offer better protection against erring Doctors and related personnel by ensuring that (a) necessary facilities are in place and their spread such that Doctors will be able to do their best with acceptable limitations. Thus, referrals abroad without appropriate local specialist input should be condemned and discouraged. The cost implications to the local economy of such exercises are such that the hope for improvements in local facilities will continue to recede further as the practice continues uncontrolled. (b) no Doctor is allowed to go into private practice either solo or in partnership with others for at least 5 years after qualification and full registration. Letting loose inexperienced hands on ones people is not a noble solution for unemployment.
3. The understanding that medicinal herbs and the concoctions derived from them without the scientific identification of the active ingredients and scientifically scaled doses are as dangerous as their protagonists.

4. Properly planned and compulsory re-education of Herbalists and Patent Medicine Store dealers so that they do not continue to perform their useful duties in ignorance for “even the masterless dog does bay the moon” (the Hebrew in Yeats “Resurrection”). In ignorance one may aim at the impossible and therefore not only achieve nought but become the instrument of untold harm to others.

5. Official and unapologetic discouraging of so-called Alternative (to what) Medicine which is not based on the known tenents of Human Anatomy, Physiology and pathology.

6. Dissemination of the basic fact that surgery sees the innermost parts of the body and that the Cardiothoracic Surgeon in particular being the expert in matters related with the visible wonders of our being should be seen as the embodiment of what is human of the Devil (Sprit), what is best of Tradition and what is best and most up-to-date in the Doctor. They are the only people capable of restructing a congenitally deformed heart and making it work within the normal expectations. They are the only Surgeon and Doctors who not only can give you a new heart but are, by surgical operations, able to improve the blood supply of ailing hearts and bring them to life again. They are the only Doctors who can remove an appreciable length of the intestine, transfer it accurately into the chest and neck of order to replace a sick gullet in its entirely and so restore the pleasure of swallowing. Due recognition should therefore be accorded to such Surgeons as a new tradition.

7. The concept of the Surgical/Medical Specialist and Superspecialist should be encouraged by appropriate training, differential remuneration and necessary recognition and incentives.

8. The establishment of an Institute of Cardiology and Cardiovascular Surgery or a National Heart Hospital to enable co-ordinated research and treatment in heart and lung diseases. The concept, propriety and viability of the project should not be sacrificed to the envisaged contest for its geographic location and directorship.

9. Implementing and condition whereby:

   (i) All children under the age of 16 years will be diagnosed and treated free of charge in hospital including University Teaching Hospitals for any ailments.

   (ii) The poor are treated free of charge when on admission in Hospital.

   (iii) All adults with chronic illness for example, Tuberculosis, Cancers, Diabetes Mellitus, Stroke and other Disabling Complications of Hypertension and, Trauma are to be treated free of charge while on admission in Hospitals.

   (iv) A 5 year programme of first making access to health facilities free for all by the year 2005 and free treatment for all by 2010.

   All these will depend on our ability to manufacture (not only drugs) but about 50% of the consumables used in Hospitals through policies (by Government) that will encourage health related industrialization by the private

sector. Also, free treatment in the context above covers all that is necessary including all drugs not just those available on hand in the Hospital concerned.

10. Ensuring that all those in-charge of the administration of Health and related matters learn that enrichment through any form of willful misappropriation of money and facilities related to the welfare and management of the sick sows unhappiness for as the wise says, “bread is sweet when it is got by fraud but later the mouth is full of grit” (Prov. 20:17, Sir 40: 11-14).

11. Improved Funding: Inadequate funding for Research and Avantguarde diagnostic facilities hinders advancement in medical care. Poor funding equates to Hades, the god of the underwold while the team of crass ignorance and fears of the unknown which are clothed in the guise of the peoples tradition together with those who through ineptitude or wanton greed misappropriate funds meant for the good of the sick kill medical advancement no less than Zeus did when he killed Asklepios for his zeal in the interest of the sick.

A viable health funding system should be put in place with the necessary legislations to ensure that progress made in continuous and not subject to undue and ill advised mutilations by successive governments.

12. That recognition be given to the fact that life is the gift of God and that (using the expression of a Jewish Rabbi), celebrations and festivals are to remind us that life should not be taken for granted (Words of Faith, B.B.C., September, 1995).

13. Supporting Academic (University) Surgery and Excellence in Surgical Scholarship: The work of Academic (or University) Surgeon is often misconstrued or poorly understood in this country. In Nigeria, such Surgeons

come under the aegis of the Nigerian Surgical Research Society of which I was once President whereas in the U.K. and U.S.A. they belong to the Society of University Surgeons. Surgery in University centres and Teaching Hospitals contrary to generally held opinion does not entail experimentations and trial procedures on humans. Departments of Surgery may have divisions of experimental surgery which conceive, engineer and carryout procedures on animals and appropriate models. The benefits derived include better evaluation, assessment and understanding of known and neww procedures, and sometimes novelties in instrumentations and improvements of supporting equipments. Hence, until recent times cost was not a major consideration or hindrance to surgically inclined academic work and research.

The academic Surgeon is expected to be proficient not only in the professional dexterities proper to operative surgery but more importantly in matters related to surgical disease processes, diagnosis and prognosis in the chosen area of specialization. The academic practitioner is therefore expected to be better equipped with more up-to-date information than his traditional Hospital Consultant counterpart since he is expected to write appreciably (apart from teaching) and he who writes successfully may also be credited with consummate reading and learning. The role of the academic Surgeon in research, teaching and practice ought to be better understood and supported for it is this role that confers on the teaching hospitals and related institutes, their primate position as tertiary institutions for ultimate referrals and search for excellence.

It is therefore recommended that Lecturers I, Senior Lecturers and Associate Professor (Readers) in the Faculties of Medicine and related Departments be sponsored for a minimum of three local conference yearly (Associate Professors, two) and every two years for one conference overseas (excluding West Africa). With due humility some of my work have gained international recognition for the University of Benin and Nigeria but unfortunately due to financial constraints I have been unable to seize the opportunities offered by international fora to propagate further such recognitions. It is necessary that a minimum of sponsorships per year become matters of course and routine and not earnings through patronage. The Professor who is in the position to promote his works, thereby propagating the good image of the University and the Country should be sponsored for four local conferences and one overseas (excluding West Africa) every year. The burden of bearing the cost of the sponsorships falls on the Institution and the Government in industrialized countries the medical and pharmeutical industries bear much of such costs and in return pay less taxes. Enabling funds should be budgeted for and provided. We should not pretend to be developed when we are not or count costs to the detriment of real development. We should resist the ever present temptation of comparing ourselves with Government Ministries that have neither teaching nor defined research departments for the production of graduate manpower. The financial resources are available, it is the courage to ask for them that is sometimes lacking.

It is our hope that our modest efforts will be seen in their proper perspective not as agents against tradition but as efforts to discern that which is resting on primitivity and ignorance and so free our people from the oppression of magical, incantational and trial run herbal make-ups. We must not be left behind. The last 100 years (1900– 999) is said to have witnessed and recorded the most astonishing achievements in human endeavour including Technology and Medicine. It is in this generation that man, since creation, has succeeded in opening the chest in comfortable knowledge, an event unthinkable in the previous centuries, an event accomplished only 45 years ago. That is our pride, that is the Magic of the Chest Surgeon.

We, Nigerians, need to awaken our self consciousness and breathe confidence into our persons so that we may become, as we should be by education, new men and new women with cultural openness devoid of the fear of the discarnate including white chalk, red cloth, palm fronts and similar elements. The delusion of a nation with great potentials should not continue. The health care sector could take the lead. Progress should not be represented by short-term commissioning ceremonies of outdated equipments and schemes but through visible commitments in infrastructure to total improvement in the quality of health in the country. Borrowing from the Catholic Hymn 113, Ladies and Gentlemen, my Prayer, my Aim, for Nigerian Health, is a much higher ground than I have found it.

Thank you.

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TABLE I

SIX YEAR DISTRIBUTION OF THE CAUSES OF HAEMOPTYSIS

S/No	DISEASE (CAUSES)	1975	1976	1977	1978	1979	1980	TOTAL	PERCENTAGE (%)
1	BRONCHIECTASIS	6	4	5	5	3	3	26	10.52
2	PNEUMONIA & LUNG ABSCESS	16	12	7	5	3	3	47	19.02
3	CHRONIC P.T.B.	18	21	13	8	7	3	70	28.34
4	MALIGNANT NEOPLASM	2	1	1	-	1	-	4	1.62
5	BRONCHOGENIC CYST	-	-	-	-	1	-	1	0.40
6	CHRONIC BRONCHITIS	-	1	-	1	-	-	2	0.81
7	RETAINED FOREIGN BODY	-	-	-	1	1	-	2	0.81
8	PARAGONIMUS INFECTION	-	-	1	-	-	-	1	0.40
9	RHEUMATOID LUNG	?	-	1	-	-	-	1	0.40
10	HYPERTENSIVE CARDIAC FAILURE	9	6	8	15	16	11	65	26.31
11	MITRAL VALVE DISEASE	22	2	1	2	2	3	12	4.86
12	ACUTE COR PULMONALE	2	4	-	3	1	4	14	5.66
13	RENAL CAUSES	-	1	-	-	-	1	2	0.81
	TOTAL	55	61	43	34	29	25	247	99.96

TABLE II

CANCER OF THE LUNG 1978 – 1999

Number certified scientifically	34
Male	26
Female	8
Heavy Smoking (20 – 30)	19
Moderate Smoking (less 20)	4
Female smokers	None
Male non-smokers	3

TABLE III

PULMONARY RESECTION RATE 1976 – 1996

INDICATIONS	PNEUMONECTOMY	LOBECTOMY	SEGMENTAL RESECTION
Pulmonary Tuberculosis	4	5	-
Primary Carcinoma	3	4	-
Bronchial Harmatoma/Adenoma		3	-
Bronchiectasis		15	8
Bronchogenic Cysts		6	2
Lung Abscess		5	-
Toxoplasmosis		2	-
Trauma		1	-
TOTAL	**7**	**41**	**10**

TABLE IV

DEMOGRAPHIC DETAILS IN CANCER OF THE OESOPHAGUS

GROUP	TOTAL	MALE	FEMALE	NO	MEAN AGE	SMOKER	ALCOHOL	SMOKED FISH	SMOKED MEAT	TOBACCO CHEWING/ SNUFFING	%TOTAL (82)
		NO	MEAN AGE								
BINI	18	11	58	7	60	8(M)	14(3F)	-	-	6(F)	22
ISHAN	15	13	52	2	60	5(M)	6(M)	-	-	-	18
EDO NORTH	4	4	55	-	-	2	2	-	-	-	4
URHOBO	23	19	65	4	57	16(M)	23	-	-	3(F)	28
IBO (DELTA)	3	1	75	2	47	1(M)	2(1F)	-	-	2(F)	4
IJAW (DELTA)	2	2	70	-	-	-	2	-	-	-	2
ITSEKIRI	6	6	59	-	-	4	6(3 BEER)	-	-	-	7
ISOKO	11	9	64	2	68	2(M)	10(1F)	-	-	2(F)	13

CONCLUSIONS

1. ALCOHOL (INCLUDING BEER)
2. SMOKING (FOR MEN) MAJOR PREDISPOSING FACTORS
3. TOBACCO (FOR WOMEN)

TABLE V

BUDGET/ALLOCATION FOR HEALTH

YEAR	₦ (BILLION)	% OF TOTAL
1996	4.838	3.4
1997	7.343	5.02
1998	11.93	4.9
1999	13.75	4.76
2000	16.838	3.04