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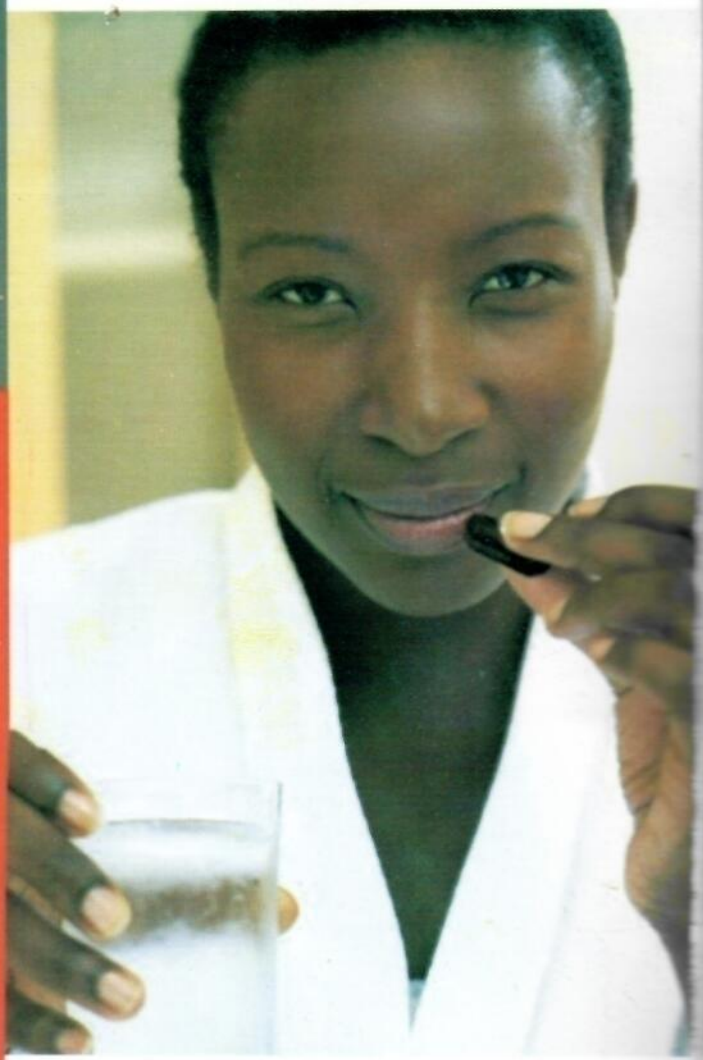

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DOKITA

50TH ANNIVERSARY EDITION

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INSTRUCTIONS TO AUTHORS

GENERAL INFORMATION

DOKITA is a WHO-recognized peer reviewed medical journal by the medical students at the University College Hospital, Ibadan, under the auspices of the **DOKITA** Editorial Board, which is an autonomous organization, composed of bona-fide medical students of the University of Ibadan. **DOKITA** provides a medium for publication of scientific paper written primarily by and for medical students and solicited manuscripts on specific subjects from experts.

Original articles, reviews, case reports and other articles on any subject of medical interest are invited. Manuscripts and other communications should be sent to the Editor-in-Chief, **DOKITA** Editorial Board, Alexander Brown Hall, University College Hospital, Ibadan. Articles are accepted with the understanding that they are offered to this journal only and that articles and reproductions can only be made by permission of the Editorial board unless authors state before publication, that they reserve the right to themselves. Reprints can be purchased at reduced prices if authors would indicate their requirements – a minimum of fifty reprints at the same time of submission of the manuscripts.

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The requirements for submission of articles to **DOKITA** are in accordance with the "Uniform requirements for manuscripts submitted to biomedical journals" (the Vancouver style) as revised and published by the International Committee of Medical and Journal Editors in the British Medical Journal (BMJ 1991:302:338-41). All papers should be submitted in duplicate orginal type script (no carbon copies). Double spacing with ample margins is desired throughout the text except for quotations. The manuscripts should have the following components each of which should begin on a new page in the following sequence;

1. Title page with the full title of the paper and the author's full names and highest academic degrees and departmental institutional affiliations.
2. Running title of no more than 40 characters (letters and spaces included) and the name, address of the author responsible for the correspondence about the manuscript.
3. An abstract/summary of 150-250 words stating the objectives, methods, results and conclusion of the paper.

Below the abstract, list in alphabetical order three to eight key words for cross indexing using terms from the medical subject headings (MeSH) list of index medicus.

4. Text
5. Acknowledgement
6. Reference
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References are numbered consecutively in the order in which they are first mentioned in the text. Arabic numerals in parenthesis are used. Abbreviations for journal titles should be those adopted by the index medicus. "Unpublished observatios" and "personal communications" may not be used as references but may be inserted (in parenthesis) in the text. Papers accepted but not yet published may be cited with the journal designated and "in press" added. Use the style of examples given below. (Note the punctuations and spacing).

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Manuscripts should be accompanied by a 3.5 diskettes of the text in Microsoft Word of not more than 8 pages. The articles can be sent by e-mail to:
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DOKITA

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50th Anniversary Edition

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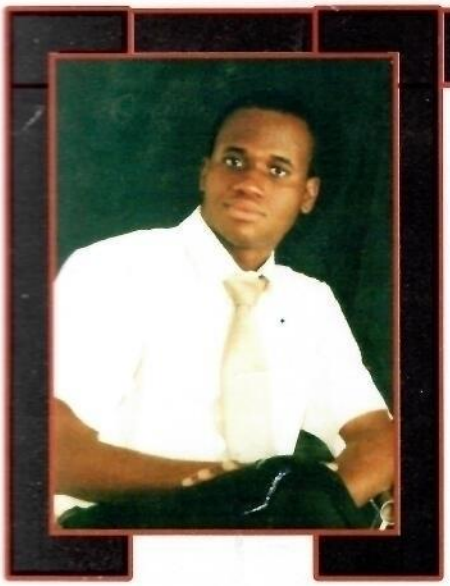


"Whichever be the case, enough does happen in, and emanate from this institution to need that reports be made. for our successors as a record of our findings, progress and ideas and to our contemporaries for record and exchange...for these, we present in the language of the Nigerian populace, **DOKITA**, *that through it, and in it we may arouse, terrify, teach, comfort and open our hearts to each other as brothers"*

Dr Moses Ikechukwu Ilo
First Editor-in-chief,
DOKITA ***Editorial Board***

EDITORIAL

It has been half a century since the first edition of **DOKITA** was published with the aim of showcasing research done in Ibadan by the students and doctors at the University College Hospital, Ibadan.

The years have been gracious to the board, with great strides being made in each board year by the Editorial Board, evident by the increasingly better quality of publications, more interactive and engaging symposia, essay and quiz competitions, and for this we are grateful, to God, to our Editorial consultants, board members both past and present, doctors, medical students and sponsors who have all contributed greatly in ensuring the continuity and development of the board and its primary publication - **DOKITA**.

This year's edition of **DOKITA**, the 50th anniversary edition, is aimed at celebrating 50 years of continued excellence, with articles from various specialties. Of special interest to myself are the articles on the Churg-Strauss syndrome, obstetric analgesia and the role of psychotherapy in the management of cancer to mention a few. In the spirit of the celebrations, a few articles focusing on the board's history and achievements are included, and also the ever refreshingly entertaining **DOKITA** extras.

I am confident that there is something in this edition for everyone, and without much ado, I invite us all to a wonderful read.

Abayomi Oyenuga
Editor-in –Chief
May 2010.

FOREWORD

I am particularly delighted to be asked to write this short piece for **DOKITA**, probably the oldest medical student journal on the African continent (sub-Sahara). Its birth coincides with Nigeria's year of independence and Ibadan, its *fons et origo* was West Africa's first English-speaking medical school at that time. **DOKITA** started with a robust record of impeccable clinical scientific editing skills and has sustained this reputation through the past five decades, thanks to the enduring commitment of its successive Editorial Boards.

One of the highlights of **DOKITA** activities is the *SYMPOSIUM* which takes a topic at a time and "goes to town" on its treatment. These topics are relevant and contemporary, taking on concerns in national health and ultimate care.

Apart from Ten General and Two Recent Advances Editions, issues have ranged around Oncology, Human Reproduction, Maternal & Child Health, Neurosciences, Trauma, Public Health, The Liver, The Kidney, Heart and Lungs, Hypertension and Mental Health. Each is up-to-date, thoroughly researched and proudly adorns the Journals shelf of many medical schools in Africa. I was personally thrilled to see a display of several issues of **DOKITA** at the University of Cape Town Medical School Library whilst on sabbatical there some fifteen years ago.

There are also the National Essay Competition and Biennial National Inter-Medical School Quiz Competition. These are initiatives that project Ibadan as the primus inter pares among the constellation of Medical Schools in Africa.

There are also the National Essay Competition and Biennial National Inter-Medical School Quiz Competition. These are initiative that project Ibadan as the primus inter pares among the constellation of Medical Schools in Africa.

DOKITA's peer-reviewed status continues to enjoy tremendous prestige and all those associated with it feel justly proud of its achievement. I have no doubt that it will continue to fulfill our highest expectations in the coming decades.

Bravo, **DOKITA**

Emeritus Professor O.O. Akinkugbe, *CFR, MD, NNOM*

GOODWILL MESSAGES

Professor A.B.O. Olukayode Oyediran

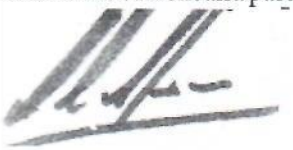
MD, DTM&H, MFCM, FRCP, FRCPE, FMCPH, FWACP, MNIM

It is with great pleasure that I congratulate **DOKITA** most heartily on its golden anniversary.

Since its founding five decades ago, this WHO-recognized journal published by the University of Ibadan Medical Students' Association (UIMSA) has established and sustained very high standards; it has earned recognition and respect within and outside Nigeria. The Editorial Board has also successfully organized symposia, as well as essay and quiz competition.

The College of Medicine is a special jewel of the University of Ibadan. The college enjoys national and international reputation for excellence. **DOKITA** is a feature of that reputation to which it has made sterling contributions.

I salute the current and past members of the **DOKITA** Editorial Board. I pray that **DOKITA** may ever flourish.



A.B.O.O. Oyediran

Professor M.O. Olatawura

MBBS (Ib), DPM (Edinburgh), FNMCPsych, FWACP, FRCPsych

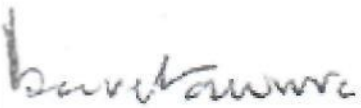
I wish to congratulate the **DOKITA** Editorial Board for the 50th Anniversary Special Edition of this epoch-making academic initiative launched when I was just a year old in my pre-clinical study programme in the then University College, Ibadan.

You can imagine the contents of the initial "magazine" editions, a far cry from the present excellent scientific enquiries and reports we now have in the journal which has gained international academic acceptance into the body of highly regarded academic journals from Africa. Needless to say, this has been made possible by the relentless drive of our students and the support of present and erstwhile teachers.

The flag is already flying. I am confident that the drive of the University of Ibadan Medical Students will lift it to even greater heights.

Congratulations and more grease to the elbows of our achievement-driven students in Ibadan. Keep the flag flying!

Yours sincerely,



Prof. M.O. Olatawura

Professor Adetokunbo O. Lucas *MD, FUI*

Adjunct Professor of International Health

Harvard University

First, I wish to congratulate all who are associated with **DOKITA** on the 50th anniversary of the journal. Over the past five decades, this publication has been a source of information and inspiration to students and staff of the University of Ibadan, College of Medicine. I wish you continuing success.

This occasion stimulates all of us to think about the future of **DOKITA**. There are new developments in health that will engage our interest. One aspect that would make **DOKITA** unique is to include publications that specifically refer to the work that Nigerian scientists and practitioners have contributed to health development. For example, **DOKITA** should perhaps cover the recent news about progress towards the elimination of guineaworm in this country. The publication should recount the contributions that Nigerian scientists like Professor Onabamiro made from 1950 onwards on the intermediate host of the worm. It should also review the national strategy for the elimination of the disease including reference to the work of Professor O.O. Kale, as a leader of the control programme. **DOKITA** should also celebrate alumni of the Ibadan medical school who contributed so much to the clinical study of Ivermectin before it was registered for use. At Tamale hospital, Dr. Kwablah Awadzi, a graduate of Ibadan did the early clinical evaluation; in Nigeria, Professor Nike Abiose did the studies on the effect of the drug on the eye. Nigerian scholars at home and abroad are doing excellent work in various fields of medicine. **DOKITA** should celebrate them. This will be a great source of inspiration for the next generation of scholars and practitioners.

With the very best wishes
Professor Adetokunbo O. Lucas
MD, FUI

Dr. Moses Ilo
"Now thank we all our God"
Set on the way those few years ago, **DOKITA** was nurtured, maintained and grown to become today the clinical journal of repute at home and abroad.
The Board over the years deserve credit and praise. They have it!
Your Board acquits itself commendably by this celebration. I congratulate you and wish it all success!
Finally, I wish **DOKITA** grows from peak to peak (there is always another peak) and that with age your Board in 2060 will commend the then Board and wish **DOKITA** pass on a strong shining torch to posterity.
Best wishes to you and God keep **DOKITA**.

Dr. Moses Ilo
Founder and Editor, DOKITA 1960

CHURG STRAUSS SYNDROME

Professor EEU Akang* *MBBS, FMCPath, FWACP,* Dr. B.F. Adeyemi** *BDS, FWACS, MSc*

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KEYWORDS
Churg-Strauss syndrome, Clinical, Pathogenesis, Treatment

ABSTRACT

The Churg-Strauss syndrome is a rare systemic autoimmune necrotising small vessel vasculitis, associated with asthma, blood and tissue eosinophilia, extravascular necrotising granulomas and focal necrotising glomerulonephritis. The standard criteria for diagnosis include asthma, eosinophilia greater than 10%, paranasal sinusitis, roentgenographic pulmonary infiltrates, vasculitis with extravascular eosinophils and mononeuropathy or polyneuropathy. The Churg-Strauss syndrome is one of three important fibrinoid, necrotising, inflammatory leukocytoclastic vasculitides that are associated with anti-neutrophil cytoplasmic antibodies, the others being Wegener's granulomatosis and microscopic polyangiitis. Implicated pathogenetic factors include eosinophil-mediated tissue injury and autoimmunity. In rare cases, leukotriene receptor antagonists such as montelukast, pranlukast or zafirlukast have precipitated the condition. This review describes the clinical presentation, differential diagnosis, therapy and prognosis of this unusual cosmopolitan disorder. The clinical and morphological diagnosis of the Churg-Strauss syndrome is challenging. The affected organs include the lungs (92%), heart (85%), skin (70%), peripheral nervous system (66%), central nervous system (60%), kidneys (40%), gastrointestinal tract (40%) and musculoskeletal system (20%). A strong clinical index of suspicion coupled with pathological tissue confirmation can expedite the diagnosis. This is especially important since early diagnosis and treatment may significantly improve the outcome of this disease.

INTRODUCTION

The Churg-Strauss syndrome is an autoimmune disorder classically defined by necrotising small vessel vasculitis, extravascular necrotising granulomas involving the upper and lower respiratory tracts, focal necrotising glomerulonephritis and peripheral hypereosinophilia.[1,2] In its full-blown form, the Churg-Strauss syndrome is clinically characterised by asthma, blood and tissue eosinophilia and systemic eosinophilic vasculitis. However, it is becoming increasingly recognised that the Churg-Strauss syndrome has an early prodromal or pre-vasculitic phase, during which, even though there is no vasculitis, there are typical patterns of organ involvement and the condition is amenable to therapy.[3]

It is a relatively rare disorder that is global in its distribution and affects approximately 0.9 to 5.3 individuals per million in the general population.[4]

The syndrome is named after Drs. Jacob Churg and Lotte Strauss, the two pathologists who first documented this condition in 1951, in a review of thirteen post-mortem cases previously diagnosed as polyarteritis nodosa. Churg and Strauss established the existence of a distinctive clinical syndrome of severe asthma, fever and hypereosinophilia, together with systemic vasculitis. They observed that, contrary to what obtained in classical polyarteritis nodosa, these cases were histologically characterised by granulomatous lesions, both within vessel walls and in connective tissue throughout the body. They therefore christened the syndrome "allergic angiitis and allergic granulomatosis".[5,6]

The American College of Rheumatology has proposed a six-point scoring system for the diagnosis of the Churg-Strauss syndrome and by this criterion, the presence of four or more of these six criteria yields a sensitivity of 85% and a specificity of 99.7%. These criteria include asthma, eosinophilia greater than 10% on differential white blood cell count, paranasal sinusitis, non-fixed roentgenographic pulmonary infiltrates, histological proof of vasculitis with extravascular eosinophils and mononeuropathy (including mononeuritis multiplex) or polyneuropathy.[7,8]

AETIOPATHOGENESIS

The Churg-Strauss syndrome is one of three important fibrinoid, necrotising, inflammatory leukocytoclastic vasculitides that are associated with anti-neutrophil cytoplasmic antibodies (ANCA) (namely, Wegener's granulomatosis, microscopic polyangiitis and the Churg-Strauss syndrome).[9] The cause of this allergic angiitis and granulomatosis is unknown and relatively little data are available regarding its pathogenesis.[7,10]

The presence of a marked tissue- and blood-eosinophilia, as well as secretory products of eosinophils in blood and tissues, implicates a pathogenetic role of eosinophil granulocytes. Prolonged survival of eosinophils due to inhibition of CD95-mediated apoptosis by soluble CD95 seems to contribute to eosinophilia in the Churg-Strauss syndrome.[10] On a cellular level, the Churg-Strauss syndrome is characterised by a strong type-2 helper-T-cell (Th2)-mediated immune response. Th2 -associated cytokines such as interleukins 4, 13 and 5 (IL-4, IL-13 and

IL-5) may precipitate the severe eosinophilia in the Churg-Strauss syndrome, while migration of eosinophils to inflammatory sites is possibly mediated by eotaxin-3.[11]

Further evidence of the probable contribution of eosinophils in the pathogenesis of the Churg-Strauss syndrome is provided by the demonstration of major basic protein in tissues, high serum eosinophil cationic protein levels and urinary excretion of eosinophil derived neurotoxin in affected patients.[12]

No data have been reported regarding the role of immune complexes or cell-mediated mechanisms in this disease, although autoimmunity is evident with the presence of hypergammaglobulinaemia, increased levels of immunoglobulin E, rheumatoid factor, and ANCA.[7] The fact that autoantibodies are found in less than half of patients suggests that these cases possibly constitute a subtype of the Churg-Strauss syndrome with different clinical behaviour.[11]

In rare cases, the Churg-Strauss syndrome is associated with the use of leukotriene receptor antagonists such as montelukast, pranlukast or zafirlukast.[13-15] Their role in the pathogenesis of the Churg-Strauss syndrome remains controversial. It is unclear whether the development of the Churg-Strauss syndrome in this subset of patients is a direct drug effect or an unmasking of a pre-existing condition on withdrawal of steroids for asthma. In support of a direct drug effect, many patients who develop the syndrome following leukotriene receptor antagonist therapy do not have a prior history of steroid therapy.[15] Proponents of the steroid hypothesis have postulated that the decreased corticosteroid dosage needed to control asthma symptoms in patients receiving leukotriene receptor antagonists unmasks an underlying latent vasculitis that previously had been controlled by the corticosteroids.[13,14] An additional hypothesis is that blockade of the cysteinyl leukotriene receptors could provoke an imbalance in leukotriene receptor stimulation, leading to an increase in circulating leukotriene B4 (LTB4), which is a potent chemoattractant for neutrophils and eosinophils and could trigger an eosinophilic state, thereby initiating vasculitis. Counter to this last hypothesis, the Churg-Strauss syndrome has also been reported in association with zileuton, an inhibitor of 5-lipoxygenase, which also blocks LTB4, making the LTB4 chemoattractant hypothesis less likely.[15]

CLINICAL AND MORPHOLOGICAL FEATURES

The Churg-Strauss syndrome predominantly affects middle-aged adults, with an age range of 15-70 years and peak in the fourth decade of life.[10,12,13,16] There is no apparent gender of predilection, although a few series have noted a male predominance.[13] Typically, affected patients have a history of asthma that is most often of adult onset. Allergic rhinitis, nasal polyps and sinusitis are common clinical findings.[13]

The majority of patients present with systemic symptoms, including fever and weight loss, at the initial examination. Pulmonary infiltrates, cutaneous lesions and neuropathy are common manifestations, each occurring in two thirds or more of patients.[13]

The lungs are the chief organs involved in patients with Churg-Strauss vasculopathy and they almost invariably develop regions of angiopathy as the disease progresses. In one series, disease involved the lungs in 92%; followed by skin (70%), peripheral nervous system (66%), central nervous system (60%), kidneys (40%), gastrointestinal tract (40%) and musculoskeletal system (20%).[9]

The most common chest radiographic findings include transient patchy alveolar opacities, while diffuse interstitial infiltrates or nodular densities occur infrequently.[13] An erythematous maculopapular eruption, purpura and subcutaneous nodules are the usual skin manifestations, occurring in 70% of patients, while peripheral neuropathy, especially mononeuritis multiplex, is the characteristic neurological finding and occurs in 72% of cases.[4,13] The neuropathy is due to involvement of the vasa nervorum by the vasculitic process.[4] Other common sites of involvement include the gastrointestinal system with abdominal pain, ascites, diarrhoea, or haematochezia; heart with congestive heart failure, cardiomyopathy, acute pericarditis, myocarditis, coronary vasculitis (resulting in ischaemic heart disease) and pericardial effusion; and kidney with focal segmental glomerulonephritis that is generally mild.[4,13]

It has been noted that the clinical presentation of patients with the Churg-Strauss syndrome varies according to ANCA status. Cardiomyopathy is predominant in ANCA-negative patients, whereas necrotising glomerulonephritis is more common in ANCA-positive patients.[17]

There are three phases in the natural history of the disease:[3,13]

1. The pre-vasculitic (early or prodromal) phase

Typically affected patients present first with clinically overt allergic rhinitis (mean age of appearance, 28 years). The rhinitis is often severe and may require several polypectomies to relieve obstruction and sinusitis.

Subsequently, several years after, patients develop asthma that becomes increasingly difficult to control (mean age of appearance, 35 years).

Vasculitis only occurs in fully established cases (mean age of appearance, 38 years).[3] Identification of patients in the early pre-vasculitic phase is important because they appear to respond well to steroids and to have an excellent

prognosis.[3]

The characteristic feature in the early stage of the Churg-Strauss syndrome is extravascular tissue infiltration by eosinophils, which may occur in any organ. This condition is usually under-recognised by pathologists to be a confirmatory diagnostic finding of the Churg-Strauss syndrome. A high index of suspicion on the part of the clinician and the pathologist will increase the diagnostic yield of early-stage Churg-Strauss syndrome, permitting the implementation of appropriate therapy.[3]

2. The vasculitic phase

The classical histological hallmarks of the vasculitic phase are an eosinophil-rich necrotizing vasculitis involving primarily small arteries, arterioles, venules and veins and necrotizing granulomas centred on necrotic eosinophils.[3,9] It must be noted that simultaneous occurrence of all of the classical findings, particularly in small biopsy material and in patients who have often received steroid therapy prior to biopsy is observed in less than 20% of cases.[3] For example, in many instances, the vasculitis of the Churg-Strauss syndrome may be non-necrotising vasculitis. In addition, biopsy or autopsy material from patients treated with steroids, which often totally suppresses eosinophil infiltration, will show a small vessel vasculitis without eosinophils, and clinical information is crucial to the correct diagnosis. A diagnostic finding that may be helpful is that the granulomas in the Churg-Strauss syndrome consist of necrotic eosinophils and Charcot-Leyden crystals, usually with a surrounding palisade of giant cells or epithelioid histiocytes. These were originally referred to by Churg and Strauss as "allergic granulomas".[5] In the granulomas of the Churg-Strauss syndrome, the necrotic material is usually distinctly pink on Haematoxylin and Eosin stains, in contrast to the usual finding in Wegener's granulomatosis, where the necrotic material is derived from neutrophils and is typically haematoxyphilic. This distinction can be diagnostically helpful in equivocal cases. In the original description of Churg and Strauss, the characteristic granulomas were reported in 100% of autopsy cases.[5] However, more recent studies indicate that they are much less frequent, perhaps because the volume of tissue available is much smaller in biopsies, or because they are suppressed by steroid therapy. Granulomas are not required for the diagnosis of the Churg-Strauss syndrome, and the absence of granulomas should not influence the pathologist against the diagnosis.[3]

3. The post-vasculitic phase

In successfully treated patients, the disease enters the post-vasculitic phase. Asthma and allergic rhinitis are still present, but there is no active vasculitis, although persisting neuropathy and hypertension may be seen. Microscopically, the only specific finding is usually the presence of healed vasculitis. This takes the form of thrombosed small vessels. The thrombi are usually well-organized by the time of pathological sampling but can often be distinguished from ordinary thromboemboli by the loss of large portions of the vessel elastica, an uncommon event with ordinary emboli. Eosinophils may not be present if disease has regressed or is being held in check by steroid therapy. In this situation, the meaning of the morphology depends on the clinical history: similar findings could well be seen in treated microscopic polyangiitis and Wegener's granulomatosis.[3]

A high index of suspicion is essential for the diagnosis of the Churg-Strauss syndrome. The diagnosis is established by a combination of clinical and laboratory findings, including tissue biopsy. Diagnostic tissue samples may be obtained via open thoracoscopic lung biopsy, transbronchial lung biopsy and sinus biopsy.[16]

RENAL INVOLVEMENT IN THE CHURG-STRAUSS SYNDROME

The incidence of renal involvement in the Churg-Strauss syndrome has probably been under-estimated in the early literature, partly due to early deaths from cardiac disease in the pre-corticosteroid era, and partly due to the absence of widely accepted diagnostic criteria resulting in many cases with chronic renal disease having been misdiagnosed. Three of the original patients of Churg and Strauss had azotaemia and one died from uraemia. Mild to moderate renal involvement has been documented in 20-84% of cases and renal failure in 9-18%, being second only to cardiac disease as a cause of death.[4]

The presence or absence of azotaemia therefore does not reliably distinguish the Churg-Strauss syndrome from other forms of renal necrotising vasculitis. Renal histology typically reveals necrotising vasculitis, involving arteries of varying sizes, in 10-50% of cases. Unlike what is observed in other necrotising vasculitides, the Churg-Strauss syndrome is characterised by a widespread infiltration of activated eosinophils. As in any necrotising vasculitis, there may be destruction of the internal elastic lamina and aneurysm formation. The more typical histological finding by percutaneous renal biopsy is a focal segmental or a diffuse necrotising glomerulonephritis. This frequently occurs in the setting of an intense eosinophil-rich interstitial infiltrate.[4]

Whereas in the original series of Churg and Strauss, these glomerular changes were noted to be mild and affected only a minority of glomeruli, in another more recent study of thirteen renal biopsy specimens, eleven showed focal glomerulonephritis, with necrotising features present in

eight and crescents in nine.[4]

Interstitial changes usually consist of oedema and a diffuse eosinophilic infiltrate with associated lymphocytes, neutrophils and plasma cells, and sometimes may be associated with only minimal glomerular pathology. Interstitial granulomas, usually with a core of degenerating eosinophils and situated adjacent to a venule, as described in Churg and Strauss' original autopsy series, have since only rarely been described in renal biopsy specimens. Tubular changes are usually mild and non-specific.[4]

Immunofluorescence microscopy has revealed only nonspecific staining in areas of segmental necrosis, while electron microscopy typically reveals the absence of dense deposits. In addition to intrinsic renal disease, renal dysfunction may also result from an obstructive uropathy due to vasculitic involvement of the ureters and the lower genito-urinary tract.[4]

DIFFERENTIAL DIAGNOSIS

The differential diagnosis of the Churg-Strauss syndrome includes two broad categories of clinical conditions:

1. Diseases characterized by tissue eosinophilia

These include asthma; allergic bronchopulmonary aspergillosis; bronchocentric granulomatosis; eosinophil granuloma; parasitic infections (*Strongyloides*, *Ascaris*, *Toxocara*, *Ancyclostoma* and occult filariasis caused by *Wuchereria bancrofti* and *Brugia malayi*); drug reactions (e.g. anti-asthmatic agents, such as beclomethasone, cromolyn sodium; crack-cocaine); hypereosinophilic syndrome; fungal infections; and malignancies such as Hodgkin's lymphoma.[3,9,12] As a caveat, it should be noted that the Churg-Strauss syndrome has been reported in association with parasitic disorders such as ascariasis and trichinosis, giving rise to the suggestion that in many cases, hyper-responsiveness to an antigenic stimulus may contribute to the Churg-Strauss syndrome.[12]

2. Other forms of ANCA-positive small vessel vasculitis

To a certain extent, the separation among the various forms of ANCA-positive vasculitis is not crucial, since treatment is, in broad outline, the same, although many cases of the Churg-Strauss syndrome can be treated with steroids alone, as opposed to microscopic polyangiitis and Wegener's granulomatosis, which usually require both steroids and cyclophosphamide. Table 1 distinguishes between the major categories of ANCA-positive small vessel vasculitides.[3] It should be noted that paediatric cases of the Churg-Strauss syndrome are less likely to be positive for ANCA than adult cases.[16]

LABORATORY FINDINGS

Blood eosinophilia is present in all patients and is usually extremely high, usually greater than 1,000/μL (10^9/L), or 75% of the total peripheral leukocyte count.[12,13]

The clinical value of ANCA testing in the Churg-Strauss syndrome is controversial, since only less than half to two-thirds of patients have a positive test result.[12,13] Twice as many of the positive cases are p-ANCA positive than c-ANCA positive. In most of the p-ANCA positive cases, the antibody is directed against myeloperoxidase (MPO-ANCA).[12]

TREATMENT

Systemic steroids at high doses are the initial mainstay of treatment for the Churg-Strauss syndrome. In cases that fail to respond to steroids or that have life-threatening complications, for example, progressive renal failure, and probably in all cases that have cardiac involvement, or that have complications associated with extensive morbidity such as neuropathy with vasculitis, cyclophosphamide may be added.[3] Early (pre-vasculitic) phase disease appears to respond much more quickly and completely than vasculitic disease. Systemic vasculitides of this type can progress rapidly, and some argue that on this basis, the vasculitic phase should always be treated with both steroids and cyclophosphamide.[3]

PROGNOSIS

The role of serum ANCA in monitoring disease activity is controversial.[3] A significant fraction of patients in the vasculitic phase do not respond to therapy, a point that emphasises the need for accurate and early diagnosis, preferably in the pre-vasculitic phase.[3]

Up to 8.5% of patients may fail to achieve remission, and 26% will have at least one relapse. Cardiac involvement or serious gastrointestinal involvement, such as bowel infarction is particularly associated with mortality. It is of interest that in a large series comparing the Churg-Strauss syndrome and microscopic polyarteritis, both diseases had about the same overall prognosis, although the causes of death were different.[3]

CONCLUSION

The clinical and morphological diagnosis of the Churg-Strauss syndrome is challenging. A strong clinical index of suspicion is important, particularly in patients with adult onset asthma that is difficult to control, coupled with features of multi-systemic disease. This is especially important since early diagnosis and treatment may significantly improve the outcome of this disease.[16] Finally, it is essential for medical practitioners in developing

countries to appreciate the fact that several rare so-called "exotic" disorders, such as the Churg-Strauss syndrome, must be included in the differential diagnosis, where appropriate, even if they are uncommon in the general population.

FINDING	CHURG-STRAUSS SYNDROME	WEGENER'S GRANULOMATOSIS	MICROSCOPIC POLYANGIITIS
1. CLINICAL FEATURES			
Allergic rhinitis	Most cases	Rare	Rare
Asthma	Almost always	Uncommon	Uncommon
Cardiac disease	Common; life-threatening	Uncommon	Uncommon
Renal failure	Uncommon	Common; rapidly progressive	Common; rapidly progressive
Mononeuritis multiplex	Most cases	Occasional	Occasional
Skin lesions	Common	Occasional	Common
2. INVESTIGATION RESULTS			
Eosinophilia	Almost always	Occasional	Unusual
ANCA	=70%; p-ANCA	90%; c-ANCA	80%; p-ANCA
Microscopic findings	Vasculitis with eosinophils Granulomas with eosinophilic necrosis	Vasculitis with neutrophils Granulomas with basophilic necrosis	Vasculitis with neutrophils No granulomas

Table I
Comparison of major diagnostic features of Churg-Strauss syndrome, Wegener's granulomatosis and microscopic polyangiitis
Modified from Churg, 2001[3]

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KNEE PAIN AND OBESITY, RISK FACTORS FOR MOBILITY

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family physicians; knee pain; mobility; obesity; risk factors.

ABSTRACT

Background information: *The family physician comes across a variety of complaints such as knee pain and obesity. The association between knee pain and obesity has been found in so many studies. Knee pain and reduced mobility have a significant negative impact on the quality of life, and because patients are less active than the general population, they are at risk of becoming obese.*

Objective: *To determine the association between knee pain and obesity among women in a Nigerian Out-Patient clinic.*

Methods and Materials: *The study employed a cross-sectional descriptive design. Systematic random sampling technique was used to recruit four hundred women from the General Outpatients' Department (G.O.P.D.) of the University College Hospital (U.C.H.), Ibadan, Nigeria. A pre-tested structured questionnaire was administered by the researcher. Body mass index (BMI) and waist-hip ratio (WHR) were used to define obesity, while knee pain was assessed clinically.*

Results: *The prevalence rate of knee pain was 42.0%, while that of obesity was 41.8%. Knee pain was significantly associated with both BMI (p=0.001) and WHR (p=0.001). Apart from obesity, the prevalence of knee pain was seen to increase with age (p= 0.001). Occupations like trading and catering were also significantly related to the occurrence of knee pain. (p= 0.001). There was a weak positive association between knee pain and age and knee pain and BMI, Cramer's V coefficient=0.386 and 0.349 respectively.*

Conclusion: *There is a clear indication that BMI, and WHR should be calculated routinely for all adult patients who present to the family physician. Those who are obese should be given health education and integrated into a weight reducing programme as a means of preventing health problems related to reduced mobility.*

INTRODUCTION

The family physician has to attend to common complaints which include knee pain and obesity, both of which are risk factors for mobility- the ability to move easily from one place to another; [1] and includes walking and climbing stairs. Knee pain is coded under chapter L component 1 as L15 in the International Classification of Primary Care (ICPC).[2] Knee pain is among the most common chronic medical conditions presenting to physicians in primary care. Musculoskeletal pain of the knee is among the most frequently occurring and debilitating chronic medical conditions affecting the U.S. population.[3] The prevalence of knee pain in Nigeria was estimated at 67% in females and 45% in males, while in another study, the prevalence was 60%.[4,5]

Obesity is a public health problem not only in developed countries, but is rapidly becoming significant in developing countries with globalization and increasing urbanization.[6] It is also important because of its health risks like cerebrovascular accidents, osteoarthritis of the knees, hypertension and gestational diabetes mellitus.[6-13] Obesity is related most strongly to limitations in activities of daily living (ADLs),such as eating, toileting and walking, which are activities related to mobility.[14,15] Body size is likely to be related to functional ability primarily through limitations in mobility, in activities that rely on lower-body strength. High BMI may reflect general inactivity which results in reduced muscle strength.[14] The pain and reduced mobility associated with knee pain have a significant negative impact on the quality of life, and because patients with knee pain are less active than the general population, they are at risk of becoming obese. On the other hand, excess weight may create more wear and tear on the weight bearing joints and lead to knee pain.

Although, the association between knee osteoarthritis and obesity has been found in so many studies, [7, 16-20] as well as the association between knee pain and obesity in developed countries, [3, 21] there is paucity of studies in primary care settings in Nigeria. This study will reveal the scope of knee pain and obesity as problems among women in a Nigerian Out-Patient clinic. This study was carried out to determine if the reported association between knee pain and obesity will be found in this setting and to determine for the first time, the prevalence of knee pain and obesity at the General Out-Patients Department (G.O.P.D.), University College Hospital, Ibadan. The findings will then inform the type of preventive measures to provide for the study population in this setting.

MATERIALS AND METHOD

The study employed a cross-sectional descriptive design. Systematic random sampling technique was used to recruit four hundred women from the General Outpatients' Department (G.O.P.D.) of the University College Hospital (U.C.H.), Ibadan, Nigeria between July, 2004 and November, 2004. From the G.O.P.D. records, 400 females over 18 years of age present to the clinic per month, therefore 1200 female respondents were expected at the sorting hall during the duration of the study. In the sorting hall of the G.O.P.D., the patients are seated in groups based on their sex and age.

Probability sampling was done initially with the simple random sampling technique using the balloting method to select the first respondent, who was the woman with tally number three on the first day of the study. Systematic random sampling technique was then used to select all the other respondents. The sampling interval per day was calculated to be 3, and every third adult female respondent was selected from day to day until the sample size was achieved. The exclusion criteria included women who were too ill to go through the rigours of the study, pregnant, or non-consenting women.

Pre-tested structured questionnaires which sought information on socio-demographic data were administered by the researchers. Body mass index (BMI), defined as weight in kilogramme divided by height in meters squared; and waist-hip ratio (WHR) were used to define obesity, while knee pain was assessed clinically. A value of BMI less than 18.5kg/m^2 was graded as underweight. Normal BMI was graded as 18.5 to 24.9kg/m^2. BMI greater than or equal to 25.0kg/m^2 was overweight. A participant with body mass index of 30.0kg/m^2 or more was classified as obese. Obesity was further classified into three: class I, BMI of 30.0 to 34.9kg\m^2; class II, moderate obesity with a BMI of 35.0-39.9kg/m^2; and class III, extreme or morbid obesity, as BMI greater than or equal to 40kg/m^2.[15] WHR was classified into normal(0.76-0.80), moderate obesity (0.81-0.85); and severe obesity (>0.86).[15]

The questionnaires were face- validated by colleagues, looking for clarity, ambiguity, relevance to the study and appropriateness of the questions. The questionnaire was then translated into Yoruba for the Yoruba-speaking respondents and pre-tested on 17 respondents at St. Mary's Catholic Hospital, Eleta, Ibadan, an Outpatient's clinic in Ibadan. Ethical approval was sought and obtained from the University of Ibadan/ University College Hospital institutional Review board.

Data was entered and analyzed with SPSS version 11. Associations between categorical variables were tested using the chi-square test. Cramer's V coefficient values were used to measure the degree of association between the independent and dependent variables. The level of significance for all statistical tests was set at alpha=0.05.

RESULTS

Four hundred women were recruited into the study. The patients in the study had ages ranging from 18 years and above, with the mean age been 41.0±15.0 years.

Majority of respondents, 223 (55.7%) were traders and married, accounting for 295 (73.8%) of the respondents. Secondary educational qualifications and above were obtained in 214 (54.5%) of the respondents. **One hundred and sixty eight (42.0%) complained of knee pain on direct questioning. This is shown in Figure 1.**One hundred and sixty- seven subjects (41.8%) were obese with eighty eight (22.0%), forty eight (12.0%) and thirty one (7.8%) women classified as obesity Class I, Class II and Class III respectively. This is shown in Figure 2.

The prevalence of knee pain increased as the body mass index also increased. The highest prevalence of 77.4% was obtained in those with class III obesity. There was a significant difference between BMI and the presence of knee pain, p= 0.001. This is depicted in Table 1.There was a significant association between waist-hip ratio and knee pain, p=0.001. This is shown in Table 2.

The age specific prevalence of knee pain increased as the age increased, with the least being 14.3% for age 18 years while age group 60 years and above had the highest prevalence of 70.0%.The older the respondent, the higher the prevalence of knee pain, (p= 0.001). This is shown in Table 3.The occupation- specific prevalence of knee pain was highest among caterers and traders, 62.5% and 51.6% respectively. Students had the least occupation- specific prevalence rate of 19.4%. These differences observed between the different occupations of the respondents and knee pain were significant. (p= 0.001). This is shown in table 4.

The degree of the association between knee pain and age, occupation, BMI and WHR was found using the Cramer's V coefficient. There was a weak positive association between knee pain and age and knee pain and BMI (Cramer's V coefficient=0.386 and 0.349 respectively), while there was little or no association between knee pain and occupation and knee pain and WHR (Cramer's V coefficient=0.248 and 0.198 respectively).

DISCUSSION

The age range of the respondents in this study was 18years and above with a mean age of 41.0 years. Knee pain and obesity are complaints attended to by the family physician, both of which are risk factors for mobility. The prevalence

of knee pain was found to be 42.0% in this study. This is lower than the prevalence of recent knee pain found in a study by Lamb et al which was 53%, and is considerably lower than that found in another previous study.[15,21]

Obesity is rapidly becoming a problem in developing countries with the change in lifestyle to the western type.[6] This problem is observed in this research with the prevalence of obesity shown to be 41.8%. This differs from the cross-sectional telephone survey done in the community in the United States of America, by Mokdad *et al* (2003), who found the prevalence of obesity in 2000 to be 19.8%, and further found in 2001 that it had gone up to 20.9%,[7] though that type of study design has the attendant risk of incomplete data. The prevalence of 41.8% found in the study contrasts with that done in the Gambia, by M.van der Sande et al (2001), who showed that the prevalence of obesity was 4.0%.[22]

In this study, the prevalence of knee pain was found to increase as the body mass index increased. The highest prevalence of knee pain was in class III obesity. This study also showed a weak positive association between knee pain and BMI. These findings are similar to the report by Ojoawo (2002), at O.A.U. Ile-Ife, who showed that 73.53% of adult patients with knee pain were obese using BMI.[18] It also corroborates the study results by Andersen et al who showed that the prevalence of knee pain increased from 12.1% in the underweight to 55.7% in obesity class III.[3] Also in this study, those with higher WHR which is another measure of obesity, had more knee pain. The WHR was significantly related to the occurrence of knee pain, even though little or no association was found between knee pain and WHR. In the study by Ojoawo, it was observed that 91.28% of the total number of patients with knee pain due to osteoarthritis, were severely obese using WHR.[15]

The prevalence of knee pain increases consistently with age, overall, with those above 60 years having the highest prevalence. In this study, more women above 40 years presented with knee pain compared with those below 40 years, while the mean age for women with knee pain was 47.6 years. A study in Ile-Ife, Nigeria, showed that the age group for occurrence of knee pain was between 51 and 60 years.[18] Adelowo (1986). in Ibadan, also found out that the ages of the patients' ranged between 35 to 78 years, the mean being 53.2 $\pm$ 9.0 years, with the mean age for females being 52.3$\pm$ 8.6 years.[4] The disparity in the age may be because other researchers studied arthropathies in general, rather than just knee pain. The research findings also agreed with the report which showed that the prevalence of knee pain increased with age.[3] Clearly, the positive association between knee pain and increasing age has been demonstrated in this study, as with past studies.[7,16,17,21]

The highest prevalence of knee pain was among caterers and traders with prevalence rates of 62.5% and 51.6% respectively. The findings in this study are in keeping with the work done earlier in University College Hospital, Ibadan, Nigeria which showed that most of the patients were petty traders. The explanation for this is that most traders sit on lower stools with their wares placed on higher tables. This position of great flexion causes knee joint instability.[4] It was also shown in the study that more of the traders were obese, and this could have also contributed to their knee pain.

CONCLUSION

This study has shown that the prevalence of knee pain in this setting is high. Knee pain and obesity are inter-related as one predisposes to the other and affect mobility. Age and obesity are also significant risk factors to development of knee pain.

RECOMMENDATIONS

There is a need for calculation of BMI, to be routine for every woman presenting to the out- patients clinic. The BMI could be done while women are waiting for consultation. Counselling can be given to those with BMI more than 30kg\m^2 during this waiting period. The WHR is a parameter that also needs to be assessed in patients in the clinic by measuring the waist and hip circumference. Patients that present with knee pain should also be assessed with the WHR, so it can be used for preventive and monitoring purposes. Support groups for weight reduction should also be instituted and be headed by a person who has achieved weight reduction and maintained this. Further studies in the community and multi-centre-based hospital studies of knee pain and obesity should be performed. Studies to determine factors which influence the prevalence of knee pain in some occupations such as traders and caterers also need to be done.

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Figure 1: Prevalence of knee pain among the respondents

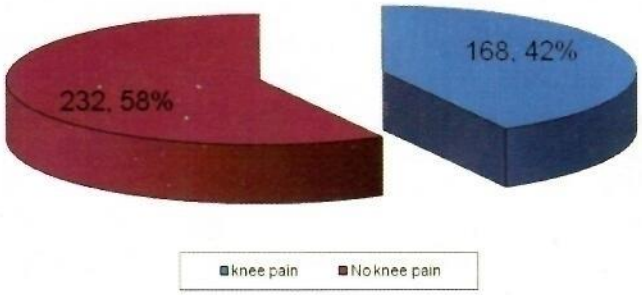

Figure 2: Classification of obesity by body mass index of the respondents

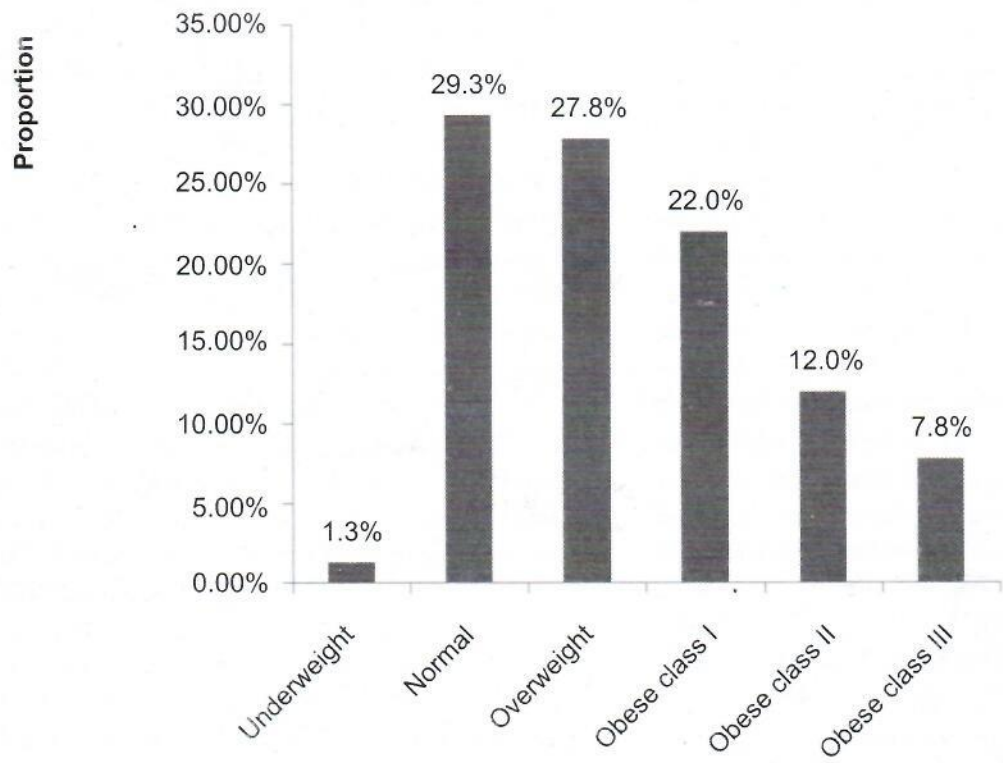

Table 1: Association between knee pain and body mass index (BMI).

Body Mass Index (BMI)	*No knee pain*		*Knee pain*		*Total*	
	n (%)=232		*n (%)=168*		*N (%)=400*	
Underweight (<18.5kg/m^2)	4	80.0	1	20.0	5	100.0
Normal (18.5-24.9kg/m^2)	88	75.2	29	24.8	117	100.0
Overweight (>25.0-29.9kg/m^2)	75	67.6	36	32.4	111	100.0
Obese Class I (≥30.0-34.9kg/m^2)	41	56.6	47	53.4	88	100.0
Obese Class II (35.0-39.9kg/m^2)	17	35.4	31	64.6	48	100.0
Obese Class III (≥ 40.0kg/m^2)	7	22.6	24	77.4	31	100.0

Chi^2 test = 50.11 (Yates corrected) df =5 p= 0.001

Cramer's V coefficient =0.349

Table 2: Association between knee pain and waist-hip ratio.

Waist-Hip Ratio	*No knee pain* n (%)=232		*Knee pain* n (%)=168		*Total* N(%)=400	
Normal (<0.81)	122	73.1	45	26.9	167	100.0
Obese (0.81->0.86)	110	47.2	123	52.8	233	100.0

Chi ^{2}test = 70.47 df=1 p= 0.001
Cramer's V coefficient =0.198

Table 3: Association between age and knee pain.

Age(years)	*No knee pain* n (%)=232		*Knee pain* n(%)=168		*Total* N(%)=400	
18-29	90	85.7	15	14.3	105	100.0
39-39	56	62.9	33	37.1	89	100.0
40-49	42	48.3	45	51.7	87	100.0
50-59	26	44.1	33	55.9	59	100.0
60+	18	30.0	42	70.0	60	100.0

Chi^2 test = 61.433 df =5 p = 0.001

Cramer's V coefficient =0.386

Table 4: Association between occupation and knee pain.

Occupation	*No knee pain*		*Knee pain*		*Total*	
	n (%)=232		*n(%)=168*		*N(%)=400*	
Traders	108	48.4	115	51.6	223	100.0
Civil	18	64.3	12	42.9	28	100.0
Servants						
Caterers	3	37.5	5	62.5	8	100.0
Farmers	4	80	1	20.0	5	100.0
Students	50	80.6	12	19.4	62	100.0
House wives	10	55.6	8	44.4	18	100.0
Artisan	14	63.6	8	36.4	22	100.0
Others	25	73.5	9	26.5	34	100.0

Chi^2 test =23.318 (Yates corrected) df =4 p = 0.001
Cramer's V co efficient=0.250

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AN OVERVIEW OF THE NATIONAL HEALTH INSURANCE SCHEME IN NIGERIA

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ABSTRACT

The objectives of the NHIS from its outset were to ensure equitable and universal access to quality health care and to ensure efficient and effective health care delivery in both public and private sectors. This review aimed to assesses progress towards the NHIS objectives by reviewing health policy documents from the Federal Ministry of Health, NHIS records and other online databases. In-depth interview of NHIS staff was also conducted. After five years of operation, the NHIS contributes only 2% of healthcare financing in Nigeria. At present, only formal sector employees of the Federal Government and those of two states (Bauchi and Cross River States) in Nigeria have enrolled their work-force into the NHIS. Issues on the coverage, management capacity, administrative efficiency and governance and also the limitation of benefit packages are major areas of concern which were identified with the current implementation of NHIS in Nigeria. Recommendations for making the NHIS a credible system of access to quality healthcare services are proposed.

INTRODUCTION

In response to the general outcry on the poor state of health care services nation-wide and the dwindling financial resources and rising poverty levels, the Federal Government of Nigeria launched the National Health Insurance Scheme (NHIS) on June 6, 2005 following the enabling law Decree 35 of 1999 (now Act 35 of 1999). This was 43 years after the concept of Social Health Insurance was first proposed and truncated as the result of the dependence on the "free health care" funded by the earnings from oil exports. However with the global slump in oil prices in the 1980s and the increasing population it became obvious that the government could no longer afford to provide free health, and subsequently several cost recovery mechanisms like user charges and drug revolving funds were introduced. However the deteriorating health indices and the widening inequalities in health care access by the poor necessitated a health sector reform leading to the birth of the NHIS.

The concept of a National Health Insurance Scheme (NHIS)

Social health insurance (SHI) is one of many ways of paying for health care. SHI can trace its roots back to mutual aid societies that existed centuries ago, one of the first countries to institute SHI nationally was Germany, in 1883. Now there are national SHI schemes around the world, some have been in operation for more than half a century. They exist predominantly in Europe (e.g., France, the Netherlands, and Hungary), Latin America (e.g., Mexico, Argentina, and Brazil) and East Asia (e.g., Taiwan, South Korea, the Philippines). A number of governments are also instituting SHI schemes in Africa.

SHI is prospective financing. This means that funds are collected in advance, mainly in the form of regular contributions (or premiums), without knowing when or for whom they will be needed. These contributions may come from the insured persons, employers, government, households, etc. In some countries, SHI is universal, i.e. every household is covered, and so every citizen must make contributions, although government may do so for the poorest and the unemployed. In other countries, only parts of the population are covered (e.g. formal sector workers may be compulsorily covered).

METHODS

An extensive review of health policy documents of the Federal Ministry of Health, NHIS records and other relevant online databases was conducted. In addition, a key informant interview with the NHIS Coordinator of the Southwest Zonal Office, Ibadan was carried out. Information obtained include history, structural framework, current status of NHIS and challenges militating against successful implementation.

HEALTH CARE FUNDING IN NIGERIA

Health care funding in Nigeria is derived from a variety of sources including budgetary allocations from Government at all levels (federal, states and local), loans and grants, private sector contributions and out of pocket expenses. From recent studies by the National Health Accounts survey of health expenditures in Nigeria for the period 2003-2005, the total health expenditure (THE) amounted to an annual average of N809 billion, representing about 9.6% of the

gross domestic product on the average. The "THE" increased by 19.2% in 2004 and by 23.8% in 2005 to N976.69billion.

The private sector dominates in health financing in the country, with the households accounting for 69% of the THE, while the government (federal, state, and LGAs) only accounted for 24%. The federal government contributes 12%, while the state and the LGAs contribute 8% and 4%, respectively. The remaining 3% and 4% are contributed by private firms and donors, respectively. Only about 2.3% of THE is from the health insurance plans.

The health expenditure in Nigeria is thus characterised by inequality, with the household heavily burdened, accounting for more than two-third of the THE.

STRUCTURAL FRAMEWORK OF THE NHIS

The Decree that established the NHIS states that the NHIS is for the purpose of providing health insurance which shall entitle insured persons and their dependants the benefit of prescribed good quality and cost effective health services. The objectives of the NHIS were thus to ensure equitable and universal access to quality health care and to ensure efficient and effective health care delivery in both public and private sectors.

The NHIS decree statutorily allows each insured person to decide which health centre he wishes to register with. A monthly capitation is paid to the health centre from the pooled funds. Health Maintenance Organizations (HMOs) are empowered to coordinate the activities of the health centres as they dispense healthcare to the insured while the over-all regulation of the scheme rests with the National Health Insurance Scheme Council.

The Nigerian National Health Insurance (NHI) is a single social health insurance scheme which has different categories (formal, informal and the exemption) groups. It utilises the services of HMOs as health managers, for collecting revenues and distributing health services. Contributions to the Scheme are made by members as premium through the HMOs, according to their different categories. Members are entitled to obtain health benefits from any health care provider irrespective of location upon provision of an adequate identification; however users cannot change health care provider of choice until after six months. All resources collected by the HMOs are pooled together to the NHIS, which regulates activities of the HMOs and disburses compensation to health providers through the HMOs. NHIS is managed by a Governing Council, which ensures effective implementation of the policy and procedures of the Scheme.

Classification of the programme

Various programmes were planned by the NHIS to ensure that every Nigerian has access to health care when needed. However these programmes are being implemented in phases.

- **Formal sector programme:** this includes the public sector (federal, state and local government staff), the armed forces, organized private sector and students of tertiary institutions and voluntary participants. It is to be mandatory for any organisation with 10 or more employees
- **Informal sector:** includes rural communities and urban self- employed.
- **Vulnerable groups:** disabled, aged, children under five and prison inmates.
- **Others:** diaspora family and friends, international travel health insurance, pregnant women, orphans, retirees and unemployed.

THE PARTIES IN THE NHIS

·The regulator (NHIS Scheme Council)

·The health management organization (HMO)

·The health care provider (HCP)

·The payers

·The users

Roles of NHIS parties

The NHIS council registers HMOs and HCP, sets operating standards and ensures compliance with the standards. The HMOs register users and collects their contributions. They also register health care providers, after ensuring that they meet minimum NHIS standards. They ensure provision of qualitative and cost effective health care services to contributors through Health Care Providers (HCPs) and adherence to referral procedures. The HMO is also responsible for the payment of capitation fees and fee-for-service to HCPs, render returns to NHIS, maintain ethical marketing strategies and other effective quality assurance systems. The users pay a monthly premium based on

5% of their basic salary; this is matched with 10% of the employee's basic salary by the employer.

HEALTH CARE BENEFITS TO BE PROVIDED ON THE NHIS

The following benefits are standard components of coverage: out-patient diagnostic and treatment services, short-term rehabilitation including detoxification and treatment of substance abuse, immunisation services, family planning, ante-natal and post-natal care. Others include eye examination, consultation with specialists, admission in a standard ward for a stated period and treatment of emergencies in and out of the HMO service area.

CURRENT STATUS OF NHIS

Coverage:

The implementation of the NHIS was proposed to be in phases. At present, only formal sector employees of the Federal government and those of two states (Bauchi and Cross River States) in Nigeria have enrolled their work-force into the NHIS. Although the following states have also agreed to partner with NHIS; Akwa Ibom, Rivers, Edo, Delta, Bayelsa, Lagos, Kwara, Niger, Yobe, Taraba, Adamawa, Kaduna, Zamafara, Kebbi, Sokoto, Katsina, Nassarawa, Anambra, Jigawa, Imo and Kogi. This development has brought to 25 the number of states that have embraced the programme across the country as Cross River, Bauchi, Ekiti and Ogun States had earlier embraced it and are already at various stages of compliance with the scheme. The organized private sector employees are partially covered, of which only bank employees have been fully covered.

A pilot programme on maternal and child health coverage is on-going in six states of the federation (Bayelsa, Gombe, Imo, Niger, Oyo and Sokoto) targeted at improving the worsening maternal and child health indicators of Nigeria. Tertiary institutions and rural community social health insurance programme is to be commenced in 2010 with the aim of achieving 40% coverage by 2013 and universal coverage by 2015. Participation however still remains optional for the informal sector. Although some HMOs have tried to incorporate community based programmes, generally the models being adopted are not sustainable as they are usually tied to donor funds. For example "The Shonga Model" which operated for one year at Shonga and neighbouring communities in Kwara State, and among lady mechanics and market women in Lagos State.

Financing:

National health accounts 2010 showed that NHIS contributes only 2% of healthcare financing in Nigeria. Although it was stipulated that 15% of basic salary of employees is required to fund the formal sector programme; only 10% is however presently available to the scheme from the Federal Government, leaving a shortfall of 5%.

Benefit package:

The benefit package excludes occupational injuries, transplants, corrective surgeries and infertility management. Services are largely curative with minimal preventive component.

HMO/HCP

Less than half, 27 of the 61 accredited health maintenance organizations have enrolees. With only 3,012 accredited primary care providers, it implies that there is one provider per 50,000 population and these are unevenly distributed as shown in Table 1 – 1,195 for Lagos State and 23 for Jigawa State. Only 816 of the 3,012 accredited HCPs have up to 500 registered users. Currently there is a freeze in registration of new HCPs and HMOs until the viability of existing ones are ascertained.

ROLE DEFINITION

Governments are still setting up committees to define standards, qualities and roles of professionals in running the scheme. Key professional groups, in particular the doctors, pharmacists and laboratory technologists are still quarrelling over their roles in the scheme and payments for services. As such the majority of the Nigerian populace still do not have access to organised healthcare delivery.

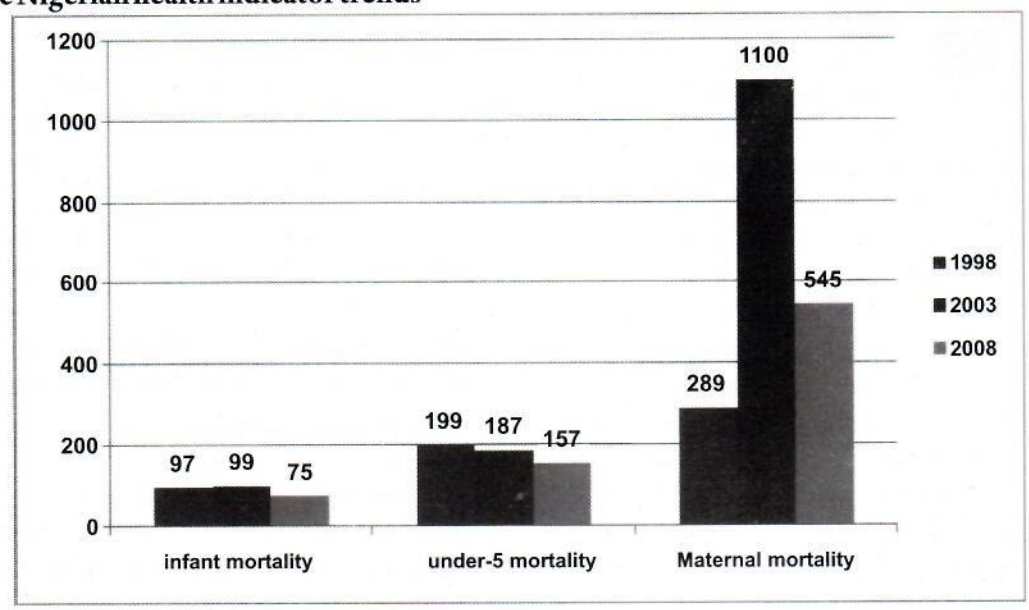
HEALTH INDICATORS

The national health statistics have remained quite abysmal with life expectancy at birth at an all time low of 43 years. Maternal and child health indicators are not in line to meet the millennium development target as maternal mortality, infant mortality and under-five mortality rates have shown no appreciable decline (see figure 1). The latest Human Development Report in 2008 placed Nigeria 158th among 177 nations. Further, 33% of Nigerians (i.e. 46 million Nigerians) have no access at all to any form of organised modern healthcare service. Of the remaining, only1.8 million can readily access some limited care through the NHIS.

Table 1: Distribution of health care providers in the country

STATE	NO. OF HCPS	STATE	NO. OF HCPS
Abia	144	Kano	134
Adamawa	115	Katsina	54
Akwa Ibom	79	Kebbi	36
Anambra	167	Kogi	70
Bauchi	39	Kwara	161
Benue	107	Lagos	1195
Borno	132	Niger	155
Bayelsa	64	Nasarawa	85
Cross River	122	Ogun	128
Delta	148	Ondo	99
Ebonyi	49	Osun	87
Edo	206	Oyo	344
Ekiti	44	Plateau	138
Enugu	190	Rivers	370
F.C.T	552	Sokoto	40
Gombe	56	Taraba	38
Imo	147	Yobe	38
Jigawa	23	Zamfara	27
Kaduna	281		

Figure 1: The Nigerian health indicator trends



Infant and under 5 mortality measured per 1000, maternal mortality ratio measured per 100,000

SWOT ANALYSIS

Strengths:

Government is committed to the success of the NHIS, and has made some provision for its success both in legislation and financing. The scheme also enjoys technical support from the Ministry of health, and National planning commission and by creating a regulatory body.

Weakness:

Although the scheme has finally taken off, it is obvious that the poor and vulnerable population are still excluded, with the rural dwellers as the major victims of the inequality in health care access. Other marginalised groups include retired senior citizens and those in the informal sectors. This implies that high out-of-pocket payments are still a common occurrence. This implies that the poor people may be unable to pay for their health care or will be impoverished as a result of trying. For instance, the International Labour Organisation has reported that every year 100 million people globally are forced into poverty by health care expenses. Out of pocket payments may also lead to catastrophic health spending (> 40% of a household's income) and further impoverish the people. As such health policy reforms that separate healthcare utilization from direct payment for services are essential if the poor are to have access to health services. Some studies have argued that users may prefer out of pocket payments, for instance a study in eastern Nigeria reported that about 57.1% of participants supported user fees if they are affordable and would guarantee efficient and good quality service; similar findings have been reported in Singapore. However, the greater percentage of those who cannot afford direct payment for services are those who are uneducated, unemployed and the aged who at present are also not covered by the NHIS. It therefore means there is need for a mechanism that will provide some concessions such as appropriate systems of waivers and exemptions to these categories of individuals, so that no one is denied access to basic health care until coverage of NHIS is expanded. For example since the year 2000 the Rivers State Government has been running a programme that reimbursed hospitals that provided medical treatment for certain groups of persons who ordinarily cannot afford to fully pay for the cost of healthcare.

Opportunities:

Though the contribution of health insurance to health care financing is still low, studies have shown that it has a high potential of making impact. This might be realized if the coverage of the NHIS is extended and made inclusive by extending it to the informal sector. The World Health Organisation Macroeconomics Commission in 2000 stressed that extending the coverage of health services and a small number of critical interventions to the world's poor could save millions of lives, reduce poverty, spur economic development and promote global security. It argued that increased resources for health and a pro-poor focus could save eight million lives a year by 2010 at a cost of US$27 billion a year and that the resulting increased productivity would yield US$186 billion a year. Fortunately, the NHIS has developed early in 2009, the blueprint for implementing the Community-based Social Health Insurance Programme (CBSHIP) in the informal sector. One of the primary objectives of managed care is to increase the role of the private sector in the provision of health care services to groups who are willing and able to pay the full costs of health care, capitalizing on public/private partnerships. This kid of model has been utilised to provide better health care provision in Singapore by transferring a substantial portion of the health care burden to the private sector. The government's share of total health care expenditure contracted from 50% in 1965 to 25% in 2000. The majority of Singaporeans are content to pay part of their medical expenses, plus additional money if access to needed care for the poor is explicitly guaranteed. Mechanisms also exist to protect against financial impoverishment resulting from catastrophic illness.

Threats:

A major obstacle militating against the effectiveness of the NHIS is the problem resulting from organisational factors. Such organizational problems range from the healthcare provider who does not make essential medicines available or provides poor quality service to the HMO who deliberately delays/withholds capitation. Many of the consumers grapple with the bottlenecks associated with accessing healthcare under such an administratively cumbersome scheme.

The financial feasibility of the NHIS has also been questioned. There has only been modest economic growth in the recent past with growing poverty levels. Financial constraints exist in the public sector compounded by the pervasive corruption such that there is often a huge gap between the budgeted funds and the funds actually released for health care financing in the country. There is a need therefore to ensure the adequacy and continuity of resources for the NHIS.

Some technical issues have also arisen. For instance, several studies have shown that the perceived poor service quality in some public health facilities is a barrier to utilization and this may be made worse by the global capitation system as operated by the NHIS. This system short-changes the enrolee because he is not guaranteed

the best drugs or diagnostic services since the HCP who has been paid upfront for these services tries to maximize his profit from the advanced payment.

Participation in the NHIS has also suffered from lack of awareness, as shown by a study in Lagos which identified low awareness particularly about the benefits was a major factor affecting participation in the scheme. Some other local studies have reported that though a good number of respondents were aware of the scheme, only a few had good information about its objectives. Despite this, majority expressed willingness to participate in the scheme and optimism that the scheme could succeed in Nigeria. There is a need to increase awareness not only among the informal sector but also among other target groups among whom minimal awareness had been reported.

WAY FORWARD

The NHIS operates on the principles of SHI and has a total of four programmes designed to cater for all sections of the populace. Only the formal sector programme has been fully established but it is still operating on a small scale. Further development of the NHIS to the stage of universal implementation will depend on several factors amongst which are continued political will, adequate funding, human resource development and public sensitization and mobilization to ensure widespread participation. The goals should be to eliminate out-of-pocket payments, redistribute human and material resources in an inequitable system, improve the quality of health services, enhance access to essential services and ultimately improve health outcomes for the majority of Nigerians.

Furthermore, it is recognized that the urban self employed and rural community constitute a substantial proportion of the Nigerian population; hence, it is advocated that the government's plans for these groups of people be unfolded to the public in clear terms. It is hoped that lessons learnt from the formal sector of NHIS would be drawn and used for a successful implementation among the informal sector groups.

CONCLUSION

Health systems all over the world are under pressure to build better health services for their people. Whatever method that is employed to do this must meet three public goals - it must be comprehensive, universal and 'free' at the point of use. Issues on how to narrow the coverage gap, increase management capacity, improve administrative efficiency and governance and address the limitation of benefit packages are major areas of concern with the current implementation of NHIS in Nigeria.

The NHIS can be a veritable tool to address the issues that pervade the healthcare sector in Nigeria. The scheme has the capacity and inherent virility and vitality to address the basic issues in the Nigerian healthcare delivery situation if properly monitored and evaluated with the intent of addressing identified problems. Other countries in the developed and not so developed world have successfully utilised concepts that are similar to the NHIS to solve the individual and national burdens of health care delivery in their societies. By endeavouring to harness available intellectual, managerial and operational skills, a credible system of access to quality healthcare services by all can be guaranteed.

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PROCREATION IN HIV-DISCORDANT COUPLES

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ABSTRACT

HIV infection has evolved from a terminal disease to a chronic disease with reasonable quality of life. Issues concerning procreation have expectedly arisen, as infected individuals are less conflicted about their limited life expectancy and their desire to conceive. In HIV discordant couples, the paramount issue is the risk of transmission to the uninfected partner and vertical transmission to an offspring. The introduction of antiretroviral therapy has much diminished this. Despite this, unprotected intercourse still carries this risk. Assisted reproduction is often employed over the background of antiretroviral therapy and the common options are timed unprotected intercourse, sperm washing and intrauterine insemination and in vitro fertilization or intracytoplasmic sperm injection. These methods are discussed along with their risks and benefits. Primary care givers to HIV-infected individuals and their partners need to keep abreast of these interventions, so as to offer up-to-date treatment for their patients.

INTRODUCTION

HIV infection has evolved over the past three decades, from an invariable death sentence to a chronic disease in which the patient can enjoy a reasonable quality of life, with the advent of highly-active antiretroviral therapy (HAART). People living with HIV/AIDS, who, hitherto, were struggling with multiple medical problems, now have enough respite from this to contemplate procreation. Issues with procreation have expectedly arisen, as these individuals are less conflicted about their limited life expectancy and their desire to conceive and are inclined to pursue the latter.

Sub-Saharan Africa has high rates of HIV discordance (where one partner is HIV-positive while the other is not)—about 50% of infected persons living as a couple have a serodiscordant partner [1], [2]. In Nigeria, prevalence of serodiscordance ranges from about 8% in the North to about 79% in the South [3]. Partner disclosure of HIV status is usually proportionate to discordance [4], likely due to safer practices that come with awareness. HIV discordance by inference signifies reduced rates of transmission to exposed partners, yet it comes with its challenges. A qualitative Ugandan study identified cultural explanations for HIV discordance, which included the thought that "gentle sex" protected HIV-negative partners [5]. Such perceptions may potentially increase transmission risk to the negative partner, as barrier protection may not be used.

RISK OF SEXUAL TRANSMISSION OF HIV

The risk of sexual transmission is directly related to the viral load. Quinn et al. [6] found viral load to be the most powerful predictor of HIV transmission between a serodiscordant couple. This may be due to the fact that the viral load in blood correlates with the viral load in semen [7]. The use of HAART has been shown to grossly reduce the viral load in semen [8], thus contributing to lower transmission rates.

Concurrent sexually-transmitted infections (STIs) can damage the mucosal lining of the genital tract, increasing the risk of transmission. Infected males with STIs have increased viral load in their semen, probably due to easier passage of the virus through the damaged areas of the lining. This contributes to increased risk of transmission [7].

PREVENTION OF HIV INFECTION

The primary concern during procreation in discordant unions is to prevent the infection of the HIV-negative partner with safer sexual practices. The respondents of the Ugandan study discussed above [9] identified negotiation of sexual relations as their most formidable challenge. Their strategies included condom use, abstinence and separation of beds, contractual agreements for outside sexual partners, or relationship cessation. Consistent condom use is usually recommended for use in HIV infection, even for couples with seroconcordance, to prevent transmission of resistant strains.

It is desirable for HIV-positive women to delay pregnancy until their viral load is very low, as maternal-to-child transmission is directly proportionate to this parameter. The same principle applies to HIV-negative women in serodiscordant relationships. Condom use is not sufficient to prevent

pregnancy. Dual method use (in combination with a long-acting effective contraceptive method, like an injectable) is recommended to both prevent transmission of infection and pregnancy [10],[11].

CONCEPTION

The challenge in conception is that the uninfected partner is exposed to transmission from the other partner. This is less important when the HIV-negative partner is the male, as it is easier to protect him from exposure from his partner—only his gametes need be in contact, which can be achieved easily by assisted reproductive techniques (ART). When the female is sero-negative, however, she is at risk of infection, even if it is only semen or spermatozoa from her partner that is used without physical contact. The goal of management in HIV discordance, therefore, is to maximise the chances of conception while minimising the risk of transmission. If the male is HIV-positive, the risk of vertical transmission towards the child further complicates the risk to the female. The emphasis of the management described in literature is mainly on the HIV-positive male partner, due to the increased risk the uninfected female is exposed to. The available options include timed ovulatory intercourse, artificial insemination with donor sperm, intrauterine insemination of washed sperms and in-vitro fertilisation / intracytoplasmic sperm injection (IVF/ICSI). If the infected partner is the female, for instance, IVF/ICSI may not be necessary (except if complicated by infertility), as insemination totally negates the risk of transmission to the male.

In the earlier years of the epidemic, HIV-infected couple were denied assisted reproduction. The rationale for that was the ethical dilemma of transmitting the virus to an uninfected partner or the offspring, as well as the short life expectancy that would have resulted in the offspring being orphaned in childhood [12]. But, as discussed, the introduction of HAARTs has changed all that.

Reproductive counselling needs to be carried out, according to WHO [13], with emphasis on (i) the need to minimize the risk of transmission to the uninfected partner and/or offspring; (ii) enabling informed reproductive choices; (iii) informing couples about the risks of HIV transmission and chances of pregnancy, in both natural and assisted conception; (iv) preparing couples for the psychological impact of assisted conception (availability, cost, duration of treatment, failure and logistics); (v) discussing the possibility of foster or adoptive parenting and (vi) informing and advising couples about the risks of sexual and vertical transmission of other frequently associated agents, such as hepatitis B or C viruses.

If unprotected timed intercourse or insemination is to be considered, the couple needs to first undergo fertility assessment to predict the success of the intervention. Assessment of male factor (seminal fluid analysis), tubal and uterine factor (hysterosalpingogram or laparoscopy combined with hysteroscopy) and ovulatory factor (mid-luteal progesterone assay) is basic [7]. Also, evaluation and treatment for sexually-transmitted diseases should be carried out. The infected partner should have the viral load reduced as much as possible (if the infected partner is the male, undetectable levels are recommended [14]) with HAART before commencement of fertility interventions to reduce risk of transmission.

Timed intercourse

Ideally, a semen viral load should be performed prior to commencement. This is because some men are "super shedders" with semen viral loads exceeding blood levels [15]—these men may have high semen viral loads despite undetectable blood levels, thus increasing their risk of transmitting the virus. Ovulation can be accurately predicted with a urine test to demonstrate the pre-ovulatory LH surge before intercourse is carried out. Pre-exposure prophylaxis has been recommended [8] with Tenofovir (due to its limited resistance, rapid mode of action and long intracellular half-life [16]). Once pregnancy is achieved, unprotected intercourse must be discontinued, as seroconversion during pregnancy increases the risk of mother-to-child pregnancy. Because of the cumulative risk of transmission with repeated sex, attempts at natural conception should not be done for more than 6-12 pinpointed ovulations; thereafter assisted reproduction should be pursued [17].

It appears that timed intercourse gives the best chance at conception [7] of all the options discussed. However, attempts with natural conception outside

the framework of effective HAART, and confirmed undetectable plasma viral load has not been satisfactory and should be strongly discouraged [17].

Sperm washing and intrauterine insemination

This method greatly minimises risk of transmission and is the preferred method by many providers for HIV-discordant couples, who feel that timed intercourse should not be recommended. It was pioneered by Semprini in Italy in 1989 [18]. His work has been reproduced and many cycles have been carried out since then [14],[17],[19]. Kim and colleagues [20] evaluated the safety of sperm washing by performing HIV testing on different fractions of semen samples and assessing for HIV receptors on sperm; they affirmed its safety. The main drawbacks are those of success rates and cost. About 10-12% of cycles result in conception [7],[12],[21]; much less than can be achieved by timed intercourse. The procedure involves density graded centrifugation and swim-up of sperms, with subsequent removal of seminal plasma and non-seminal cells. A sample of the washed sperms is then checked for HIV by polymerase chain reaction before insemination by a soft catheter or a syringe through the cervix. This definitive result and the rapidity with which it is required add greatly to the cost of the procedure. A case may be made for omitting the HIV testing of the washed sperms [7], as evidence strongly suggests that the washing invariably rids the sperms of detectable HIV [12],[20]—none of the women treated thus have been reported so far to have seroconverted following sperm washing and IUI. Such a possible modification of the procedure will have to be considered within the context of ethical practice.

It has been shown that prolonged exposure to untreated HIV infection in men does not affect semen quality [22]. However, a longitudinal study on the effect of HAART on semen quality showed a significant decline in progressively motile spermatozoa over time [23]. This may have implications in their suitability for IUI. When IUI is offered in the setting of infertility in HIV-negative men, an attempt at enhancing the chances of success is often made by the use of ovulation-induction agents for superovulation to occur. This same protocol may be a reasonable approach for its use in HIV serodiscordance as well.

Artificial insemination

This involves deposition of unprocessed semen into the vagina, in the same way as would have been done by sexual intercourse. Within the context of serodiscordance, it would be appropriate if the woman is inseminated with sperm from an HIV-negative donor or if the male partner is the HIV-negative member of the couple. The drawback of the former is the lack of genetic input in the offspring by the father in this option, which might not be acceptable in many settings. When the insemination is by the partner, the couple can practice self-insemination.

IVF/ICSI

Assisted reproduction in HIV-infected couples can be used in three scenarios: to overcome subfertility for the same indications as in an HIV-negative couple; to minimise the risk of HIV transmission in case of an HIV-serodiscordant couple with an HIV-1-infected man or; to prevent HIV superinfection with a different HIV strain in seroconcordant couples [21]. The semen is subjected to the same preparation as for IUI. Multiple pregnancies are typically more likely to occur with these methods. There is also the theory that in ICSI, with the injection of a spermatozoon (potentially carrying an HIV particle) directly into an oocyte may lead to incorporation of the viral genome into the future embryo, leading to possible iatrogenic HIV-infected offspring [14],[21]. This is yet to be substantiated, though.

Surrogacy

This is not a usual option as it exposes the surrogate to unnecessary risk of transmission. A case in literature [24] was of a same-sex male couple, both HIV-positive who approached a university clinic with a request for surrogacy, using one of the couple's sperm. The university ethics committee refused this, because, while it provides services for HIV-discordant couples, same-sex couples and gestational surrogates, it needed to always act in a manner to protect the surrogate from infectious risk.

Adoption and fostering

This may be a last resort for some in whom treatment fails, or is not feasible.

CONCLUSION

The safety of timed intercourse is unproven. A randomized controlled trial comparing timed intercourse with pre-exposure prophylaxis to sperm washing with IUI may determine this. This will have implications for the developing world, where the rigorous procedure of sperm washing and testing for HIV may be unaffordable for most people and artificial insemination, surrogacy and adoption may be culturally unacceptable.

Conception for the HIV discordant couple is complex and evolving, therefore experts from the multiple disciplines involved need to work together to extend their knowledge on these issues and develop increasingly ideal techniques, so as to offer patients the best possible care.

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COTRIMOXAZOLE, CLINICAL USES AND MALARIA CHEMOTHERAPY

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ABSTRACT

Microbial infections still account for considerable morbidity and mortality in sub-Saharan Africa. The importance of chemotherapeutic agents cannot be over-emphasized. Some antimicrobial agents provide broad spectrum of activity spanning different classes of bacterial and protozoan diseases. Cotrimoxazole, an antifolate antimicrobial was originally meant for treatment of bacterial diseases but has been shown to be an effective drug in the treatment of malaria amongst other conditions.

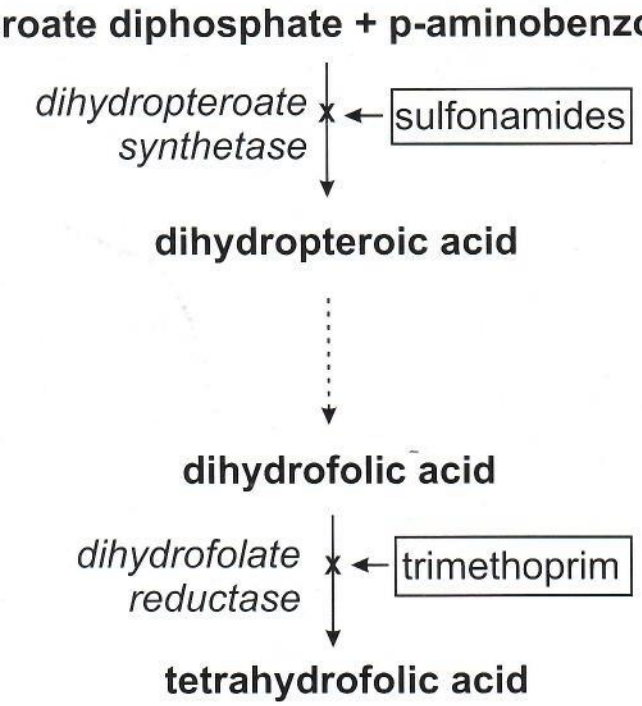
This review attempts to explore the pharmacology of Cotrimoxazole, its many clinical uses and adverse effects. Specific experiences of the author in the application of cotrimoxazole in the treatment of acute uncomplicated falciparum malaria are highlighted and suggestions on how to optimize the use of this drug are made.

INTRODUCTION

Microbial infections still account for enormous morbidity and mortality especially in the developing countries of the world. In Nigeria and most of African countries, control on the use of antimicrobials does not exist thus resulting in frequent misuse[1-5]. It is yet to be determined what impact appropriate and inappropriate use of antimicrobials have made on morbidity and mortality in Nigeria though it is incontrovertible that antimicrobials have saved millions of lives and prevented considerable sufferings. Sulphanilamide was the first sulphonamide and one of the earliest antimicrobial introduced to medical practice in the 1930s[6]. The combination of sulphamethoxazole and Trimethoprim known as cotrimoxazole was introduced in the mid 1970s. Trimethoprim, the second component of cotrimoxazole was originally intended mainly for treatment of urinary tract infection but the spectrum of activity especially in combination with sulphamethoxazole spans multiple systems and microbes[6]. In Nigeria, cotrimoxazole is marketed under various names and is easily available and inexpensive. The drug has been accessed by parents and patients once their wards or they suffer any febrile illness oftentimes low doses and short duration have been employed[2]. Recent observation of patients attending general outpatient clinic at a primary health facility reveals that more than 30% of patients have been exposed to one form of antimicrobial or the other and about 68% of these patients had taken cotrimoxazole alone or in combination[7]. Such practices are extended to many other antimicrobials and this practice threatens chemotherapy of infections since microbial resistance is promoted. There is still a dearth of information with respect to the level of antimicrobial resistance to cotrimoxazole in Nigeria but available report indicate high antibiotic resistance and this is probably rising[8-10]. This review attempts to discuss the pharmacology and clinical uses of cotrimoxazole in general and application of same in malarial chemotherapy, a major cause of morbidity and mortality in sub Saharan Africa. It concludes by suggesting the need for antimicrobial policy in Nigeria.

PHARMACOLOGY OF COTRIMOXAZOLE

Cotrimoxazole consists of Trimethoprim and sulphamethoxazole at a ratio of 1:5, this combination is synergistic against micro-organisms particularly bacteria. The Anatomic Therapeutic Chemical (ATC) classification is J01EE01 and a category C drug, that is, caution is advised as the drug has documented adverse effect on pregnant animals. Sulphamethoxazole and Trimethoprim inhibit successive steps in the synthesis of tetrahydrofolate and theoretically are synergistic[6]. While sulphamethoxazole inhibits synthesis of dihydrofolic acid by acting as false substrate to dihydropteroate synthetase Trimethoprim inhibits dihydrofolate reductase enzyme. This negatively impacts on the ability of sensitive micro-organism to synthesize thymidine and uridine, essential elements, respectively in DNA replication and transcription. Maximum effect is witnessed in bacterial and other prokaryotes since they lack ability to take up folic acid from their environment and have to synthesize *de novo*. This mechanism of action is presumed to be operative in other micro-organisms including protozoans like malaria and fungi such as the etiologic agent of rhinoentomophthoromycosis or Martinson's disease[11-13]. Organisms exhibit resistance mainly by the alteration of the enzyme targets and occasionally by evolving a bypass mechanism that enables them to take up folic acid or even tetrahydrofolic acid[6].



The components of cotrimoxazole exhibit similar pharmacokinetic properties including relatively good absorption and distribution. Sulphamethoxazole achieves peak plasma concentration ~4 hours and appears in very high concentration in urine through which it is rapidly excreted after oral dose. Only about a third of plasma concentration is achieved in the cerebrospinal fluid. Trimethoprim achieves peak plasma concentration within 2 hours which is relatively more rapid than sulphamethoxazole. Half life of sulphamethoxazole is about 11 hours and that of Trimethoprim is 10 hours. When the drugs are given orally in the conventional 5:1 ratio, that is, sulphamethoxazole 800 and trimethprim 160 mg peak plasma concentration approximates 40 and 2 ug/ml. Similar ratio was maintained when the combination was given by intravenous infusion over a period of 1 hour (46 and 3.4 ug/ml). Approximately 65% and 40% respectively of sulphamethoxazole and Trimethoprim is bound to plasma protein and the volume of distribution of Trimethoprim is estimated to be 9 times that of sulphamethoxazole being able to enter the cerebrospinal fluid with ease. Both compounds are excreted in urine and reduction of dosage should be observed in ureamic patients[6].

Adverse effects attributable to the use of cotrimoxazole involve the skin in most cases (75%). Generally, the dermatological adverse effects are mild but severe adverse skin reactions like Steven Johnson Syndrome (SJS) and toxic epidermal necrolysis (Lyell's syndrome) are also seen though rarely. The mechanism of dermatological adverse effects remains to be fully elucidated. It is however presumed to be precipitated by active metabolite which sensitises T lymphocytes [14]. Folate deficiency and pancytopaenia may be precipitated in individuals who are malnourished[6]. Common adverse gastrointestinal disturbances include nausea and vomiting and less commonly diarrhoea. Cholestatic jaundice had also been documented. Sulphamethoxazole is known to cause headache, depression and hallucinations. Cotrimoxazole has been implicated in causing permanent renal damage in patients with impaired renal function and a reversible decrease creatinine clearance in normal individuals[6].

HIV/AIDS patients are especially predisposed to hypersensitivity reaction like neutropenia, SJS and Sweet's syndrome[6]. It is estimated that up to 50% of HIV/AIDS patients who receive cotrimoxazole for treatment of *Pneumocytis juroveci* infection (PCP) will have adverse reactions and this has been related to poor ability to handle nitroso-derivative of sulphamethoxazole[14, 15]. Influence of NAT2 genotype and phenotype on sulphonamides hypersensitivity has yet to show consistency.

CLINICAL USES

Cotrimoxazole is effective in the treatment of and prophylaxis of urinary tract infections. The components are known to concentrate in urine, prostatic as well as vaginal fluids. The combination has been employed in the treatment of acute exacerbation of chronic bronchitis and has demonstrable efficacy in acute otitis media and sinusitis. Cotrimoxazole provides ready alternative to fluoroquinolones in the treatment of shigellosis. The combination is also a second line drug after fluoroquinolones and ceftriazone in the treatment of typhoid fever but treatment is recommended for 15 days. In addition, chronic carriers of *Salmonella typhi* may

benefit from prolonged treatment with the combination.

Cotrimoxazole in high dose, 100 mg/kg of sulphamethoxazole and 15 mg/kg of Trimethoprim has comparable activity in the treatment of HIV/AIDS patients infected with Pneumocytis jiroveli[15]. The combination is also effective chemoprophylaxis against the organism and is better tolerated than when used in large doses for treatment[16, 17]. Cotrimoxazole is considered to be a good substitute for doxycycline in combination with streptomycin for treatment of brucellosis[6]. The drug has also been used successfully in the treatment of *Strenotrophomonas maltophilia* (Whipple's disease)[6]. Rhinoentomorphthorophycosis, a mycotic infection of the naso-pharynx, responds well to regular course of cotrimoxazole[13]. The drug has been used alone or in combination with other antimalarial drugs for the treatment of acute uncomplicated falciparum malaria. Indeed cotrimoxazole was central to WHO recommendation of the integrated management of acute febrile illness in resource-poor countries presumably caused by malaria or respiratory tract infection in most cases[18,19].

COTRIMOXAZOLE AND TREATMENT OF MALARIA

Considerable attempts have been made towards determining the efficacy of cotrimoxazole in the treatment of acute uncomplicated falciparum malaria. When used alone it was observed that the drug has similar efficacy to chloroquine and sulphadoxine-pyrimethamine in the treatment of acute uncomplicated falciparum malaria [11, 12, 20-22]

Cotrimoxazole monotherapy of malaria

Studies conducted to evaluate efficacy and tolerability of monotherapy of malaria with cotrimoxazole in the 1990s in southwest Nigeria revealed comparable parameters with the comparators namely chloroquine and sulphadoxine-pyrimethamine. In the comparative study with chloroquine, two dosing regimens were employed, that is, 5-day and 3-day regimens with cotrimoxazole been used at an equivalent dose of 20 mg per kilogramme body of sulphamethoxazole component. The 98 children studied had presented with acute symptomatic uncomplicated falciparum malaria and were randomised to receive oral chloroquine and two regimens of cotrimoxazole. Pre treatment clinical and parasitological parameters were similar in the three treatment groups. The fever and other symptoms clearance times were comparable in all the treatment groups: 1.83 ± 1.3, 1.9 ± 1.0 and 2.4 ± 1.3 days for chloroquine, 3 day cotrimoxazole and 5 day cotrimoxazole, respectively $p = 0.24$. Parasite clearance times for the three treatment groups were also similar; 3.0± 1.0, 3.1 ± 0.7, and 3.0 ± 1.0 days respectively for chloroquine 3 day and 5 day cotrimoxazole; $p= 0.96$. The cure rates for chloroquine, 3 day and 5 day cotrimoxazole were 74.2%, 88.2% and 84.8%, respectively ($\chi^2 = 2.40$, $p = 0.30$)[21]. Similar results were obtained with another 145 children aged between 1 and 10 years, 73 of whom received cotrimoxazole for 5 days while the remaining 72 received sulphadoxine-pyrimethamine at the standard dose. Pre treatment clinical and parasitological parameters were similar in the two treatment groups. The time to clear fever and other symptoms were similar in the two groups. 1.94 ± 1.10 vs 2.20 ± 0.96 $p > 0.05$. Parasite clearance times were also similar; 2.62 ± 0.91 days vs 2.94 ± 1.17 days respectively, for cotrimoxazole and pyrimethamine-sulphadoxine; $p> 0.05$. The cure rates on days 14, 21 and 28 were respectively, 84.9%, 79.5% and 78.1% for cotrimoxazole and 84.7%, 82.0% and 76.4% for pyrimethamine-sulphadoxine treatment groups[22]. It is noteworthy that results from a western Ugandan study did not support the foregoing as efficacy of cotrimoxazole in treatment of acute febrile illness amongst children was very low[23]. Mechanism of antimalarial activity of cotrimoxazole is presumed to be similar to that of sulphadoxine-pyrimethamine, that is, inhibition of both Dihydropteroate Synthase (DHPS) and Dihydrofolate reductase (DHFR) enzymes. In the same vein reduced sensitivity and resistance of *Plasmodium falciparum* have also been ascribed to alteration of these targets[24].

Combination chemotherapy with cotrimoxazole

Consequent upon WHO recommendation and adoption of same by various national governments in Africa, malaria is now treated with combination of two or more drugs which influence different biochemical pathways[25,26]. It has been observed that use of cotrimoxazole and chloroquine might have constituted inadvertent combination therapy for malaria[27]. In a short communication[27] of a study of efficacy of chloroquine plus cotrimoxazole, it was observed that the combination was efficacious in the treatment of chloroquine-resistant or sulphadoxine-resistant malaria in a group of children in southwest Nigeria. The study had evaluated the efficacy of cotrimoxazole plus chloroquine in the treatment of chloroquine or sulphadoxine pyrimethamine treatment failure in 32 consecutive children who had earlier been treated with either chloroquine or pyrimethamine-sulphadoxine but failed to achieve cure. Each child was treated with oral medication of chloroquine using the standard regimen of 10 mg per kg body weight each on day 0 and 1 and 5 mg per kg body weight on day 2 plus cotrimoxazole at an equivalent dose of 40 mg per kg body

weight in 2 divided doses daily for three days. All were followed up for a period of 14 days both clinically and parasitologically. All children were asymptomatic and aparasitaemic by day 3 and remained free of malaria parasite till day 14. It was suggested that previous use of the 2 drugs concomitantly had probably constituted antimalarial drug combination considering that cotrimoxazole was favoured for treatment of mild respiratory tract infection[28]. Both conditions are expected to co-exist especially in childhood population. Few available studies suggest efficacy of combination chemotherapy involving cotrimoxazole in children. The combination of cotrimoxazole with chloroquine or amodiaquine or artesunate indicated good tolerability profile as well as therapeutic efficacy in the treatment of acute uncomplicated *Plasmodium falciparum* infection in children[27,28 and 30]. In a comparative study of 97 children aged 6 months to 10 years, amodiaquine in combination with cotrimoxazole was administered in 51 cases while 46 others received amodiaquine- sulphadoxine-pyrimethamine combination. The time to clear fever and other symptoms were similar in the two groups 1.64 ± 0.98 vs 1.47 ± 0.74 $p > 0.05$. Parasite clearance times were also similar; 2.41 ± 0.67 days *vs* 2.35 ± 0.60 days respectively, for aqct and aqsp; $p > 0.05$. The cure rates on days 14, 21 and 28 were respectively, 98%, 94% and 87% for aqct and 100%, 98% and 89% for aqsp treatment groups. Similar results and inferences from the study of cotrimoxazole in combination with artesunate were also drawn when compared with standard regimen of artesunate-amodiaquine.

It is worthy of note that while both sulphadoxine-pyrimethamine and cotrimoxazole may support gametocyte generation, the latter is considerably less supportive. Thus few studies that compared gametocyte generation capability of cotrimoxazole and that of sulphadoxine-pyrimethamine either as monotherapy or in combination have observed that sulphadoxine-pyrimethamine was clearly the less efficacious[30,31]. There may be need to explore this further with a view to improving treatment of malaria and other infectious diseases.

It has been opined that inadvertent combination therapy might have been rampant in the past and may have contributed to the delay in the evolution of drug-resistant malaria in Nigeria[27]. Consequent on similar mechanism of antimicrobial action of cotrimoxazole and sulphadoxine-pyrimethamine the use of both drugs in the same individual may be considered not rational. It may also be inferred that when mild respiratory tract infection co-exists with malaria in children cotriomxazole in combination with another antimalarial than anti-folate drug should suffice. Large clinical studies as well as *in vitro* evaluation of relevant determinants of host-parasite relationship as well as the influence of unconventional antimalarial drug like cotrimoxazole on dynamics of drug resistance in malaria would be needed.

CONCLUSION AND SUGGESTIONS

Cotrimoxazole is a drug with wide clinical applications spectrum of activity spanning bacteria, fungi and protozoan infections. The drug is relatively safe and inexpensive but often misused sequel to its almost universal availability. Misuse of cotrimoxazole like most other antimicrobials is a threat to effective treatment of infectious diseases and therefore portends serious danger for humans. There is an urgent need for appropriate policy formulation on distribution and use of drugs in general and antimicrobials in particular followed by necessary enforcement.

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THE SYNOPSIS OF OBSTETRIC ANALGESIA

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KEYWORDS
Obstetrics, analgesia, pain perception

ABSTRACT

Analgesia is defined as the loss or modulation of pain perception and it is often offered to parturients during labour. In our society however, it is thought that parturients should feel labour pain as this is a test to ascertain true womanhood. This synopsis is aimed at highlighting the significance of obstetric analgesia.

INTRODUCTION

Labour is defined as a sequence of uterine contractions that results in effacement and dilatation of the cervix and voluntary bearing-down efforts leading to the expulsion per vaginal of the products of conception[1]. In other words, it is the onset of painful, regular uterine contractions, more, than once every ten minutes with or without show or rupture of membranes with progressive cervical effacement and dilatation with or without descent of the foetal presenting part. This eventually leads to delivery or expulsion of the contents of the uterus, normally at viability.

Analgesia, according to the Chambers 21st century dictionary, is defined as a reduction or loss of the ability to feel pain, without loss of consciousness or deadening of sensation. It can also be defined as the loss or modulation of pain perception[1].

Some women feel that pain is a natural part of childbirth. The story began when medicine, religion, and philosophy were intermixed and the balance of the earth, air, fire, and water still controlled our bodies, with science a late partner to medicine. Pain had an important role in society: to maintain order and collect information – a purpose still prevalent in some societies today. Its role in childbirth – education, punishment ("She's got to learn"), atonement, redemption, and bonding ("You'll love your baby all the more") – also survives. Writing in the middle of the 19th century, John Stuart Mill pointed out that it was not God but nature that inflicted pain. It was surely permissible to improve on nature. Anaesthesia formed part of a new humanitarian movement that aimed "to eliminate suffering from human experience, a tendency that was not particularly apparent before then."[2]

HISTORICAL TRENDS IN OBSTETRIC ANALGESIA

The first obstetric analgesia documented was performed by James Young Simpson in 1947 using ether and chloroform[3]. Queen Victoria asked John Snow to administer chloroform for the delivery of her eighth and ninth children in 1853 and 1856 respectively. In 1880, Klikowitsch of Petrograd applied 80% nitrous oxide and 20% oxygen analgesia to 25 obstetric cases. In 1885, spinal analgesia was developed from the first suggestion by Corning and Bier's practical experiments in 1896 up to this day. In 1902, Von Steinbuchel of Germany introduced the combination of scopolamine hydrobromide and morphine to induce a twilight sleep. In 1903, ambulation during the first stage of labour was found to be helpful as noticed by obstetricians and studies showed great benefit. Barbituates were added for sedation in 1924.

In 1933, John Cleland from the University of Oregon, described the pain pathway involved in labour and delivery by working on animals. From his study, it was found that paravertebral blocks at T11 and T12 could block the pain of the first stage of labour and that of second stage by caudal block[4]. In 1940, Dr. Lamaze and Read advocated "natural child birth"[1]. Also in 1945, Tuohy demonstrated the first continuous subarachnoid anaesthesia using a ureteral catheter placed through a needle[5]. In 1949, the first continuous lumbar epidural analgesia using a plastic tube inserted into the epidural space was reported by Flowers et al[6]. However, this method of analgesia did not become well known until the 1970s when catheters became widely used in performing the procedure.

Factors affecting pain perception

There are various factors that affect parturients perception of labour which have been studied over time.

These include:

1. Age
2. Educational attainment
3. Previous experience
4. Current experience
5. Culture
6. Socio-economic status
7. Companionship
8. History of severe menstrual pain

TYPES OF ANALGESIA

The pain of labour is severe and many women seek to reduce it. The ideal labour analgesic technique is one that should confer complete pain relief without any side effects to either the mother or the neonate. Patients' preference, tempered by sound medical judgement should guide the selection of the optimal modality for pain control during labour[7].

TECHNIQUES OF ANALGESIA

This can be broadly divided into:

i. Non Regional

ii. Regional

Non Regional techniques for labour analgesia include:

i. Non-pharmacological methods

ii. Pharmacological methods

NON PHARMACOLOGICAL NON REGIONAL TECHNIQUES

i. Hypnosis: Hypnotic technique may substantially improve the parturient's outlook and behaviour by reducing fear and apprehension[1,9,10].

ii. Transcutaneous electric nerve stimulation (TENS): success rate is 25%[8]

iii. Massage[9,10]

iv. Continuous labour support[12,13]

v. Intradermal water injection[11]

vi. Temperature Modulation: Hot or cold packs, water immersion[9,10]

vii. Relaxation/ Breathing Techniques

viii. Acupuncture[9,10]

ix. Acupressure

x. Aromatherapy

xi. Music and audioanalgesia[10]

xii. Childbirth education

The non pharmacological methods listed above have been tried in different parts of the world to relief labour pain. Reported effectiveness of these methods varies. Some data show that the use of the methods proved helpful in pain management in labour. Efficacy of methods like audioanalgesia and music therapy remains to be assessed.

PHARMACOLOGICAL NON REGIONAL TECHNIQUES

i. Inhalational Agents

ii. Systemic Analgesics

INHALATIONAL AGENTS

Nitrous Oxide: Entonox (50% nitrous oxide in oxygen) provides analgesia within 20-30 seconds of inhalation. It however does not provide complete analgesia.

Inhalational halogenated agents: Halothane, Isoflurane. They produce uterine relaxation. High concentrations should be avoided during delivery to prevent uterine atony and post partum haemorrhage[1].

SYSTEMIC ANALGESICS

These are usually given after labour is well established. Examples are: Meperidine(Pethidine), Morphine, Diamorphine, Fentanyl, Thiobarbiturates: Propofol and Ketamine. The most frequently used opioid for analgesia in labour is Meperidine. They do have some side effects: Pruritus, nausea and vomiting, hypotension, respiratory depression (first two hours - Fentanyl; up to 16 hrs with Morphine), urinary retention, delayed gastric emptying, reactivation of herpes simplex virus, fetal bradycardia from uterine hyperstimulation.

REGIONAL ANALGESIA TECHNIQUES

The regional nerve blocks used in Obstetrics include:

i. Lumbar Epidural and Caudal Epidural block

ii. Subarachnoid (spinal) block

iii. Pudendal block

EPIDURAL BLOCK

When compared with other methods, Epidural block provides superior analgesia for labour. It is the gold standard. There are different types with include: Continuous Epidural Infusion, Patient Controlled Epidural Analgesia (PCEA), and Combination of continuous infusion + PCEA. Several studies have demonstrated a modest prolonged second stage of labour, stimulation of labour contractions, low blood pressure,

inability to move for a period of time after delivery and an increase in operative delivery rate (vacuum and forceps delivery) of women receiving epidural analgesia for labour[16]. Less commonly, there is associated post dural puncture headache, if the dura is punctured accidentally (1%) [15]. Examples of epidural agents are: Bupivacaine, Ropivacaine, Levobupivacaine, Chloroprocaine, Lidocaine.

SPINAL ANAESTHESIA

It is currently the anaesthetic of choice for caesarean delivery. The onset of sympathectomy is more abrupt than with epidural block. Spinal anaesthesia results in good relaxation of the pelvic floor and lower birth canal. Prompt anaesthesia is achieved within 5-10minutes. 1 – 2% of patients however come down with spinal headaches[1].

COMBINED SPINAL EPIDURAL ANAESTHESIA

It became popular in the mid 1990s as an alternative to epidural anaesthesia for labour. Rarely, spinal or epidural anaesthesia caused nerve injury and transient of permanent hyperesthesia or paraesthesia. Excessive drug concentration, sensitivity of infections may be responsible for some of these complications[1].

PUDENDAL BLOCK

Both transvaginal and transcutaneous methods are useful for administering a pudendal block. Often in clinical practice, pudendal block is performed within 4 – 5 minutes of episiotomy. Advantages of pudendal nerve block are its safety, ease of administration and rapidity of onset of action. Disadvantages include maternal trauma, bleeding and infections. Rarely, maternal convulsions can occur due to drug sensitivity[1].

TRENDS IN NIGERIA

In Nigeria, awareness of obstetric analgesia is relatively low. Studies done by Olayemi et al in Ibadan revealed that about 27.1% are aware of obstetric analgesia and those who accepted were 57.6% especially the well – educated and the young. The most common method used is systemic opioids (80%). 14% are aware of inhalational analgesia and about 10% of epidural analgesia. Those who thought that labour pain was natural and should be experienced without any form of analgesia were about 76.5%[16].

In Benin, a similar study was conducted, 37.5% were aware that labour pain could be relieved but 26.0% had prenatal information of labour analgesia. 85.1% of the patients however wanted their labour pain relieved. 38.9% actually received analgesia during labour[17]. This is a far cry from what is obtained in developed countries. Furthermore, Nigerian women have a poor knowledge of epidural analgesia[18].

Labour analgesia services is poorly utilised in Nigeria.

RECOMMENDATIONS

It is now known that Nigerian women desire analgesia in labour. There will be a boost in the utilisation of obstetric analgesia if there is an improvement in the antenatal information on labour analgesia. There should also be a well organised and structured labour analgesia service in Nigeria at a cost that is affordable to the average women. This service would go a long way to address the limits of manpower and technology in Nigeria.

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AN OVERVIEW OF GLUCOSE-6-PHOSPHATE DEHYDROGENASE (G6PD) DEFICIENCY IN ICTERIC NEWBORNS

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ABSTRACT

Glucose-6-Phosphate Dehydrogenase (G6PD) deficiency is an X-linked disorder and the most common human enzyme deficiency; an estimated 400 million people worldwide are affected by this enzymopathy with the highest prevalence found among Africans, Asians and Mediterraneans. One benefit of having G6PD deficiency is that it confers a resistance to malaria. G6PD deficiency is also sometimes referred to as favism, since some G6PD deficient individuals are also allergic to fava beans. Individuals with reduced G6PD activity are at risk for several pathologies which can be potentially serious (even causing death) if they are not properly treated. The severity of the pathologies associated with G6PD deficiency has prompted researchers to study this condition. Since the discovery of G6PD deficiency in 1956, thousands of research papers have been published on various aspects of this genetic condition. Severe neonatal jaundice proved to be the most common clinical manifestation and a globally important, most dangerous consequence of glucose-6-phosphate dehydrogenase (G6PD) deficiency. The early characterization of G6PD activity therefore provides an aetiological diagnosis for neonatal jaundice (NJ), as well as the opportunity to give the newborn's family information concerning haemolytic crisis prevention. However, the absence of frank anaemia and other changes supportive of acute haemolysis in G6PD deficient infants with neonatal jaundice direct attention away from red cells towards a hepatic origin. Defective G6PD activity in the hepatocyte has been suggested as an alternative factor playing a role in the pathogenesis of G6PD deficiency related neonatal jaundice.

INTRODUCTION

One of the problems experienced by G6PD deficient individuals presents itself immediately after birth. Neonatal jaundice is a common condition in all newborns, but when it persists, G6PD deficiency is suspected. Neonatal jaundice is a yellowish discoloration of the whites of the eyes, skin, and mucous membranes caused by deposition of bile salts in these tissues. This is a direct result of insufficient activity of the G6PD enzyme in the liver[1].

Glucose-6-phosphate dehydrogenase deficiency, the most common enzyme deficiency worldwide, causes a spectrum of diseases including neonatal hyperbilirubinaemia, acute haemolysis, and chronic hemolysis[1]. Persons with this condition also may be asymptomatic. This X-linked inherited disorder most commonly affects persons of African, Asian, Mediterranean, or Middle-Eastern descent. Approximately 400 million people are affected worldwide [1]. According to the report of the World Health Organization, 7.5 % of the world's population carries one or two genes for G6PD deficiency and 2.9% are G6PD deficient[2].

Homozygotes and heterozygotes can be symptomatic, although the disease typically is more severe in persons who are homozygous for the deficiency[1]. It is also known to be associated with neonatal jaundice, kernicterus and even death[3]. Being an X-linked condition, the prevalence of G6PD deficiency in any given population is determined by the number of deficient males. However, deficient females (in which there is lyonization of the normal X-chromosome) are also at risk of haemolysis and jaundice[4]. In a population with a high prevalence rate, early detection of the enzyme deficiency by neonatal screening is desirable in order to take appropriate measures to prevent the complications of haemolysis and jaundice[5].

The peculiarity of manifestations of this enzymopathy especially in the neonatal period is jaundice without haemolysis. This may be so serious that it can lead to kernicterus or death and also predisposes the neonate to infection [6, 7]. Many studies conducted in the Mediterranean area and some Asian regions also confirmed that G6PD deficiency is a common cause of severe jaundice in the neonatal period[8]. However, because not all G6PD deficient infants become jaundiced and due to the marked variation in the incidence and intensity of G6PD deficiency associated neonatal jaundice among various populations, there has been an active search for additional factors that may cause neonatal jaundice when combined with G6PD deficiency. This article therefore gives an insight.

EPIDEMIOLOGY

In a study conducted to determine the prevalence of G6PD deficiency in relation to neonatal hyperbilirubinaemia in Egyptian infants, the incidence of G6PD deficiency was 30.2% among 53 cases of neonatal jaundice[9]. This result is very near to those of several studies conducted in India where G6PD deficiency accounted for

32% of the cases presenting with neonatal hyperbilirubinemia [9]. Also G6PD deficiency was found in 38.2% of the hyperbilirubenemic neonates in Nigeria [10]. Several other studies from Saudi Arabia [11, 12]. Iran [13], Jamaica [14] *and* China[15] reported that G6PD deficiency is strongly associated with neonatal jaundice and even kernicterus. G6PD deficiency is also considered as one of the most common causes of neonatal jaundice among infants in Greece [16], Singapore [17] and Taiwan [18]. It is interesting to note that numerous studies in Nigeria, India, Saudi Arabia, Singapore, Jamaica and Malaysia have revealed that this enzyme deficiency in icteric newborns was 40, 12.2, 18.4, 1.62, 1.57 and 3.5%, respectively, in which neonatal jaundice was seen without haemolysis [19]. It is therefore imperative to understand the pathophysiology of G6PD deficiency and the mechanism by which jaundice occurs without haemolysis.

PATHOPHYSIOLOGY

G6PD catalyzes nicotinamide adenine dinucleotide phosphate (NADP) to its reduced form, NADPH, in the pentose phosphate pathway. NADPH protects cells from oxidative damage. Because erythrocytes do not generate NADPH in any other way, they are more susceptible than other cells to destruction from oxidative stress [2]. The conversion of nicotinamide adenine dinucleotide phosphate to its reduced form in erythrocytes is the basis of diagnostic testing for the deficiency. This usually is done by fluorescent spot test. Different gene mutations cause different levels of enzyme deficiency, with classes assigned to various degrees of deficiency and disease manifestation. The level of G6PD activity in affected erythrocytes generally is lower than in other cells [20]. Normal red blood cells that are not under oxidative stress generally exhibit G6PD activity at approximately 2 percent of total capacity [21]. Even with enzyme activity that is substantially reduced, there may be few or no clinical symptoms. A total deficiency of G6PD is incompatible with life. The G6PD-deficient variants are grouped into different classes corresponding with disease severity (Table 1)[22].

Table 1: Classes of G6PD Enzyme Variants [1]

Class	*Level of deficiency*	*Enzyme activity*	*Prevalence*
I	Severe	Chronic nonspherocytic hemolytic anemia in the presence of normal erythrocyte function	Uncommon; occurs across populations
II	Severe	Less than 10 percent of normal	Varies more common in Asian and Mediterranean populations
III	Moderate	10 to 60 percent of normal	10 percent of black males in the United States
IV	Mild to none	60 to 150 percent of normal	Rare
V	None	Greater than 150 percent of normal	Rare

Neonatal jaundice due to G6PD deficiency may occur after exposure to oxidant agents and as a consequence, haemolysis occurs. But quite often, there is a mutation in the promotor site of uridine diphosphoglucuronate glucuronosyl transferase- 1 gene (UDPGT-1) which accompanies G6PD deficiency, leading to indirect hyperbilirubinaemia in the absence of haemolysis [6, 23]. One of the important manifestations of this enzyme deficiency in the neonatal period is jaundice without haemolysis. This may be so serious that it can lead to kernicterus or death and also predisposes the neonate to infection [6, 24]. Environmental and cultural factors that influence the incidence of neonatal jaundice include maternal exposure to oxidant drugs, the use of herbal remedies, and the incidence of neonatal infection, hypoglycemia and acidosis, and the normal level of neonatal hemoglobin within a population. It has long been assumed that these factors combine with an increased susceptibility of neonatal erythrocytes to haemolysis to give rise to an increased incidence and extent of haemolysis. However,

recent evidence also suggests that haemolysis is only partly responsible, decreased bilirubin conjugation and elimination play a major role in the pathogenesis of neonatal jaundice [25]. The presence of an additional hemolytic process such as ABO incompatibility was found to have little impact on the degree of haemolysis and hyperbilirubinaemia[26]. These observations confirm those first made in Sardinia, where the severity of neonatal jaundice does not correlate with red cell G6PD activity [27], that the hyperbilirubinaemia is largely the result of an impairment of liver function caused by G6PD deficiency in the liver [28].

Table 2 [1] Medications That Should Be Avoided By Persons with G6PD Deficiency

Drug name	Use
Dapsone	Antimicrobial for treatment of leprosy
Flutamide (Eulexin)	Antiandrogen for treatment of prostate cancer
Mafenide cream (Sulfamylon)	Topical antimicrobial
Methylene blue (Urolene Blue)	Antidote for drug -induced methemoglobinemia
Nalidixic acid (NegGram)	Antibiotic used primarily for urinary tract infections
Nitrofurantoin (Macrodantin)	Antibiotic used p rimari ly for urinary tract infections
Phenazopyridine (Pyridium)	Analgesic for treatment of dysuria
Primaquine	Antimalaria agent
Rasburicase (Elitek)	Adjunct to antineoplastic agents
Sulfacetamide (Klaron)	Antibiotic (ophthalmic and topical preparations)
Sulfamethoxazole (Gantanol)	Antibiotic used in combination preparations (i.e. trimethoprimsulfamethoxazole[TMP -SMX; Bactrim, Septra])
Sulfanilamide (AVC)	Antifungal agent for treatment of vulvovaginal Candida albicans infection

DIAGNOSIS

The diagnosis of G6PD deficiency is made by a quantitative spectrophotometric analysis or, more commonly, by a rapid fluorescent spot test detecting the generation of NADPH from NADP [1]. The test is positive if the blood spot fails to fluoresce under ultraviolet light [1]. In field research, where quick screening of a large number of patients is needed, other tests have been used; however, they require definitive testing to confirm an abnormal result [1]. Tests based on polymerase chain reaction detect specific mutations and are used for population screening, family studies, or prenatal diagnosis [1]. In patients with acute haemolysis, testing for G6PD deficiency may be falsely negative because older erythrocytes with a higher enzyme deficiency have been haemolyzed. Young erythrocytes and reticulocytes have normal or near-normal enzyme activity [1]. It can therefore only be done 2-3 weeks after a hemolytic episode.

CONCLUSION

G6PD deficiency should be considered in neonates who develop hyperbilirubinaemia within the first 24 hours of life, a history of jaundice in a sibling and bilirubin levels greater than the 95th percentile. G6PD deficiency can lead to an increased risk and earlier onset of hyperbilirubinaemia, which may require phototherapy or exchange transfusion. In certain populations, hyperbilirubinaemia secondary to G6PD deficiency results in an increased rate of kernicterus and death. An interaction between G6PD deficiency and promoter polymorphism for the gene encoding the bilirubin conjugation enzyme has been implicated in the pathogenesis of hyperbilirubinaemia in G6PD deficient infants [29].

Decreased bilirubin elimination in hepatocytes also plays a major role [29]. Since glucose-6-phosphate dehydrogenase deficiency seems to be a relatively common cause of neonatal jaundice in Nigerian infants, early detection of this enzymopathy by cord blood screening and monitoring for possible jaundice are recommended in all Nigerian male newborns. Among practicing physicians, a high index of suspicion about the possibility of G6PD deficiency is necessary when managing neonates with unexplained hyperbilirubinaemia.

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THE ROLE OF PSYCHOTHERAPY IN CANCER MANAGEMENT

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INTRODUCTION

Cancer represents a tremendous burden on patients, families, and societies; it is one of the leading causes of death and disease burden worldwide; it accounted for 7.9 million deaths (around 13% of all deaths) in 2007[1]. Most cancer deaths can be attributed to cancers of the lungs, stomach, liver, colon and breasts [1]. More than 30% of cancer deaths are preventable.[1] Deaths from cancer is projected to continue to increase worldwide, currently, nearly 7 million people die each year of cancer[2], this is projected to rise to 12 million deaths by 2030.[1] The burden of disease associated with cancer is also on the increase, an estimated 24.6 million people are presently living with cancer with more than half reportedly in developing countries[2].

Cancer management involves a broad multidisciplinary approach, treatment may involve surgery, radiation therapy, chemotherapy, immunotherapy, hormonal therapy, gene therapy or some combination of these (Table 1).

Table 1. Different modalities for cancer management

SURGERY	RADIOTHERAPY	CHEMOTHERAPY	IMMUNOTHERAPY
Complete excision.	Adjuvant.	Adjuvant	Vaccine.
De-bulking.	Neo-adjuvant.	Neo-adjuvant.	T-cell immunotherapy.
May follow neo -adjuvant chemotherapy.	Brachytherapy or Teletherapy.	Combination chemotherapy	Monoclonal antibodies.

The primary objectives of cancer treatment are to obtain a cure, prolong life, or improve the patients' quality of life.[3] Even with the most advanced forms of treatment, the 5-year survival rate for cancer of the uterine corpus, breast, testis, and melanomas is 75% while it is less than 15% for cancer of the pancreas, liver, stomach, and lungs.[3]

PSYCHOLOGICAL SEQUELAE OF CANCER

The diagnosis of cancer in a patient triggers a lot of psychological disturbance in both patients and their caregivers. Psychological disturbances associated with cancer diagnosis include disbelief, denial, despair, anxiety and depression[4]. While some patients are able to adapt to the diagnosis with minimal disruption of life role, regulate emotional distress, and remain actively involved in all aspects of life that continue to hold meaning and importance,[5] in a majority of others, these psychological symptoms may persist, leading to worsening of the disease state, poor treatment outcomes and negative impact on quality of life if not identified early and effectively managed[6].

Other psychological reactions that have been reported in patients diagnosed with cancers include fear of death, disfigurement and disability; fear of abandonment and loss of independence; fear of disruption in relationships, role functioning and financial standing, anger, and guilt.[4]

The levels of psychological distress associated with cancer diagnosis is reported to exist along a continuum ranging from normal adjustment through adjustment disorders to sub-threshold mental disorders (i.e. the individual has some symptoms of a particular disorder which are not sufficient to meet diagnostic criteria) ; to having a diagnosable Mental disorder.[5] Common mental disorders reported in patients with cancer include adjustment disorder (68%), major depressive disorder (13%) and delirium (8%).[4]

Table 2 shows the DSM-IV criteria for the diagnosis of adjustment disorder.[7]

A. The development of emotional or behavioral symptoms in response to an identifiable stressor(s) occurring within 3 months of onset of the stressor(s).

B. These symptoms or behaviors are clinically

The Distress Continuum

|--------|----------|----------|----------|----------|

Normal Adjustment Sub threshold Diagnosable Mental Adjustment Disorders to Mental Disorders Disorders (e.g., major depressive disorder).

significant as evidenced byEither of the following:

i. Marked distress that is in excess of what would be expected from exposure to the stressor.

ii. Significant impairment in social or occupational (academic) functioning.

C. The stress related disturbance does not meet the criteria for another specific Axis 1Disorder and is not merely an exacerbation of a pre-existing Axis 1 or Axis II disorder.

D. The symptoms do not represent bereavement.

E. Once the stressor (or its consequences) has terminated, the symptoms do not persist for more than an additional 6 month.

Specify if:

Acute: if the disturbance lasts for less than 6 months.

Chronic: if the disturbance lasts for 6 month or longer.

Adjustment disorders are coded based on the subtype, which is selected according to the predominant symptoms. The specific stressor(s) can be specified on Axis IV

With depressed mood

With anxiety

With mixed anxiety and depressed mood

With disturbance of emotions and conduct

Unspecified

FACTORS INFLUENCING PSYCHOLOGICAL ADJUSTMENT TO CANCER DIAGNOSIS

Many factors have been reported to influence adjustment to cancer. These factors have been broadly divided into three categories: cancer derived, patient derived, and society-derived factors.[8,9]

Cancer –derived factors include the type of cancer, its stage, and its prognosis, as well as what stage a patient is in terms of diagnosis, treatment, and recurrence of the cancer.[6]

Patient –derived factors are broadly divided into two: intrapersonal coping and interpersonal social support[10, 11] as well as consideration for stage of life [12] (for example, young adults may respond quite differently compared to older adults).[6]

Society- derived factors include the general societal views of cancer (e.g stigma) as well as the influence society has on issues such as availability of treatments, open versus closed discussion of the illness, and popular belief about cause.[6]

The personality traits of optimism and pessimism might play a critical role in the psychological well-being of cancer patients. A study carried out in Germany investigated the role of optimism and pessimism on psychological well-being of 161 newly diagnosed cancer patients with heterogeneous cancers.[13] Patients were assessed for optimism/pessimism and positive/negative emotions before the start of their first chemotherapy session and at 9 months' follow-up. Before the start of chemotherapy, psychological well-being was associated with higher optimism and lower pessimism. The result showed that only pessimism predicted negative change in psychological well-being at the 9-month follow-up. Additionally only pessimism predicted heightened perception of chemotherapy-related side effects.[6]

Psychological factors have also been found to have significant influence on biological systems and this impacts disease progression and outcome. Stressful life events such as being diagnosed with a cancer activate the stress-response system which in turn affects a host of endocrine and immune functions. According to psycho-neuro-immunology theory by Robert Ader, the release of stress hormones and alteration of neurotransmitter levels suppresses the immune responses.[4]

Researchers have reported that natural killer cells perform an important role in the body's immune response to cancer growth. Stress response compromises immune response, leading to reduced natural killer cell activity and hence increases disease progression and risk of cancer recurrence .[14] Goodwin et al (2002) showed that breast cancer patient with poor adjustment and lack of social support had lower natural killer cell activity which predicted disease

progression and recurrence of cancer.[15]

WHY PSYCHOTHERAPY?

Psychotherapy has been proven to be beneficial as an adjunct therapy in cancer management and is applicable at different stages of cancer management. The availability of social support, such as being a part of a social network, has been found to correlate with decreased mortality in breast cancer. Overall, findings from related research suggest that even informal psychological support from close relatives willing to step in and provide needed care reduces mortality in cancer patients.[16]

Psychotherapy can be defined as treatment of emotional, behavioral, personality, and psychiatric disorders based primarily upon verbal or nonverbal communication and interventions with the patient, in contrast to treatments utilizing chemical and physical measures.[17] Psychotherapy is rooted in the idea of a mind-body connection, which recognizes that what a person experiences emotionally and mentally has effects on body functioning.

Psychological interventions can help patients adjust to the diagnosis and allay the apprehensions and fears that arise from painful procedures, unwanted side effect (hair loss, nausea/vomiting, fatigue, pain), disruptions to daily life, some questions that often occur during active treatment such as "will I survive this?" Or "will they get it all out?" or "what side effects will I experience?", and enhance patient's compliance with treatment procedures. In addition, in the post-treatment period psychotherapy could be beneficial in dealing with heightened distress, associated with a renewed sense of vulnerability that comes with the cessation of active medical efforts to fight the disease. Patients could also develop fears of recurrence, intensification of worries as the dates of follow- up appointments approaches leading to avoidance of regular follow up if patients do not have some form of psychological intervention.[6]

Adjustment to recurrence and palliative care often involves shifting expectations from cure to healing; healing involves a process of becoming whole again[18], transforming one's life in a variety of ways in the face of death. The patient who successfully adjusts to the crisis of recurrence is able to maintain hope and engage in a variety of meaningful life activities. For example, a patient who has confidence that pain and suffering can be controlled will have hope for future and an improved quality of life. Patients who believe they are loved and cared for will have hope in their future relationships. Religion and spirituality play a very important role in helping many patients maintain hope. Psychotherapy in this respect helps patient have a better quality of life.[6]

Generally, psychotherapy enhances compliance with medical treatment, reduces fears related to treatment procedures, reduces anxiety and depression, and helps patient communicate better with their physician. It also gives patient sense of support that helps them better able to continue coping despite their difficulties and improves their quality of life.

DIFFERENT MODALITIES OF PSYCHOTHERAPY

Psychotherapy can be both formal and informal. Informal psychotherapy, involves various forms of counseling or interactions between friends and confidants or someone considered older or wiser including religious clerics or elders in the society while formal psychotherapy involves formal therapy sessions with a professional. There are wide range of Psychotherapeutic approaches and techniques.

Examples include:

1. Counseling

A professional relationship and activity in which one person endeavors to help another to understand and to solve his or her adjustment problems; the giving of advice, opinion, and instruction to direct the judgment or conduct of another.[17]

2. Behavioral Therapy (behavior modification)

This therapy focuses on replacing problematic behavior patterns with more healthy responses. A behavioural therapist may use techniques such as biofeedback and muscle relaxation. This kind of therapy deals only with the symptoms of a problem.

3. Cognitive therapy also called Cognitive – behavioural therapy

Cognitive therapy is directed at changing thoughts and behaviors by addressing the repeated, faulty, negative thoughts that affect behavior. Cognitive therapist help people learn to reprogram harmful internal messages and create positive self- talk, or internal dialogue. This kind of therapy often includes homework assignments for the patient such as disputing disturbing thoughts, trying different responses to criticism, or making a list of things he or she likes about himself or herself. It also includes different forms of behavioral therapy. Several trials reported CBT to be very effective as a form of psychotherapy in Cancer patient.[19]

4. Client-centered therapy

This form of therapy focuses on the feelings and current experiences of the individual. The therapist encourages the patient to direct the sessions while providing empathy and support. The goal is to help patients help themselves.

The length of this therapy varies.

5. Family/Couples therapy

Family therapy focuses on relationship patterns. All family members may be involved in therapy sessions. A therapist involved in this type of therapy acts as a facilitator to help the family or couple communicate their feelings more effectively. Although usually short-term, this therapy can last longer depending on the needs of the individuals.

6. Group therapy

Group therapy varies widely in size and format, as well as in length. Some groups are small and meet weekly without a scheduled agenda. Others may meet monthly and offer information, teach coping skills, help reduce anxiety, and provide a place to share common concerns and emotional support.

7. Psychodynamic therapy

Similar to traditional psychoanalysis, the goal of this form of therapy is to change lifelong personality patterns by uncovering the connections between current emotional reactions and early childhood experiences. This form of therapy is long-term (lasting several years) and focuses on the underlying causes of a problem.

Whatever approach is used, the focus of therapy is on the emotional stress resulting from the illness; treatment of related mental disorders for example depression or anxiety; and to explore past or present issues that may affect the person's adjustment to the illness for example the person's previous experiences with loss in general and loss related to the current illness.

PSYCHOTHERAPY IN CANCER MANAGEMENT

The efficacy of psychosocial interventions in the management of adult cancer patients is well documented. Literature reviews have concluded that, in general, psychosocial interventions for cancer patients are beneficial.[6]

Available studies have used a variety of outcome measures in demonstrating the effects of psychosocial interventions in cancer treatment. Outcome measures that have been reported in the literature include emotional adjustment (e.g., depression, anxiety), improvement in functional outcomes (e.g., return to work, social roles), disease-related symptoms (e.g., nausea/vomiting, fatigue, pain), health behaviors (diet, smoking, exercise) and immune system functioning.[6]

In one study, involving 249 breast cancer patients, patient-partner dyads were randomly assigned to one of four groups: a control group receiving standard disease management (Surgery/Radiotherapy/Chemotherapy), a standardized psycho-education group, a group receiving telephone counseling, or a group receiving psycho-education plus telephone counseling. Patients and partners who received the study interventions had less side-effects distress and severity as well as higher levels of psychological well-being compared those who received standard care.[6]

A 1996 study reported weekly individual cognitive therapy and bimonthly family counseling improved both depression and quality of life in women with non-metastatic breast cancer. Research has generally shown that psychotherapy can help reduce anxiety and depression in people with cancer, help them make better use of their time, and return to work.[19]

In another study, researchers at the University of California school of Medicine in Los Angeles in 1999 showed that behavioral therapy was most useful in managing anxiety related to specific treatment concerns, such as phobic reactions to needles, fears related to surgery or chemotherapy, and claustrophobic feelings during magnetic resonance imaging (MRIs).[19]

The availability of social support, such as being part of a social network, has been found to be related to decreased mortality from breast cancer. In a longitudinal study of 2,835 female nurses with breast cancer, those who, before diagnosis, reported no close contacts (i.e., relatives, friends, or living children) had a twofold increased risk of mortality from breast cancer, compared with those who had more social contacts (i.e., 10 or more close relatives). This increased mortality was only found when comparing these two extremes in social ties, suggesting that women with relatively few social contacts or an intermediate number of contacts may not be at increased risk. Overall, the results of this study suggest that informal support from role of close relatives willing to step in and provide needed care was important in reducing mortality in breast cancer.[10]

In another study on women with recurrent breast cancer, significant impairments in physical, functional, and emotional well-being were found within 1 month after recurrence; however, a patient's self-efficacy (confidence in his or her ability to manage the demands of illness), social support, and family hardiness (family's internal strength and ability to manage hardship and change) had positive effects on quality of life. Conversely, more distress about physical symptoms, additional life concerns, a sense of hopelessness, and a negative perception of illness or care-giving were associated with a lower quality of life.[20]

Similarly, in a recent study of women with early-stage breast cancer and men who had been treated for early-stage prostate cancer with surgery or radiation who received a ten-week cognitive behavioral therapy group

course helped to reduce social disruption and improve their outlook, sense of well-being, ability to relax, an improved quality of life even up to one year after the therapy.[19]

In summary, different forms of psychotherapeutic interventions could be effective in reducing distress in patients with cancer.[6, 19] The National Comprehensive Cancer Network (NCCN), a group of twenty-one expert cancer treatment centers in the United States, now recommends that all patients with cancer be evaluated for emotional distress. People who are found to have higher distress levels during cancer treatment should be referred for counseling or psychotherapy. Screening and interventions for emotional distress should be incorporated into cancer management at periods when patients are more likely to experience distress, such as shortly following diagnosis, start of treatment (surgery, radiation, chemotherapy), conclusion of a long course of treatment, at recurrence, and with the transition to palliative care. Psychotherapy has become a standard complementary measure to improve the quality of life for people with cancer.[1]

CONCLUSION

Even with the recent advances in cancer management, cancer is still a leading cause of death and disease burden worldwide with associated significant impact on the psychological well-being of sufferers hence a need to include comprehensive psychological interventions in its management.

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PATTERN OF COMPUTED TOMOGRAPHY FINDINGS IN CHILDREN WITH HYDROCEPHALUS IN IBADAN

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ABSTRACT

Background

Hydrocephalus is the excessive accumulation of cerebrospinal fluid (CSF) due to excessive production or inadequate absorption with resultant dilation of the ventricles. The management of hydrocephalus even in developing nations now involves evaluation with a Computerized Tomography (CT) scanner. Due to high cost and significant economic constraints of the population only a small proportion of children have access to the modality. The CT of findings these patients usually determine the course of management and long term follow-up

Objective

to determine the pattern of findings in cranial CT examinations of children with hydrocephalus aged 16 years and younger.

Methods

A retrospective analysis of all the cranial CT scans performed at the University College Hospital, Ibadan over a period of 2 years between 2006 and 2007.

Results

Hydrocephalus was identified in 49 children with a mean age of 2.58 years (±3.56 SD). The occurrence of communicating hydrocephalus (63.3%) was higher than that of non-communicating hydrocephalus (36.7%) with males presenting more with non-communicating hydrocephalus compared with the females who presented equally with communicating and non-communicating hydrocephalus. The most common etiology was congenital and the most common presenting symptom was head enlargement.

Conclusion

CT is a useful tool in characterizing hydrocephalus in children. In some instances, it may not show the exact cause (such as that caused by an Arnold Chiari malformation), but can sufficiently distinguish communicating from con-communicating hydrocephalus. It is therefore an efficient imaging modality in the management and follow up of children with hydrocephalus

KEYWORDS

Computerized tomography, Hydrocephalus, Children

INTRODUCTION

The term hydrocephalus is derived from two Greek words: *hydro* for water and *kephale* for head. Hydrocephalus implies an excessive amount of cerebrospinal fluid (CSF), within the cavities of the brain known as ventricles[1]. Hydrocephalus is characterized by an imbalance of cerebrospinal fluid (CSF) formation and absorption[2]. It is usually manifested as a dilatation of the ventricular system. This dilatation causes potentially harmful pressure on the tissues of the brain[3].

Hydrocephalus may also be communicating or non-communicating. Communicating hydrocephalus occurs when the flow of CSF is blocked after it exits from the ventricles. This form is called communicating because there is a communication between the ventricular system and the subarachnoid space (fig 1). Non-communicating hydrocephalus - also called obstructive hydrocephalus - occurs when the flow of CSF is blocked along one or more of the narrow pathways connecting the ventricles such that there is no communication between the ventricular system and the subarachnoid space. One of the most common causes of hydrocephalus is aqueductal stenosis. In this case, hydrocephalus results from a narrowing of the aqueduct of Sylvius, a small passageway between the third and fourth ventricles in the middle of the brain.

There are two other forms of hydrocephalus which do not fit exactly into the categories mentioned above and primarily affect adults: hydrocephalus ex-vacuo and normal pressure hydrocephalus. Hydrocephalus ex-vacuo occurs when stroke or traumatic injury cause damage to the brain. In these cases, brain tissue undergoes atrophy and the ventricles enlarge to fill up the apace. Normal pressure hydrocephalus can occur at any age, but it is most common among the elderly. It may result from a subarachnoid haemorrhage, head trauma, infection, tumour, or complications of surgery. However, many people develop normal pressure hydrocephalus even when none of these factors are present for unknown reasons.

Cranial Ultrasonography (US) is an essential relatively inexpensive diagnostic tool in assessing hydrocephalus.

However it is operator-skill dependent and only useful in children with patent fontanels.

Both computed tomography (CT) and magnetic resonance imaging (MRI) are excellent modalities for evaluating the brain, but their routine use is often hindered by high cost and significant economic constraints of the population in developing countries allowing only a small proportion of children access to this vital imaging tools.

A contrast CT scan is the imaging of choice in patients with hydrocephalus, especially young children, as it can be performed without anaesthesia or sedation and can be done in a short time compared to a magnetic resonance imaging (MRI) scan which might require a patient to lie still for longer periods[4].

CT may be necessary in assessing the ventricular size in older children with closed fontanels. Adequate information regarding ventricular size, subependymal seepage of CSF, presence of infarcts, tumours, and presence of basal exudates can be obtained from a contrast-enhanced CT scan. Although a CT scan might indicate whether the hydrocephalus is obstructive or communicating in nature, this differentiation is not always possible.[4]

The findings of CT usually determine the course of management and long term follow-up

MATERIALS AND METHODS

The study was carried out in Department of Radiology, University College Hospital, Ibadan.We retrospectively reviewed all the cranial CT scans performed over a 2-year period, between 2007 and 2008. A total of 239 consecutive patients were included in the study. All cases aged less than 16 years, in which CT data were available, were evaluated.

RESULTS

A total of 1,987 CT scans were performed during the study period. The distribution of the studies performed is shown in table 1. Of all the 1609 cranial CT scans reviewed, a total of 241 were for children aged less than 16 years representing only 15%.

145 (60.2%) were males and 96 (39.8%) were females with a male to female ratio of 1.5:1.

The Cranial CT findings in the 241 patients evaluated revealed hydrocephalus in 49 (20.3%) patients having the highest frequency of radiological finding.

Table 2 shows the frequency distribution of other radiological findings.

Of the 49 cases of hydrocephalus, 20 (40.8%) were female and 29 (59.2%) were male. Eighteen (36.7%) of them were non-communicating hydrocephalus while 31 (63.3%) cases were communicating hydrocephalus. 10 females had communicating hydrocephalus and 10 females also had non-communicating hydrocephalus while 21 males had communicating hydrocephalus and 8 males had non-communicating hydrocephalus.

Table 1: Distribution of all studies performed between 2007 and 2008

STUDY	NUMBER	PERCENTAGE (%)
Brain	1609	81
Chest	40	2
Abdomen	118	6
Abdomen/pelvis	40	2
Cervical	40	2
Thoracic	20	1
L/s	40	2
Angiography	80	4
Total	1987	100

Table 2: Pattern of CT findings in study population

FINDING	NUMBER
Hydrocephalus	49 (20.3%)
Cerebral atrophy	28 (11.6%)
Skull fracture	23 (9.5%)
Tumors	11 (4.6)
Cerebral edema	7 (2.9%)
Intracerebral hematoma	10 (4.2%)
Subdural hematoma	7 (2.9%)
Epidural hematoma	4 (1.7%)
Other cases	64 (26.6%)
Normal studies	38 (15.8%)
Total	**241**(100%)

Table 3: Associated findings in patients with hydrocephalus

Associated findings	Number	Percentage (%)
Aqueduct stenosis	14	31.1
Meningitis	4	8.9
Dandy walker malformation	6	13.3
Ecephalocele	2	4.4
Absces s	2	4.4
Fracture	1	2.2
SDH	2	4.4
Posterior fossa tumors	3	6.7
Infarct	1	2.2
Porencephaly	1	2.2
Intracranial cyst -?arachnoid	1	2.2
Cerebral atrophy	4	8.9
Meningomyelocoele /meningocoele	4	8.9
Total	45	100

Table 4: Distribution of Type of Hydrocephalus by Gender

TYPE	MALE	FEMALE	TOTAL
Communicating	21	10	**31 (63.3%)**
Non-communicating	8	10	**18 (36.7%)**
Total	**29 (59.2%)**	**20 (40.8%)**	**49**

Table 5: Pattern of Clinical Presentation of Patients with Hydrocephalus

PRESENTATION	NUMBER (%)
Head enlargement	18 (36.7%)
Fever	8 (16.3%)
Headache	6 (12.2%)
Loss of consciousness	5 (10.2%)
Loss of developmental milestone	4 (8.2%)
Seizures	1 (2.0%)
Convulsions	1 (2.0%)
Vomiting	1 (2.0%)

DISCUSSION

Hydrocephalus is characterized by an imbalance of cerebrospinal fluid (CSF) formation and absorption. It is manifested as a dilatation of the ventricular system. About 55% of all hydrocephalus cases have congenital origin[2]. This slight increased prevalence of a congenital origin of hydrocephalus is reflected in our study population.

The two types of hydrocephalus are differentiated based on their communication or non-communication with the subarachnoid space[2] and the diagnosis usually depends on imaging with computed tomography (CT), magnetic resonance (MR) or Ultrasound. Hydrocephalus can accompany ventriculomegaly as a secondary process. Ventriculomegaly is a result of brain tissue atrophy and malfunction of CSF circulation. In some cases it is very difficult to identify primary hydrocephalus which leads to regressive changes and secondary hydrocephalus.

Diagnosis of the hydrocephalus is based on a correlation between clinical symptoms of elevated intracranial pressure and the image of dilated ventricular system[2].

A contrast CT scan is the imaging of choice in ill patients, especially children, as it can be performed without anaesthesia or sedation and can be done in a short time compared to a magnetic resonance imaging (MRI) scan which might require a patient to still lie for longer periods. Adequate information regarding ventricular size, subependymal seepage, presence of infarcts and tuberculomas, and presence of basal exudates can be obtained from a contrast-enhanced CT scan.

In developed nations, hydrocephalus has historically been most commonly due to myelomeningocele; with the post-hemorrhagic hydrocephalus of prematurity becoming at least as common in recent years.[5] Some reports have suggested that in central Africa the most common causes of hydrocephalus are neural tube defects and congenital aqueductal stenosis. Similarly, in Zambia, the ratio of congenital to "post-meningitic" hydrocephalus has been reported to be 2:1.[6] This etiologic pattern is identical to our series as the suspected causes of hydrocephalus identified by CT places congenital aqueductal stenosis ahead of recognised infective/ inflammatory changes usually reported in developing countries.

In contrast to the Zambian study, well-documented prospective series in East Africa have shown the aetiology of hydrocephalus to be 57% post-infectious, 29% non-post-infectious, and 13% myelomeningocele. Thus, neonatal meningitis / ventriculitis is likely the most common cause of hydrocephalus in East Africa.[6]

Despite the prevalence of malaria in Africa and case

reports of associated hydrocephalus, there is no clear relationship between its cerebral form and subsequent hydrocephalus.[7] On the other hand the pathophysiology of hydrocephalus in the setting of myelomeningocele is multifactorial: it may be secondary to obstruction at the aqueduct, ventricular outlet, craniocervical junction, or arachnoid granulations.

The clinical symptoms and presentation of hydrocephalus changes with the patient's age. Children before the age of two years present with symptoms of hydrocephalus like large head circumference, wide anterior fontanel with dilated scalp veins[2].

Our series show that a greater proportion of patients present before the age of 2 years- 30/49 (61.2%). This may be due to the dramatic changes that occur with the acuteness of the increase in the head size. Furthermore severe head enlargement of almost twice baby size has been recorded due to late presentation.

Older children will not present with increased head circumference, and often complain of the classic triad: headache, vomiting and lethargy.

Increased muscle tone and paralysis of upward gaze are also frequent at clinical examinations of these patients.

In ophthalmological examination atrophy of the optic nerves are presented. Children older than 2 years with obliterated fontanel tend to present with neurological symptoms of the increased intracranial pressure with normal head size. When dilated third ventricle compresses hypothalamic structures hormonal dysfunctions such as sexual maturation abnormalities, gigantism, and diabetes mellitus can be the first symptoms of hydrocephalus. Dilated ventricular system coexists with slightly dilated subarachnoid space in infants up to six months of age[8]. This condition may result from transitory immaturity of choroid plexus.

The most common cause of ventriculomegaly in children before age of two is atrophy of brain tissue as well congenital anomalies of corpus calossum, holoprosencephalon and lissencephalia[9].

Ophthalmological examination reveals optic nerve atrophy. Children older than two years with hydrocephalus and obliterated anterior fontanel have normal head circumference. They may often present clinical symptoms such as the atrophy of optic nerves and papilloedema of optic disc. The most common reason of hydrocephalus in children before two years of age is intraventricular haemorrhage in the perinatal period whereas in children older than two years is inflammatory process. Imaging examinations are needed not only to diagnose hydrocephalus but also to assess enlargement of the ventricular system during the therapy.

Another recognised cause of hydrocephalus are CNS tumours (the second common neoplasm disease in children beside leukaemia) filling the ventricular system [10,11]. The level of ventricular system enlargement depends on the tumour location. Metastases in the subarachnoid space and inside the ventricular system may occur in children treated from primary CNS neoplasm. They often block CSF outflow and may result in hydrocephalus. Children older than 2 years have another sequence of causes. First of all we should list inflammatory process of the brain which can include meningitis. Hydrocephalus can be an outcome of complicated or improper treated inflammation [12]. It can develop as a result of secondary scar lesions in a subarachnoid space. The next cause of hydrocephalus is subtentorial neoplastic process [11]. Posterior fossa tumours such as medulloblastoma, ependymoma and astrocytoma result in symmetric supratentorial ventricular system enlargement due to their location (*Fig.2*).

Among the causes of hydrocephalus in the group of elderly children, congenital anomalies of CNS such as arachnoid cyst which gives delayed neurological symptoms of elevation of the intracranial pressure can be found [13]. Imaging examinations make possible both diagnosis and establishing causes of hydrocephalus.

The most frequent cause of hydrocephalus with elevated ICP (intracranial pressure) in children before age of two is intraventricular haemorrhage in perinatal period [2]. The other known causes are the congenital inflammatory processes of the CNS such as TORCHES (toxoplasmosis, rubella, cytomegalovirus, herpes simplex, HIV and syphilis) which lead to brain damage.

Hydrocephalus as a symptom can coexists with such developmental anomalies like Dandy-Walker syndrome (Fig. 3), myelomeningocele or narrowed Sylvian aqueduct[11].

Hydrocephalus is often the result of head injury with intracranial haemorrhage in this group of children younger than 2 years.

The clinical exam is the most readily available investigation for the diagnosis of increased ICP, or infection.[14]

Cranial ultrasonography (US) is an essential diagnostic tool in developing countries: it can readily assess ventricular size with minimal training, and is relatively inexpensive. Depending on operator skill, the size of the fourth ventricle can be assessed on US as a proxy indication of the patency of the aqueduct.

This may be particularly relevant in stratifying patients for treatment with prosthetic shunts vs. endoscopic third ventriculostomy (ETV).[6]

Serial US imaging may be appropriate in patients with patent fontanelles who require frequent checks on their

status following some form of treatment.

All children with shunts should be followed up regularly, including baseline US within 3 months of surgery. Although acute changes from baseline may help in the subsequent diagnosis of shunt failure, up to a third of patients will not exhibit any evidence of ventriculomegaly.[14]

CT is an exceptional modality, but its routine use is mired by availability and cost in developing countries. Nevertheless, CT is necessary in assessing the ventricular size in older children with closed fontanels. Evidence of increased ICP in children with closed fontanels can also be obtained through direct measurement of CSF pressure by lumbar puncture: the CSF column height is measured in a piece of IV tubing connected to the spinal needle via a 3-way stopcock but this may be considered a little more invasive than CT[15]

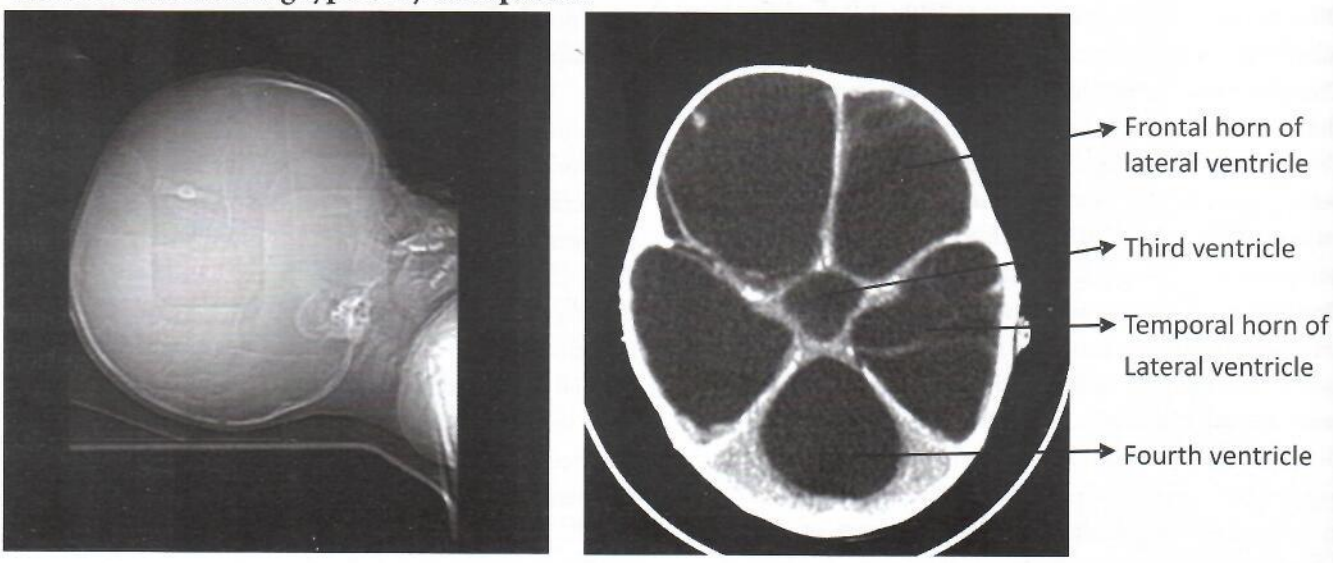
Performing CT examination or MRI we can estimate the degree of ventricular system dilatation [16]. Some measurements should be done; the width of the temporal horn in relation to the width of the body of lateral ventricle [2]. Enlargement of the temporal horn commensurately with the bodies of the lateral ventricles is a sign on differentiation of hydrocephalus to atrophy. Reduced ventricular angle made by line going through the medial wall of the frontal horn to the long axis of the brain is a sign of hydrocephalus. Imaging examinations differentiate the normal pressure and the elevated ICP hydrocephalus [17]. They reveal zone of periventricular brain tissue oedema which can be seen at the level of frontal horns of lateral ventricles. Another symptom of dilated ventricular system is smoothing out of cerebral cortex [8]. On sagittal reconstructed CT images, an assessment of the distance between mammilary bodies and brainstem or the size of recesses of the third ventricle can be made. However such measurements are best assessed with a high field strength MRI.

Treatment of hydrocephalus is usually based on two surgical methods; ventriculo-peritoneal shunt insertion in the case of communicating hydrocephalus and endoscopic third ventriculostomy in most cases of non communicating hydrocephalus.

CONCLUSION

CT is a useful tool in characterizing hydrocephalus in children. Despite its limitations of differentiating between communicating and non communicating hydrocephalus in a few cases, it is nevertheless an efficient imaging modality in the management and follow up of children with hydrocephalus

Fig 1. CT images of a 2 month Old patient presenting with head enlargement
(a) Scannogram showing craniofacial disproportion in favour of the cranium
(b) Contrast axial image of the same patient showing marked dilatation of all ventricles consistent with a communicating type of hydrocephalus.



(A) (B)

Fig 2. Contrast enhanced axial CT images showing the posterior fossa
(a) Huge heterogeneous posterior fossa mass compressing the fourth ventricle with resultant dilatation of the third and lateral ventricles in a patient with medulloblastoma.
(b) Relatively homogenously enhancing intraventricular mass within the fourth ventricle resulting in non communicating hydrocephalus.

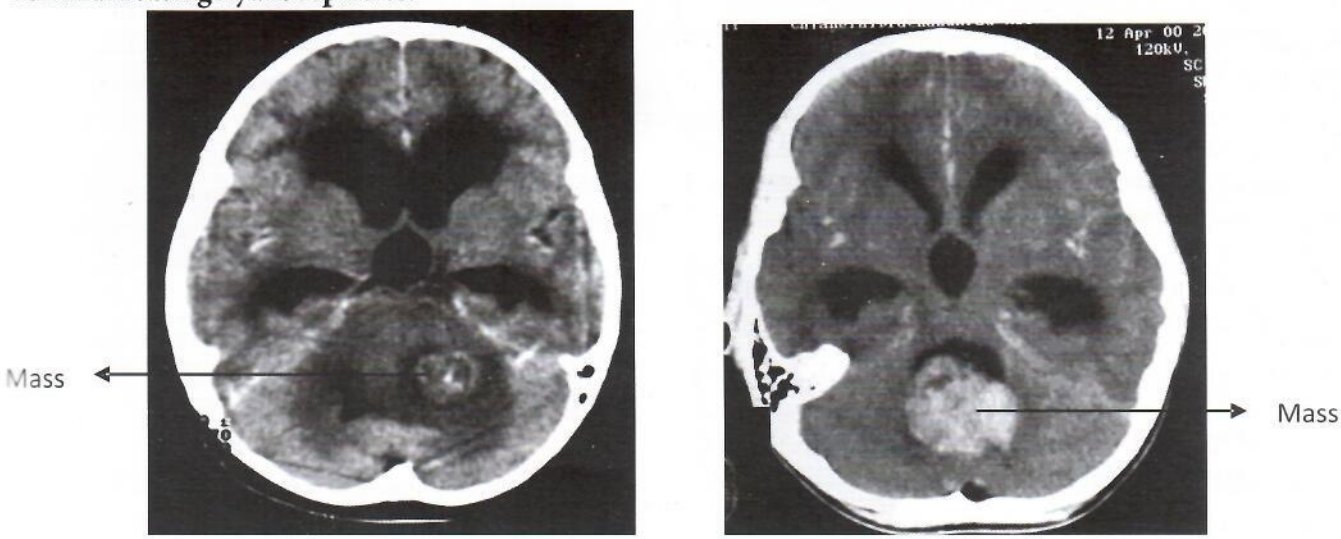
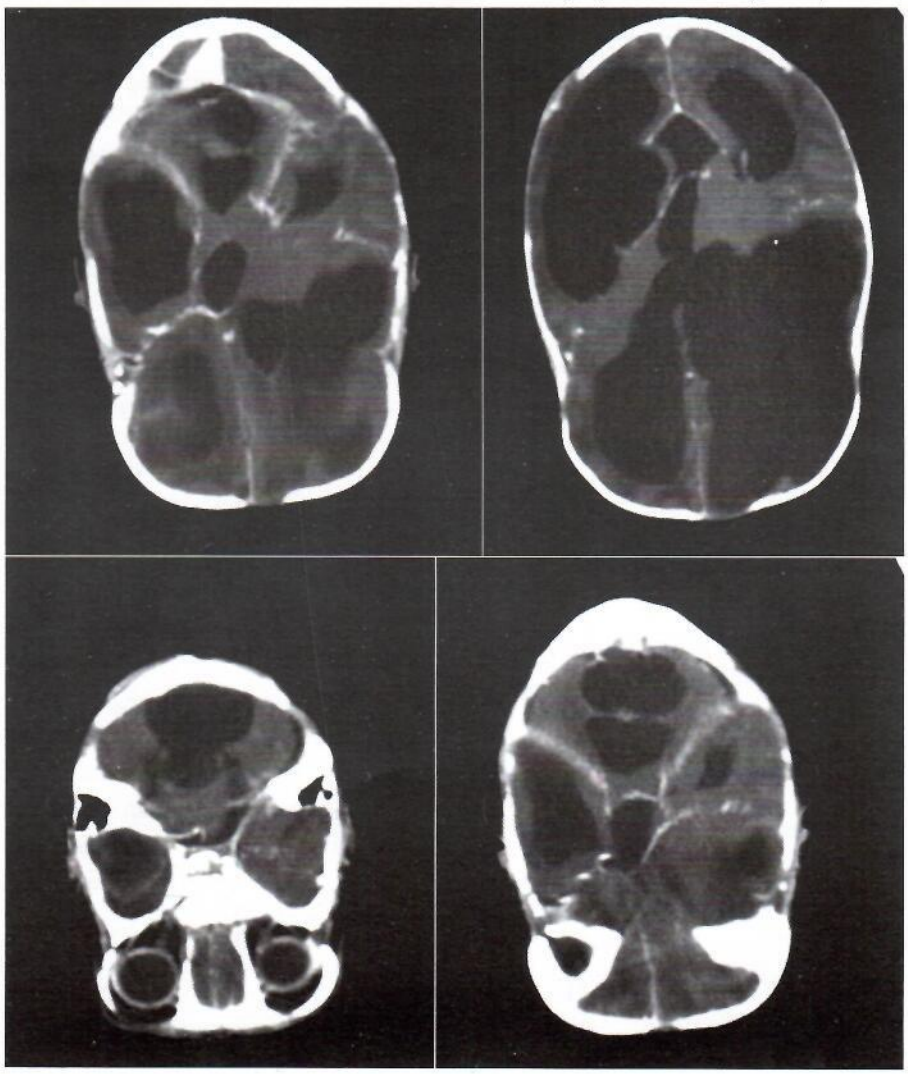


Fig 3. Contrast axial CT images of a 3 week -old patient showing congenital communicating hydrocephalus with a wide connection to a large cisterna magna, indicative of a Dandy Walker malformation. The CT also indicates severe cerebral atrophy and transependymal seepage of CSF.



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CLINICAL APPROACH TO PREMATURE RUPTURE OF FETAL MEMBRANES: Current Opinion

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KEYWORDS
Membrane rupture, Diagnosis, Treatment

ABSTRACT

Premature rupture of fetal membranes is a pathological event which poses major morbidity on both the mother and fetus when the diagnosis is missed. Premature rupture of fetal membranes is regarded as the most controversial topic in Obstetrics as numerous debates surround the optimal method of clinical evaluation and treatment. This article brings to your comfort the current views about the clinical condition and management plans based on researches, consensus and expert opinion.

INTRODUCTION

Premature rupture of fetal membrane (PROM) accounts for 30% to 40% of preterm deliveries and is the single most identifiable cause of prematurity[1]. A retrospective review[2] of 344 patients with PROM over 10-year period in University of Benin Teaching Hospital, Benin City, Nigeria revealed prevalence of 25 per 1,000 births. In about 95% of cases, it occurs near term. Preterm PROM (rupture of fetal membrane before 37 weeks gestation) complicates approximately 3% of pregnancies and accounts for 1/3rd of preterm births[3]. A pregnancy medically becomes viable at the end of 28 completed weeks of gestation in the developing countries and 22 completed weeks of gestation in the developed countries. Whether the period of gestation is known or not, a fetal weight of less than 500g is described as the weight of an unviable fetus.

There is however a significant association between the gestational ages of membrane ruptures and the complications. PROM increases the risk of prematurity and accounts for 1-2% of fetal death[4]. Hence, adequate knowledge and skills are highly needed by all physicians to critically evaluate, manage (and if possible refer) a patient with PROM. It is worthy of note that mortality rate for premature infants is still high in the developing countries (520 per 1,000 births)[1] but it outweighs the potential risk of sepsis after PROM. A retrospective study[5] done to evaluate the quality of management of PROM at Ibn Sina Maternity Hospital, Rabat, Morocco identified that there were poor client reception, inadequate patient processing from examination to admission, late detection of risk factors, delayed decision – making upon intervention, poor post – delivery care of mothers and newborns.

In this light, rapid and accurate diagnosis with appropriate management can result in better outcome.

PATHOLOGY

In a study[6] done by Mercer B.M. et al, where a total of 2,929 women were evaluated at 23 to 24 weeks gestation, the combination of short cervix ($\leq$ 25mm), previous preterm birth caused by PROM, positive fetal fibronectin screening results was highly associated with preterm delivery caused by preterm PROM.

The effect of the physiologic changes combined with shearing forces generated by uterine contraction at term may weaken the membrane leading to PROM at term [7, 8]. At earlier gestational ages, intrauterine infection has been shown to play a major role in PROM [9]. Other factors associated with increased PROM include:

a. Low socio-economic status (as women in lower socioeconomic conditions are less likely to receive proper prenatal care)

b. Sexually transmitted infections

c. Cervical conization

d. Cigarette smoking during pregnancy[7,10-12].

e. Negoid race[13]

f. Uterine distention (multiple pregnancy, polyhydraminos)[14]

g. Procedures like cervical cerclage and aminocentesis

h. Choriodecidual infections[15]

i. A reduction in the membrane collagen content[16]

j. Prior antepartum antibiotic treatment

k. Cervical incompetence[1]

The common pathogens for PROM in a Nigerian teaching hospital[17] include *Gardnerella* (29.1%), *Candida* (23%), *and Staphylococcus aureus* (18.7%). Others are

Streptococcus pyogenes (16.6%), coagulase-negative *Staphylococcus* (6.3%) and *Klebsiella* (6.3%). It is evident in the study[17] that *G. vaginalis* was the most common organism.

DIAGNOSIS

Many patients complain majorly of sudden gush with continued leakage of fluid, vaginal discharge, vaginal bleeding, and pelvic pressure. The physicians should further ask for abdominal pain, not necessarily contractions, history of recent intercourse, fever, headache, reduced fetal movement, nausea and vomiting, and diarrhoea. It is very important to rule out urinary tract infections (UTIs).

The patient's estimated due date should be verified. Cervical dilatation and effacement should be evaluated using a sterile speculum.

A digital cervical examination should be avoided as the morbidity and mortality increases [18, 19] and causes an average 9-day decrease in the latent period[20]. It may lead to adverse sequelae such as infections. In a prospective study[21] carried out by Munson LA et al, it was found that the difference between digital and speculum examinations was not clinically significant. Speculum examination is preferred.

PROM is further determined with the leakage of liquor from the cervical os as the patient coughs (or the valsalva manoeuvre).

The diagnosis is made by using Nitrazine paper which turns blue with the alkalinity of amniotic fluid (pH of 7.1 to 7.3). Blood contamination, semen, alkaline antiseptics, *bacterial vaginosis* can invalidate the result. Ferning or aborization on a low-power microscope further indicates PROM. The crystallization is said to be due to reactions resulting from amniotic fluid protein and salts. The sensitivity of using both methods is 90%[22]. The presence of ferns may be obscured by vaginal blood. Swabbing of the cervical mucus from the external cervical os yields false – positive results. The result with a little amount of amniotic fluid in the vagina is unreliable.

During the speculum examination, the physician must carry out cervical culture and DNA probe for *gonorrhea* and *Chlamydia* because both organisms are 7 times more common in women with PROM[23]. After the speculum examination, vaginal and perianal swabs for the culture of *group B - streptococcus* should be obtained.

In doubtful situations, ultrasound may be helpful. Ultrasound will also help to determine the lie, position and estimated fetal weight. If the diagnosis is still in question, Amniotic Fluid Index (AFI) is done. If doubt still exists, transabdominal instillation of 1 ml of indigo carmine dye in 9ml of sterile saline under ultrasound guidance can be done. Rupture of fetal membrane is confirmed by the passage of the dye into the vaginal tampon within 30mins. The use of methylene blue dye should highly be discouraged as it has been shown to be associated with hyperbilirubinemia and hemolytic anemia in infants[24].

Blood test must include full blood count (especially white blood cell), C - reactive protein (which is raised in infection), and clotting studies.

TREATMENT

The management of PROM is controversial, a complex endeavor requiring coordinated expertise of several specialists in various disciplines - Obstetrician, Perinatologist, Radiologist, Social workers, and Midwives.

The initial management is determined by the gestational age and the presence or absence of an intra-amniotic infection.

The mother must be rehydrated and given analgesic to make her comfortable. The mother with her family members is counseled about the risk of PROM.

In a prospective observational study[25] of 78 women with confirmed PROM at less than 28 weeks, conservative management of patients offered a survival rate of at least 40% with no serious complications.

Preterm PROM is more complicated than PROM at term. Severe neonatal complications follow delivery before 32 weeks gestation. Therefore, efforts should be made to prolong the pregnancy until 34 weeks gestational age[26].

About 90% of patients with PROM go into spontaneous labor within 24 hours to 1 week of drainage of liquor. Administration of broad-spectrum antibiotics and delivery are necessary regardless of gestational age in any patient with evidence of intra-amniotic infection (maternal temperature > 38°C, fetal tachycardia, fundal tenderness, foul or purulent vaginal discharge, maternal tachycardia, elevated C-protein level or by amniocentesis, positive gram stain finding, glucose <20mg/dl, positive amniotic fluid, culture results of anaerobic or aerobic orgaisms.[27]

Ofloxacin and azithromycin are 100% active against all the isolated pathogens, while ampicillin is the least active[17] *G. vaginalis* was the most sensitive while *coagulase -negative staphylococcus* and *klebsiella* are the least sensitive based on a study[17] by Aboyemi A.P et al in the University of Ilorin Teaching Hospital, Nigeria. They suggested that metronidazole should be added to azithromycin to cover for both aerobes and anaerobes in centers where facilities for screening of anaerobes are not available.

Other contraindications to conservative management include abruptio placentae and non-assuring fetal testing. Reduced fetal heart rate variability is not a sensitive sign in preterm infants. Assessment should be made by fetal

monitoring or ultrasound.

A patient with pregnancy not more than 32 weeks gestational age and has evidence of fetal lung maturity should be delivered but if gestational age is less than 32 weeks, a course of antibiotics and corticosteroids should be administered and daily fetal monitoring done. The use of antibiotics has been associated with prolongation of pregnancy and reduction in infant and maternal morbidity. Prolonged use of antibiotics may give rise to ampicillin – resistant *E. coli*[27].

For patients at 32 to 33 weeks with evidence of pulmonary maturity, amniocentesis and induction of labour should be considered with caution. Pulmonary maturity can be predicted antenatally using lung lengths and/or thoracic circumference ratios[28]. Physicians should administer a course of corticosteroids and antibiotics when there is no evidence of fetal lung maturity and consider delivery after 48 hours or observe and monitor for intra-amniotic infection and deliver at 34 weeks gestation[29].

At 34 to 36 weeks, physicians should avoid prolongation of pregnancy. Evidence supports the idea that induction of labor decreases the risk of choriomnionitis without increasing the Caesarean delivery rate[29]

In a randomized trial[30] of 5041 women with PROM who were assigned to induction of labor with intravenous oxytocin or vaginal prostaglandin E2 against expectant management for as many as 4 days before the induction of labour, there was similar rate of Caesarean delivery and neonatal infections. However, induction of labour resulted in a lower risk of maternal infection.

COMPLICATIONS

Preterm delivery is one of the most common obstetric complications. A study[30] of patients at term revealed that 95% of the patient delivered within approximately 1 day of PROM whereas another study[4] of women between 16 and 26 weeks gestation revealed that 57% delivered within 1 week.

Other complications are cord compression (32 to76%), chorioamnionitis (13 to 60%), respiratory distress syndrome (35%), abruptio placentae (4 to 12%), malpresentation, oligohydraminos, necrotizing enterocolitis, neurologic impairment, intraventricular hemorrhage, antepartum fetal death (1 to 2%).

Naef concluded from a study[31] done on PROM women between 34 to 37 weeks gestation that there is an increased risk of chorioamnionitis and a low average umbilical cord pH for conservation management between 34 to 36 weeks. The risk of infection increases with duration of rupture of membrane and an AFI less than 2.0cm.

In pregnancies complicated by preterm PROM, lower than expected measures of fetal size and fetal growth were associated with an increased rate of infant neurodevelopment outcome at 2-year follow-up.[32] The residual amniotic fluid volume after preterm premature rupture of membrane does not appear to correlate with fetal growth suggesting that the increased rate of fetal growth restriction in PROM is not secondary to oligohydraminos but intrauterine pathologic process.[33]

PREVENTION OF COMPLICATIONS

1. Early diagnosis of PROM[5]
2. Maternal and fetal monitoring
3. Avoid digital examination[21].
4. Interdisciplinary management involving Obstetrician, Perinatologist, Radiologist, Social workers and Midwives.
5. Corticosteroid administration reduces the risk of Respiratory Distress Syndrome by 15.4%, Intraventricular haemorrhage by 8.4% and nectrotizing enterocolitis by 3.8%.[29]
6. Antibiotics therapy decreases postpartum endometritis, chorioamnionitis, neonatal sepsis, neonatal pneumonia, and intraventricular haemorrhage.[27]
7. Tocolytic therapy is recommended in the absence of intra-amniotic infection to allow time for lung maturity during corticosteroid administration.[34]

CONCLUSION

There is a need for a formulation of protocol for the management of preterm premature rupture of fetal membranes in each center to facilitate the optimum management of these patients. Each center must have an idea of how well neonates at various gestational ages do at their centers. The overall goal is to manage the patient conservatively till a gestational age at which neonatal morbidity and mortality is reduced to minimum and delivery before infection

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FACTORS INFLUENCING FOOD CHOICES AMONG UNDERGRADUATES OF TWO SELECTED UNIVERSITIES IN SOUTH-WEST NIGERIA

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KEYWORDS
Factors of food choices, Youths, Undergraduates, Discipline, Fast food

ABSTRACT

Factors influencing food choices have been observed to be fundamental to the eating habits and health status of an individual. There is paucity of data on factors influencing food choices among undergraduates in the first generation universities in south west Nigeria. This study was therefore designed to fill this gap in knowledge.

A descriptive survey research design was carried out at Obafemi Awolowo University, Ile-Ife and the University of Ibadan, between November 2009 and February 2010. A self-developed 18-item questionnaire was used for the study. Descriptive statistics of frequency and percentage were used for the demographic data and inferential statistics of t-test and analysis of variance (ANOVA) were used to test the hypotheses.

Undergraduates surveyed were 431 but 398 were analyzable which made 92.3 %(10 were wrongly filled and 23 not returned). Males 203 (51%) and females 195 (49%). Age range 16-20 were 127(31.9%), 21-25 were 271(68.1%). Results show that gender, age and level of study did not have any significant effect on food choices made by respondents ($P > 0.05$). Medical and health science students had lower perception than non medical students about the factors that influence food choices (socio-economic factors and convenience of fast food) ($P < 0.05$). Convenience of fast food affected more students from Obafemi Awolowo University than those from the University of Ibadan ($P<0.05$).

Undergraduates generally make food choices undermining health implications, suggesting that, health education intervention should be employed to assist undergraduates in making informed food choices beneficial to health.

INTRODUCTION

Food choices have been the focus of many recent studies especially as the food eaten by an individual predispose to or prevent the onset of many chronic diseases. The amount and type of food consumed are fundamental determinants of human state of health. It is no gain saying that good health is an important economic asset. Small changes made in the selection of food will make a big difference on the overall balance of nutrients [1,2,3]

There are many factors that determine what people eat. In addition to personal preferences which are very common, there are cultural, social, religious, economic, environmental, political, media influences, peer and food vendor pressure, ease or convenience of preparation among others. Studies have revealed the vulnerability of youths to poor eating habits[2]. They are said to be more interested in fast food or "Junk" (convenience) eating. This is particularly so when they leave home and catering for themselves for the first time [4,5,6,7]. Most of their choices of food result in unhealthy diet which may predispose them to many chronic diseases like cancer, hypertension, heart disease, arthritis, obesity and others, many of which will affect the length and quality of life in future [6,7,8,7]. It was reported that the shift in dietary habits in the developing countries towards the "affluent" or western diet that is prevailing in many developed countries has been followed by increases in the incidence of various chronic diseases of middle and later adult life[9,10]. Many undergraduates may have no concern or appreciation for what the future will bring if they failed to eat properly. Thus, individuals at this stage need guidance [9,10].

The aim of this study therefore was to examine some of the common factors that influence food choices among undergraduates in two of the first generation universities that have a good national spread in their selection of students in South-West, Nigeria so that appropriate health education intervention may be put in place if indicated.

MATERIALS AND METHODS

This is a descriptive survey design study. The study was carried out at the University of Ibadan, Ibadan and Obafemi Awolowo University, Ile-Ife, between November 2009 and February, 2010. Undergraduates of not more than 25 years of age, male and female were selected using simple random sampling technique. A self structured 18-item questionnaire was used to elicit their perception on

factors influencing food choices namely: socio-economic factors, media influence convenience of fast food and peer pressure. Demographic characteristics such as age, sex, level of study and discipline (Medicine/ health sciences and others not medically related) were collected maintaining confidentiality. Data were analyzed using SPSS version 15. Frequencies were determined; t-test and analysis of variance (ANOVA) were used to analyze associations between categorical variables. Level of statistical significance was set at $P < 0.05$.

RESULTS

A total of 398 questionnaires were analyzable (10 not properly filled and 23 not returned) out of the 431 respondents that were given questionnaires, giving a total of 92.3% that were analyzable. There were more male participants in the study than females 203:195 (51% to 49%); age range from 21-25 years was more than the age range of 16-20 years in the study 271:127 (68.1% to 31.9%). Medical and health sciences students were 111(27.9%) while others (none medically related) were 287(72.1%). Students in 100-200 level were 189 (47.5%); 300-400 level were 178 (44.7%) and 500-600 level were 31 (7.8%) (Table1). The variables analyzed are presented in tables 2-6. Sex, age and level of study did not have any significant effect on the food choices made by the respondents ($P>0.05$) (Tables 2, 3, 4). Socio-economic influence and convenience of fast food significantly affected the food choices of the students ($P<0.05$). Medical and health-related sciences student were more affected compared to other students since the mean score was higher in other students, indicating better understanding, while media influence and peer pressure did not significantly influence the food choices of the students ($P>0.05$) (Table 5). Convenience of fast food significantly affected food choices of the students in the two universities ($P<0.05$), but the students from the university of Ibadan had a better mean score, which indicates that they are better informed concerning fast food than their counterparts from Obafemi Awolowo university. Other factors (socio-economic, media influence and peer pressure) did not affect food choices of students in both universities significantly ($P>0.05$) (Table 6).

DISCUSSION

There is currently great global interest in the making of food choices. This is because appropriate dietary food choices are recognized to promote health and reduce the risk of diseases, morbidity and mortality. The data from this study indicate that food choices were made out of convenience rather than healthy life style in both Universities. It was revealed that sex, age and level of study were not significant factors influencing food choices among the students. This is surprisingly different from findings in other studies where sex and age have been reported to strongly determine food choices [11,12].

In the analysis that compared the perception of medical students and students of other health-related disciplines with those from other disciplines that are not in the medical field, the result was statistically significant revealing that the other group (non medical) of students had a better perception of socio-economic influence and convenience of fast food than medical students by contributing a higher mean score to the significance. This implies that they can make informed choices that do not negatively affect their food selection than they affect the medical and health science related students. This is rather surprising as one would have expected the students in the medical field to demonstrate better understanding of these issues than the non-medical or health science students. This however, points to the fact that having knowledge does not necessarily guarantee better practice or perception. This is in line with the finding of other studies where it was observed that knowledge does not necessarily change behaviour which is complex [8, 13]. However, in the area of media influence and peer pressure, students of medical sciences and others exhibited no significant difference, implying that they have similar disposition to these two factors. This also confirms that all the students irrespective of their disciplines need health education to make informed choices that will promote health.

The perception of the students in both universities concerning factors that affect food choices was not significantly different in the way that they are influenced by socio-economic factors, media influence and peer pressure influence($P>0.05$). It is surprising that these variables were not significant. This finding is at variance with reports from other studies [4, 5, 9] where it was observed that students are usually influenced by socioeconomic factors, media influence and peer pressure. However, there was a significant difference ($P<0.05$) in the perception of the convenience of fast food. The university of Ibadan students had a better perception than Obafemi Awolowo University students as suggested by a higher mean score. This implies that the Obafemi Awolowo university students feed more on fast food than the University of Ibadan students. One may also assume that the University of Ibadan students may have more healthy meals than fast foods around their campus than Obafemi Awolowo University. The difference may also be because the university of Ibadan students are relatively more cautions of fast food as a result of many nutritional

seminars held frequently in the institution promoted by the department of Nutrition and Dietetics. The convenience of fast foods and their ready availability have been documented in literature to be a major factor affecting food choices among most youths [5, 9, 14]. Health education intervention may help to bridge the gap suggested by this later finding.

CONCLUSION

Youths have been particularly observed to be guided more by convenience than health benefits in making food choices. Health education focusing on nutrition may help to improve the perception of these young undergraduates in making healthy food choices especially in the areas where they lack adequate knowledge. This is very important since inadequate food choices predispose to chronic diseases like cancer, hypertension, cognitive impairment among others and foster optimum health among our youths who are the future of our nation. This is in line with the suggestions of other investigators that health promotion and education are the key factors to bring about behaviour change [13,14,15].

Table 1: Socio Demographic Characteristics of undergraduate
N = 398

Characteristics	Frequency	Percentage (%)
Sex		
Male	203	51.0
Female	195	49.0
Age:		
16 – 20	127	31.9
21 – 25	271	68.1
Discipline		
Medicine/health related sciences	111	27.9
Others(Non health related)	287	72.1
Level of Education		
100 – 200	189	47.5
300 – 400	178	44.7
500 – 600	31	7.8

Table 2: Effect of Sex on factors influencing choices

Variable	Sex	N	Mean	Sd	t-value	df	Sig. (2 tailed)
Socio-Economic	Male	203	10.0739	2.8055	-1.235	396	0.217
	Female	195	10.4462	3.1997			
Media Influence	Male	203	7.4483	1.8856	-1.243	396	0.215
	Female	195	7.6718	1.6914			
Convenience of Fast food	Male	203	10.2118	3.0555	1.027	396	0.305
	Female	195	9.9077	2.8415			
Peer Pressure	Male	203	9.9458	1.8780	.907	396	0.365
	Female	195	9.7641	2.1166			

P>0.05(Not significant) in all variable

Table 3: Effect of Age on factors influencing food choices

Variable	Age in years	N	Mean	Sd	t-value	df	Sig. (2 tailed)
Socio-Economic	16 – 20	127	10.2677	3.1382	.052	396	0.959
	21 – 25	271	10.2509	2.9495			
Media Influence	16 – 20	127	7.6693	1.8519	.848	396	0.397
	21 – 25	271	7.5055	1.7678			
Convenience of Fast food	16 – 20	127	10.2047	2.8068	.656	396	0.512
	21 – 25	271	9.9963	3.0215			
Peer Pressure	16 – 20	127	9.8819	1.9257	.171	396	0.864
	21 – 25	271	9.8450	2.0344			

P>0.05(Not significant) in all variables

Table 4 (i): Effect of educational level on socio-economic factors

Source of Variation	Sum of square (SS)	df	Mean square (MS)	F	P-value
Main effects level	10.660	2	5.330	.588	.556
Explained	10.660	2	5.330	.588	.556
Residual	3589.859	395	9.061		
Total	3589.859	397	9.042		

P>0.05(Not significant)

Grand mean=10.26< 100-200 level=10.08, 300-400 level=10.40, 500-600 level=10.45>

Table 4 (ii): Effect of educational level on Media influence

Source of Variation	Sum of square (SS)	df	Mean square (MS)	F	P-value
Main effects level	4.608	2	2.304	.715	0.490
Explained	4.608	2	2.304	.715	0.490
Residual	1273.563	395	3.224		
Total	1278.171	397	3.220		

P>0.05(Not significant)

Grand mean=7.56< 100-200 level=7.66, 300-400 level=7.44, 500-600 level=7.65>

Table 4 (iii): Effect of educational level on convenience of fast food

Source of variation	Sum of square (SS)	df	Mean square (MS)	F	P-value
Main effects level	11.423	2	5.712	.654	0.521
Explained	11.423	2	5.712	.654	0.521
Residual	3450.007	395	8.734		
Total	3461.430	397	8.719		

P>0.05(Not significant)

Grand mean=10.06< 100-200 level=10.02, 300-400 level=10.01, 500-600 level=10.65>

Table 4: (iv): Effect of educational level on Peer pressure

Source of variation	Sum of square (SS)	df	Mean square (MS)	F	P-value
Main effects level	4.044	2	2.022	.505	0.604
Explained	4.044	2	2.022	.505	0.604
Residual	1580.793	395	4.002		
Total	1584.837	397	3.992		

P>0.05(Not significant)

Grand mean=9.86< 100-200 level=9.91, 300-400 level=9.76, 500-600 level=10.10>

Table 5: Factors of food choices of Medical & Health Sciences Students and Others (Not medically related)

t-test	Discipline	N	Mean	F	t	df	Sig. (2 tailed)
Socio-Economic	Medicine & health related Others	111 287	9.6937 10.4739	.018	-2.334	396	0.020*
Media Influence	Medicine & Health related Others	111 287	7.5946 7.5436	3.690	.254	396	0.799
Convenience of Fast food	Medicine & Health related Others	111 287	9.4865 10.2857	.108	-2.437	396	0.015*
Peer Pressure	Medicine & Health Related Others	111 287	9.5586 9.9721	12.599	-1.858	396	0.064

*P<0.05(Significant)

Table 6: Perception of students in both universities (OAU and U.I) on the factors influencing food choices.

t-test	Treatment Groups	N	Mean	Sd	t	df	Sig. (2 tailed)
Socio-Economic	OAU U.I	225 173	10.3422 10.1445	2.9781 2.9951	.650	396	0.516
Media Influence	OAU U.I	225 173	7.6089 7.4913	1.5689 1.8766	.647	396	0.518
Convenience of Fast food	OAU U.I	225 173	9.8000 10.4046	3.0147 2.9032	-2.033	396	0.043*
Peer Pressure	OAU U.I	225 173	9.9111 9.7861	2.4147 1.8030	.618	396	0.537

*P<0.05(Significant)

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SUDDEN INFANT DEATH SYNDROME

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KEYWORDS

Prone sleeping position, bed sharing, sudden infant death syndrome

ABSTRACT

Sudden infant death syndrome(SIDS) is defined as 'the sudden death of an infant under one year of age, which remains unexplained after a thorough case investigation, including performance of a complete autopsy, examination of the death scene, and review of the clinical history'[1]. SIDS is the leading cause of death for infants aged between 1 month and 1 year in developed countries[2].

A Triple Risk Model was proposed in 1994 which suggest that SIDS occurs when three factors are present simultaneously. The first factor is an underlining vulnerability in the infant; the second, a critical developmental period; and the third, an exogenous stressor[3].Petechial Haemorrhages of the thymus gland, visceral pleura, and epicardium occur in 68-95% of SIDS deaths and are generally more extensive than in non-SIDS deaths. Prone and side sleeping position, maternal smoking in pregnancy, bed sharing for infants of mothers who smoked and head covering have all been identified as major modifiable risk factors for SIDS[4].

SIDS can be prevented and application of all our knowledge concerning the syndrome will help reduce its incidence.

INTRODUCTION

In 1969, a National Institutes of Health consensus conference led to the first standardized definition of sudden infant death as the 'sudden death of an infant or young child, which is unexpected by history, and in which a thorough post mortem examination fails to demonstrate an adequate cause of death'. Subsequent modifications of the definition restricted its application to infants under the age of 12 months, added the requirement of a death-scene investigation, or linked the death to a sleep period[5].

No single definition of SIDS is universally accepted, and contradictions among SIDS studies are due to the use of various definitions of the syndrome around the world.

EPIDEMIOLOGY

Among the industrialized nations, Japan has the lowest reported SIDS rate (0.09 case per 1000 infants), New Zealand has the highest rate (0.80 per 1000), and the United States has an Intermediate rate (0.57 per 1000).

In the United States, infants who are African American, Native American, or Alaska Native have SIDS rates that are two to three times the national average, irrespective of socioeconomic class[6].

There is dearth of data concerning the incidence of SIDS in Nigeria and West Africa.

SIDS occurs less frequently in the first month of life, peaks between 2 and 4 months of age, and decreases thereafter. Around 90% of SIDS deaths happen in the first 6 months of life. Boys are more likely to die than girls, at a ratio of 60:40[7].

RISK FACTORS

Risk factors for SIDS can be divided into extrinsic and intrinsic categories. Extrinsic risk factors are physical stressors that would place a vulnerable infant at risk for asphyxia or other homeostatic derangement[8]. Such extrinsic factors include:

Prone and side-sleeping positions; Infants placed supine (back) to sleep are at the lowest risks of SIDS.

Bedclothes that cover the head

Sleeping on sofas or other soft furniture in which the infant could become wedged

A high ambient temperature in the sleeping environment

Soft bedding

Bed sharing: The risk of SIDS with Bed sharing is higher in young infants.

The intrinsic factors are postulated to affect the underlying vulnerability of the infant and thus increase the risk of SIDS. Intrinsic factors can be:

Genetic: Polymorphism in the gene encoding the promoter region of the serotonin transporter, male sex and siblings of SIDS victims.

Developmental: Prematurity

Environmental: Perinatal exposure to smoking, parental smoking, ethanol intake, or drug use, socioeconomic disadvantage.

Many studies suggest that breastfeeding has a protective effect against SIDS.

PATHOGENESIS

A Triple Risk Model was proposed in 1994 which suggest

that SIDS occurs when three factors are present simultaneously. The first factor is an underlining vulnerability in the infant; the second, a critical developmental period; and the third, an exogenous stressor.

Clinical observation in infants, analysis of heart-rate and respiration recordings in infants who subsequently died of SIDS, and physiological studies in animal models provide compelling evidence for a respiratory pathway in the majority of SIDS deaths. The respiratory pathway to SIDS can be divided into five steps[9].

First, a life-threatening event (which may occur in any infant during sleep) causes severe asphyxia, brain hypo perfusion, or both. Such life-threatening events include rebreathing of exhaled gases in the face-down position or in the face-covered (supine) position, reflex apnoea originating from the laryngeal chemo reflex, and obstructive apnoea due to gastric regurgitation. The laryngeal chemo reflex consists of reflex apnoea and swallowing in response to the activation of receptors in the laryngeal lumen by water or gastric contents; it occurs early in life and disappears thereafter, although the precise time in infancy is unknown.

Second, the vulnerable infant does not wake up and turn his or her head in response to asphyxia (combined hypoxia and hypercapnia), resulting in rebreathing or an inability to recover from apnoea.

Third, progressive asphyxia leads to a loss of consciousness and areflexia, a so-called hypoxic coma, a step that is hypothesized to occur on the basis of extrapolations from studies in animals that indicate the rapid development of coma when a critical level of the partial pressure of arterial oxygen is reached (approximately 10 mm Hg) or when hypo perfusion results in extreme brain hypoxia.

Fourth, extreme bradycardia and hypoxic gasping ensue, changes that are evident in the terminal-event recordings in infants who were being monitored at home at the time of death from SIDS.

Fifth, in vulnerable infant, auto resuscitation is impaired-a second defence failure- because of the ineffectual gasping, which results in uninterrupted apnoea and death. Recordings in the same infants over time indicate that SIDS is not always a "sudden" disorder; rather, death may be preceded by a vicious cycle of episodic tachycardia, bradycardia, or apnoea hours and even days before the lethal event. Evidence of intermittent hypoxia in infants with SIDS includes markers of chronic tissue hypoxia, such as brain-stem gliosis and apoptosis.

Another hypothesis suggests three common factors as potential contributors to SIDS which include: bacteraemia, genetic predisposition to insufficient pathogen recognition pattern and prenatal infectious events that affect organ growth and/or the developing immune system[10].

DIAGNOSIS

By definition, SIDS is a diagnosis of exclusion. Protocols for standardised autopsies and death scene investigations in sudden unexpected infant deaths have been published. Although autopsies are crucial in identifying the cause of death in many kinds of sudden infant death, such as infections, congenital abnormalities and trauma, deaths from suffocation are often difficult to diagnose from an autopsy alone. Thus examination of the circumstances present immediately before death, including detailed description of the infants sleep environment, has become increasingly emphasized in recent years[11].

Several classification schemes for sudden unexpected infant death have been developed as a way to standardize the assignment of cause of death on the basis of autopsy, scene investigation, and clinical information. Reaching a consensus internationally on a classification scheme is essential to accurately monitor trends in sudden infant death and to make appropriate use of data obtained through the autopsy and death scene investigation.

AUTOPSY FINDINGS

Although there are no pathognomonic autopsy findings for SIDS, there are several common findings. Petechial haemorrhages of the thymus gland, visceral pleura and epicardium occur in 68-95% of SIDS deaths and are generally more extensive than in non-SIDS deaths. Additionally, pulmonary congestion and oedema indicative of terminal left ventricular failure are more common in SIIDS cases. Oronasal secretions, which are typically frothy, mucoid and pink or bloody, are also more common in SIDS cases[12].

PATHOLOGICAL FINDINGS

Infants who have died from SIDS have also been found to have structural and neurotransmitter alterations in the brainstem in areas associated with autonomic control, control of respiration, sleep, and arousal. The serotonin system is abnormal in at least 50% of SIDS cases.

Defects in the cerebellum such as neuronal immaturity, altered apoptotic programmes, negative expression of somatostatin and the EN2 gene, intense c-fos expression positivity, and astrogliosis in the cortex and dentate nucleus have been reported.

MANAGEMENT AND SUPPORT

The physician should advocate for an autopsy in all cases of sudden unexpected death, discussing results of the

autopsy with the family and providing emotional support. Surviving siblings and other family members also need age-appropriate support. If appropriate, the family should be referred for genetic counselling, metabolic testing, or both. Additionally, the family should be directed to local counselling and support groups, which are available in most communities.

PREVENTION

Infants should be placed for sleep in a supine position for every sleep. A firm sleep surface is advised; soft objects and loose bedding should be kept out of the crib. Mothers are advised not to smoke during pregnancy. Overheating of the home and bed sharing with infants should be avoided

CONCLUSION

Continued research, surveillance, risk reduction campaigns and standardization of autopsy and scene investigation protocols and classification of deaths are all essential pieces to illuminating the SIDS puzzle and reaching the goal of eliminating it as a cause of infant death.

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BEST ESSAY OF THE PROFESSOR J.A. ADELEYE INTER – MEDICAL SCHOOL ESSAY COMPETITION

"Sustainable Alternate Energy Sources In Lieu Of Diminishing Oil Reserves in Nigeria"

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1.0 INTRODUCTION

"The current trend in the decline of oil reserves, if not addressed, will hamper the country's ability to negotiate for higher OPEC quota and will invariably lead to a reduction in government's reserve in the long term". This statement was made by Nigeria National Petroleum Corporation, in a memo forwarded to the National Assembly on the 2010 budget. (OPEC—Organization of Petroleum Exporting Countries)

Oil reserves are the quantities of crude oil, estimated to be recoverable under existing economic and operative conditions. The aggregate production rate from an oil field over time usually grows exponentially until the rate peaks, and then declines until the field is depleted. This follows King Hubbert's logistic model (Hubbert Peak Theory), which states that the production rate of a limited resource will follow a symmetrical bell-shaped curve, based on the limits of exploitability and market pressures. [1] It is estimated that Nigeria's oil reserve which is about 36.2billions of barrel, will be exhausted in 41 years time, at its current production level of 2.4million barrels per year (bbl/d). Thus, the diminishing rate of oil reserve depends on the rate of oil production.

Below, is the 2008 summary of reserve data of some major oil producers in the world: [2]

Country	Reserve (10^9bbl)	Production rate (10^6bbl/d)	Reserve life (years)
Saudi Arabia	267	10.2	72
Canada	179	3.3	149
Iran	138	4.0	95
Iraq	115	2.1	150
Kuwait	104	2.6	110
United Arab Emirates	98	2.9	93
Venezuela	87	2.7	88
Russia	60	9.9	17
Libya	41	1.7	66
Nigeria	36	2.4	41
Kazakhstan	30	1.4	59

This relatively high oil production rate in Nigeria is because, since the first oil fields were discovered in the country, they have been highly depended on for energy. According to the Energy Commission of Nigeria, petroleum constitutes over 80 per cent (%) of commercial primary energy consumed and over 95% of the country's export earnings. More so, the rate of oil exploration depends on some factors such as political instability, manipulations of energy supplies, attack on supply infrastructures and natural disasters, which contribute to the diminishing of oil reserves in Nigeria. These have led to threats to energy security which manifest as limited supplies and rising costs of oil and gas.

Apart from crude oil, Nigeria is also endowed with a variety of energy sources, most of which are renewable, for example: coal; solar energy; wind energy biomass energy; nuclear energy and hydrothermal energy. [3] Despite the abundance of these energy sources in Nigeria, the reality is that there is a big gap between the demand and the supply of final end use energy, mainly fuel and electricity. Thus, it is imperative to adopt alternate sources of energy to meet the shortfall in energy supply as well as mitigate environmental impact on the climate.

2.0 AN OVERVIEW OF OIL RESERVE IN NIGERIA

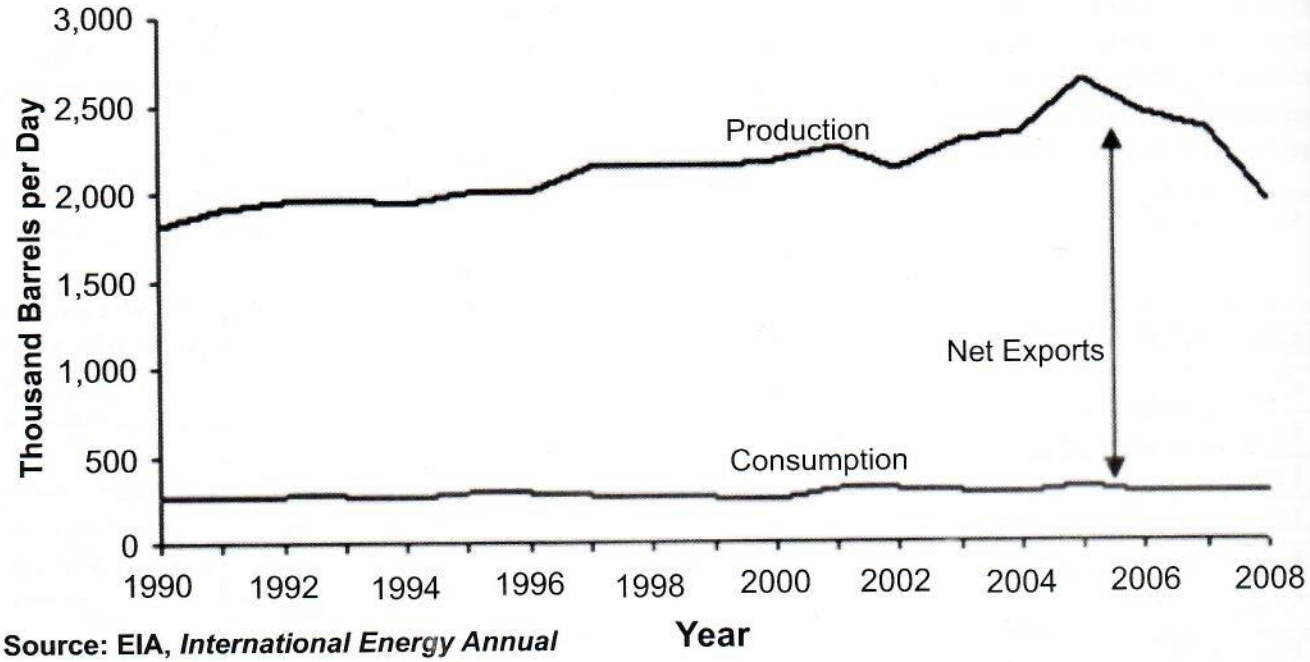
Proved oil reserves in Nigeria, according to Oil and Gas Journal (OGJ), were estimated to be 36.2 billion barrels as of January 2009. Majority of the reserves are found along the country's Niger-River Delta offshore in the Bight of Benin, the Gulf of Guinea and the Bight of Bonny. [4] Current exploration activities are mostly located in the North-east of the country.

2.1 Oil Production in Nigeria

By 1958, when commercial production of petroleum began, Nigeria was producing oil at the rate of 4 000 barrels per day and exporting the same from Port Harcourt. By independence in 1960, Nigeria was producing 17 000 barrels per day (bbl/d). Oil production in Nigeria shortly after it joined OPEC in July 1971, was vigorously pursued, and production in 1974 reached 2.2million bbl/d.

In 2008, Nigerian crude oil production averaged 1.94million bbl/d, making it the largest crude oil producer in Africa. As a member of OPEC, Nigeria has agreed to abide by allotted crude oil production limits, which have varied over the years.

Nigeria's Oil Production and Consumption, 1990-2008



Source: EIA, *International Energy Annual* *Short Term Energy Outlook* March 2009

The major foreign producers in Nigeria are Shell, Chevron, Exxon Mobil, Total and Agip

2.2 Consumption

In 2008, Nigeria consumed approximately 286 000 bbl/d of oil. According to the Oil and Gas Journal (OGJ), Nigeria has four (4) refineries with a combined capacity of around 500 000 bbl/d. In February 2009, only one of these refineries was reported to be operational but running below capacity. As a result, the country is currently importing almost 85% of its refined products.

3.0 ALTERNATE ENERGY SOURCES

3.1.0 Solar Energy

Nigeria lies within a high sunshine belt and thus, has enormous solar energy potentials. Solar thermoelectric technologies utilize this energy in the form of heat to generate electricity. Thus, with the enormous energy produced by this energy source, it represents a clear alternative to the fossil fuels which pollute the environment and contribute to global warming.

Many technological advances that make daily life more convenient rely on solar energy. These include highway traffic signs, cell phones, automated teller machines, pagers and global posting systems. Because they require virtually no maintenance, solar cells generate power for nearly every communication satellite, circling the Earth and space missions.

3.1.1 Energy Capacity

The amount of energy from the sun that falls on the Earth's surface is enormous. All the energy stored in Earth's

reserves of coal, oil and natural gas is matched by the energy from just 20 days of sunshine. Outside the Earth's atmosphere, the sun's energy contains about 1300 watts per square metre (w/m^2). About one-third of this light is reflected back into space, and some are absorbed by the atmosphere.

By the time it reaches the Earth's surface, the energy in sunlight has fallen to about 1000 w/m^2 at noon, on a cloudless day. Averaged over the entire surface of the planet, 24 hours per day, for a year, each square metre collects approximate energy equivalent of almost a barrel of oil each year (4.2 kilowatt-hours of energy every day). Deserts with very dry air and little cloud cover, receive the most solar energy which generates 6 kilowatt-hours per day per square metre.

3.1.2 Solar energy technology

The sun's energy can be actively captured to generate electricity or passively harnessed to heat water or building with the use of heat collectors.

Solar or photovoltaic cells convert sunlight directly into electricity. They are usually made primarily of silicon, the same material used in computer semi-conductor chips.

When sunlight hits a solar cell, the energy knocks electrons free of their atoms, allowing them to flow through the material, resulting in electricity production.

Concentration systems use mirrors to focus the sun's energy. The concentrated sunlight heats water or a heat-transferring fluid to generate steam. This steam is used just like in a conventional power plant, to spin a turbine and generate electricity.

3.1.3 Advantages

Sunlight is free and infinitely renewable. Unlike the conventional power plants, solar panels produce no polluting emissions, including those that cause global warming. Also with no moving parts, solar panels are silent, easy to operate and rarely need maintenance.

3.1.4 Drawbacks

The major drawback is the cost of installation of solar panels and production of solar cells. Researchers aim at making solar cells cheaper and more efficient through the use of less expensive materials, improved production methods and easier installation systems.

3.2.0 WIND ENERGY

Wind is moving air, and therefore, contains kinetic energy. It is an effect from the uneven heating of the Earth's surface by the sun and its resultant pressure inequalities. Wind energy technology converts this energy into a rotating shaft power which can be used in wind turbines for electricity generation, and in wind pumps for lifting water.

3.2.1 Energy Capacity

In Nigeria, wind is available at annual average speeds of about 2.0 metres per second (m/s) at the coastal region, and 4.0m/s at the far northern region. Assuming an air density of $1.1kg/m^3$, wind energy intensity, perpendicular to the wind direction ranges between $4.4w/m^2$ at the coastal areas and $35.2w/m^2$ at the far northern region.

3.2.2 Wind Energy Technology

The wind's kinetic energy can be harnessed using wind energy-conversion systems which include wind turbines wind generators and wind plants. When wind moves the blades of the fan (a component of wind turbine), they spin a central hub. The spinning hub moves a series of gears connected to a generator which converts the mechanical energy into electrical energy.

3.2.4 Advantages

Wind is free, inexhaustible and immune to inflation. This is the most environmentally benign source of energy, producing no polluting emissions or green house gases.

Also, wind farms can be built in a fraction of time it takes to construct coal or natural gas power plants: A 50 megawatt wind farm can be completed in 18 to 24 months.

The maintenance cost of wind generating systems is competitive with that of fossil-fuel systems because there are minimal operating expenses with no fuel use.

3.2.5 Drawbacks

The major challenge to using wind as a source of energy is that it is intermittent and not always available when electricity is needed. Wind cannot be stored (although wind-generated electricity can be stored if batteries are used).

Since electricity generation from wind requires a speed greater than 5m/s, good wind sites are often located in remote locations, far from areas of electric power demand.

The motion of the rotator blades of wind turbines generates noise.

The cost of wind power machinery and its installation is high. However, with new technologies, super-aerodynamic blades and more efficient turbines will be produced. Hence the cost of production will fall to compete with traditional energy sources, even in low-wind area.

3.3.0 BIOMASS ENERGY

This refers to energy derived from the combustion of biomass to liquid or gaseous fuel. Biomass is the organic material produced by photosynthesis, a process that converts solar energy into stored chemical energy. These organic materials such as woods or plants are used to create heat, generate electricity and produce fuel for cars.

Located in a tropical forest region, Nigeria should be able to harness this abundant energy source.

3.3.1 Biomass Energy Technology

Ethanol Production: This is alcohol produced from the

fermentation of biomass. It is a major renewable energy source that offers an alternative to fossil fuels. Anhydrous alcohol increases the octane number of gasoline. Compared with petroleum, power alcohol has lower emissions of carbon monoxide, nitrogen oxide and hydrocarbons.

Biogas Production: It is the production of combustible gas by the fermentation of organic material, in the absence of oxygen. It is composed of about 60% methane and 40% carbon dioxide. It is used in gas lamps, to power diesel and petrol engines, and to generate electricity.

Direct Combustion: This involves burning of biomass such as firewood, in its natural state to process heat and electricity. Apart from their domestic uses, they are used in large-scale furnaces and multiple megawatt power plants. 1kilogram of firewood can generate 1kilowatt-hour (kw-h) of electricity while its oil equivalent which is less affordable, can generate 4kw-h.

Gasification: Here, the biomass is converted into a gaseous energy carrier known as producer gas, through a process based on partial oxidation at high temperatures. The gas produced is used for heat production and electricity generation.

3.3.2 Advantages

Unlike oil and coal, biomass produces no harmful sulphur emissions, and has significantly less nitrogen, thus, reducing acid rain and smog.

Burning biomass can result in zero net carbon dioxide emission: any carbon dioxide released by burning biomass, can be taken back out of the atmosphere by growing more biomass.

Using bio fuels in our cars, results in less environmental pollution and global warming.

3.3.3 Drawbacks

It takes a lot of energy to plant and harvest the crops and trees. It also takes up much water and fossil fuel to make the fertilizers for planting.

Some biomass crops are not available all year. For instance, corn, wheat and barley are seasonal crops. Though trees are renewable, they are a slow-growing resource.

3.4.0 NUCLEAR ENERGY

16% of the world's electricity now comes from nuclear energy, 85% of which is concentrated in industrialized countries. This source of energy relies on the fact that some elements can be split (fission), and will release part of it as heat.

Because it easily undergoes fissions, Uranium-235 which is from Uranium ore, is one of the most commonly used elements for nuclear energy production. The primary source countries are United States of America (USA), South Africa, Australia, Canada and Nigeria- with resources between 270 and 2400 thousand tonnes each. Just like USA that generates 20% of their electricity from nuclear energy, Nigeria should be able to harness this abundant energy source.

3.4.1 Energy Capacity

Uranium-235 can produce 3.7 million times, as much energy as the same amount of coal. For example, approximately 2metric tonnes of Uranium-235 could be used to fuel a 1000 megawatt-electrical reactor for 1.5 years.[5]

Compared with oil, nuclear energy has extraordinary high energy density. 1kg of oil produces 4 kilowatt-hour (kw-h) of electricity, while an equivalent of Uranium, produces 50 000 kw-h.

3.4.2 Nuclear Energy Technology.

A nuclear power plant generates electricity like any other steam-electric power plant. Water is heated, and steam from the boiling water turns the turbines and generate electricity. This heat is produced from a chain reaction of Uranium-235.

3.4.3 Advantages

Uranium which is the raw material is abundant.

It produces high amount of energy per amount of material consumed.

The cost of energy production is competitive with that of fossil fuels (e.g oil).

It is a sustainable alternative to oil for electricity production.

3.3.4 Drawbacks

The radioactive waste from nuclear energy may be dangerous, though, unlike fossil fuels, toxicity decreases because they are unstable.

The major drawback is that the peaceful use of civilian nuclear power for electricity generation has allowed for the production of nuclear weapons.

The level of accidents associated with the production of nuclear energy is relatively high.

4.0 RECOMMENDATIONS FOR IMPLEMENTATION

Although Nigeria has an abundance of renewable energy sources, limited exploitation has bedevilled efforts to transform the promise of renewable energy into reality. Thus, to actualize this dream of sustainable energy utilization, the following measures should be taken:

Policy initiatives should be proposed to engender large-scale dissemination of Renewable Energy Technologies (RETs). Also, renewable energy policy programmes should demonstrate the economic and environmental benefits of these technologies.[6]

- A decentralized energy structure should be developed and independent power producers should be encouraged. This will foster the rehabilitation of under-utilized energy infrastructures to operate at optimum conditions.

- Innovative and sustainable financing programmes for research involving local financing agencies should be encouraged.

- Long-term RET training programmes should be designed to develop a critical mass of locally trained personnel, with technical and economic skills.

- Local analytical expertise should be utilized in the comprehensive evaluations of available renewable energy resources.

- The adoption of energy conservation and efficiency practices should be actively promoted to ensure rationalized consumption of energy in the country.

5.0 CONCLUSION

Because oil constitutes the major source of energy in this country, the diminishing of oil reserves poses a lot of challenges to the economy. Thus, to combat the effect, energy supply mix into the economy should be diversified to include, coal, solar, wind, biomass and nuclear energy. These energy sources, due to their abundance and less negative effect on the environment, are good sustainable alternatives to the diminishing oil reserves in Nigeria.

Finally, if we are to consider and be responsible for the well being of our future generations, then, other alternate energy sources and techniques must be developed in order to meet our present needs as well as that of our future generations. Further, to attain vision 20-2020, we need to emulate the developed and fast-growing economies of the world by mainstreaming energy planning into our overall national plan.

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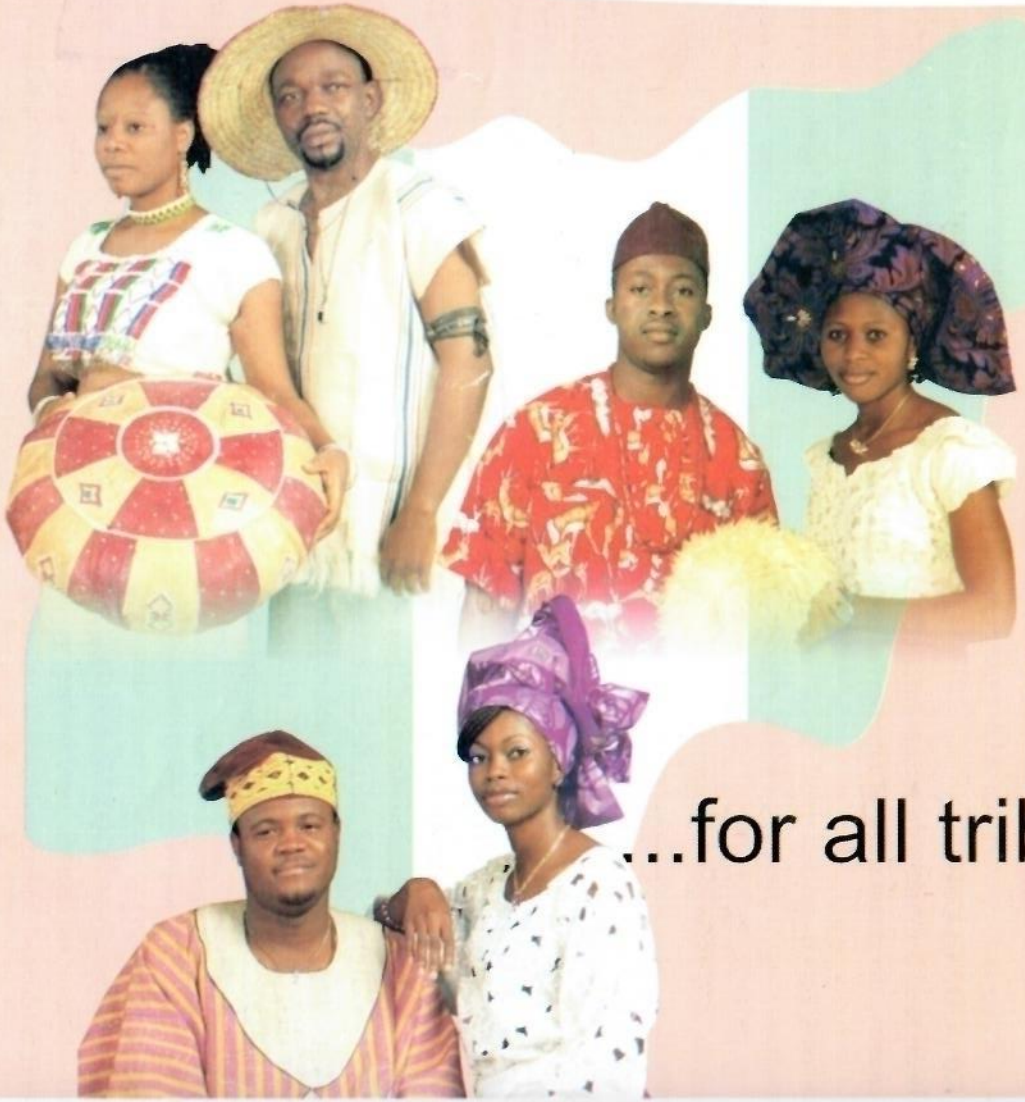

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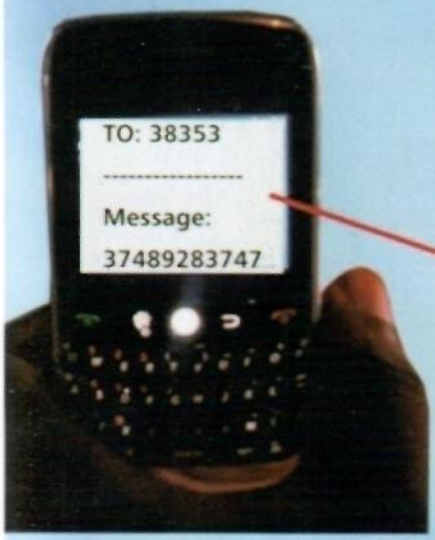

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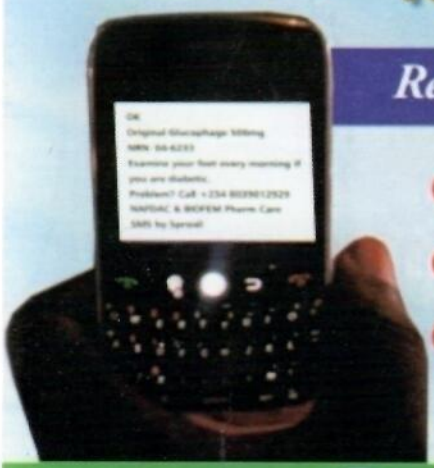

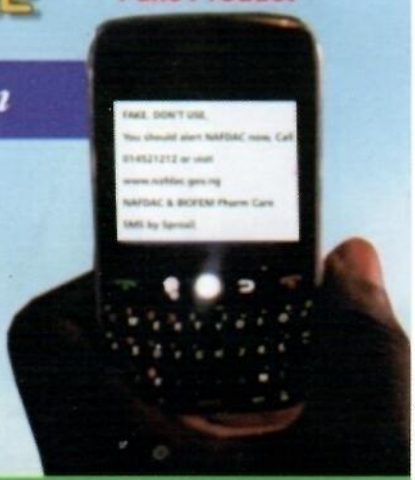

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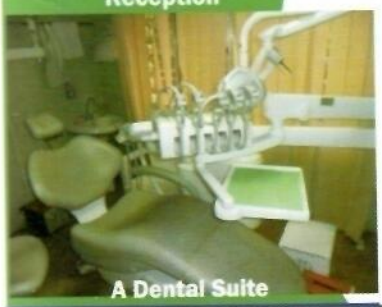

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DOKITA 1960-2010: A SHORT HISTORY OF EARLY YEARS

THE BIRTH

First, there was the Association of Medical Students (AMS) magazine, (Editor from 1957, Moses Ilo). The magazine served Yaba College students, Kano medical school students, the University College London (Ibadan Pre-Clinical students)

Then, there was the "Hamattan" magazine. The Editor in the year 1957 was Dr. Ralph Hendrickse {(consultant physician (Haematology)}. The magazine served the University College Hospital (clinical site of the University College London in Ibadan).

In June 1959, Moses Ilo and Dr. Hendrickse discussed and agreed that the merger of the two magazines would better and more appropriately serve the interest of the medical community which at the time meant Nigeria. It should be noted that the only medical school in existence in Nigeria was in Ibadan and the only medical journal in West Africa was the West Africa Medical Journal (WAMJ). The journal born of the merger would:

a) Be based at the UCH, Ibadan

b) Be more clinical and scientific in orientation.

c) Be run by the clinical students with overview, direction and intellectual and academic support of a clinician (consultant) of choice by the board of students. Dr. Ralph Hendrickse was an immediate volunteer to serve.

This was immediately discussed by me with David Olatunbosun, followed by our approaches to agreeable student colleagues. Most of these students and a few of others were, at the meeting of the clinical students, voted into what became the board that formally requested Dr. Hendrickse to chairman it. A meeting of this team (board) then met at the dining room of the clinical students' hostel. A name was needed for the journal. The very open and free minded but enjoyable discussion ended when David Olatunbosun collated all local names for doctors and healers and said, "what about *dokita*?" I remember shouting "what about that, chief!" (My fond name for David). "That's it!" "Yes!!!" every one said in unison.

"**DOKITA**" was born!

Its conception was easy and not celebrated, ante-natal fluctuated but uneventful, birth followed, attended by all and sundry but perinatal and teething problems. Management of these needed all efforts and made us realise that children who "must survive must survive" and come from parents that give what it takes without complaints nor seek for adulation. **DOKITA** survived and was presented first to Nigerians on October 1, 1960, and then a week later spread to nearly all English-speaking medical clinical schools around the world.

The special feature (any others notwithstanding) was the listing of the first 13 medical doctors who graduated with the University (London) degrees from a University in Nigeria - Ibadan.

This synopsis wishes to acknowlege the contribution of well wishers and the encouragement of all beyond mention. Among others, I recognise the encouragement from outside our immediate academic circles, (as he then was) of Sir James Robertson ,the then Governor-General of Nigeria; Dr. Nnamdi Azikiwe (President-elect, non-executive); Mr. A. K. Blankson (Chief Editor, West African Pilot); Sir Francis Ibiam; Sir Kofo Abayomi; Sir Samuel Manuwa and Dr. Okechukwu Ikejiani. Care and guidance of Dr. Ralph Hendrickse can never be overstated.

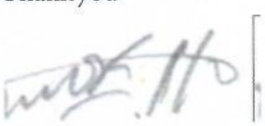
Finally on this subject, many thanks and gratitude must be given to all who contributed articles (especially the clinical students) and the financial contributors notable amongst which (permit my mention) Dr. and Mrs. Olikoye Ransome-Kuti ,as well as the advertisers in the journal.

The interest, good reception, and unmitigated goodwill which followed this first edition gave impetus and high motivation for the production of the second edition.

The last encouragement I received in November, 1962 (long after I had forgotten the problems we went through was the annotation in the lancet Editorial Column which read: "From Africa: always something new".

I therefore urge you to please continue the story of **DOKITA**

Thank you



Dr. Moses Ilo

Founder and Editor, **DOKITA**, 1960

THE TROPICAL JEWEL

Dr. Temitope O. Ajayi*, past Editor-in-chief of DOKITA Editorial Board (2007/2008)
*At the time of writing this article, * was a Medical Officer-in-charge at the Ologoama Community Health Centre, Bayelsa State.*

The elegant celebration of the golden anniversary of the DOKITA Editorial Board is just a token of what we, her children, can return back to her in appreciation of the positive impacts she has made on us.

It all began 50 years ago, and still remains one of the best things to have ever happened to the Ibadan Medical School, when a group of medics came together to establish a journal that will primarily contain advancements and researches undertaken by medical students and professionals. And it has grown to include other activities like the Annual Symposia, the Emeritus Professor O. O. Akinkugbe Inter-medical Schools National Quiz Competitions, and the Professor J. A. Adeleye Essay Competitions amongst other events. To wrap it up, members of the Editorial Board remain resource persons other student bodies look up to for that touch of excellence.

Joining the Board has redefined me. I really can not precisely remember when I made the decision to join DOKITA, but I can vividly recall when I took the step to live upright with a determination to associate with the best!

My first contact with the Board was in pre-clinical school 2004, when some folks who called themselves *board members* came to announce the 2nd edition of the Inter-medical Schools Quiz Competition that was held at the University of Benin in 2005. I wondered why they came early (about 3 months to the competition) to advertise the programme. It only further impressed on me their level of competence and efficiency at organizing programmes. Passing my first MB exams was top on my mind so I never gave it a thought joining the Board- though I was the Editor of UIMSA's (the University of Ibadan Medical Students' Association) pre-clinical press and did not want to add to my responsibilities- I had enough to deal with.

Now, the coast is clearer; so they told us, as I resumed to clinical school late 2004 and it was not much of a problem deciding to join the Board when the invitation for membership was put up in early February 2005. DOKITA was the best around and still remains the best.

I have always been formal all my life, to be modest, and so did not see any reason why my application should not be typed (a cogent point for intending members). There were about seven applicants from my class- the youngest in school- and three of us made it after the rigorous interview. My memory beautifully reminds me of how tough my interview on the 19th of March, 2005 went, having presented myself as former editor of UIMSA pre-clinical press, and incumbent secretary of the clinical press club. I had to sell myself to the not-smiling seniors that interviewed me. Questions ranged from what I felt about the Board, administrative questions, and current affairs to academic questions. I have got a smiling face, and it was the same look I wore to the interview in my neatly-ironed deep blue suit (which is actually a 'coat; by today's fashion standards). Mr. Ajiboye, then a final year medic and Distribution Manager, was apparently uneasy with my smiling countenance and he queried why I came to an interview, a serious DOKITA interview with a smiling face. Only God saved me that he did not ask me to discuss the physiology of smiling!

There is a huge difference between what one feels about the Board before joining and what actually goes on, as regards Board programmes. My first Board meeting was principally about suggestions of research topics for the Laboratory Medicine edition of the journal. The meeting was boring to me and the only contribution I made was to introduce myself to the older members, who referred to us as boardlings. My classmates, Mr. Oyatokun and Miss Otesile also held same opinion with me about the meeting. I consistently dozed through-out the meeting which held late in the night, typical of DOKITA and I can remember Miss Ayodele constantly tapping me to wake me up from my slumber.

At that particular meeting, I was nominated and drafted into a major committee- the symposium committee, with the event to hold within three months. I was the only one nominated from my class into a committee of experienced and senior Board members. That was responsibility beckoning on me, but it started with a flop.

DOKITA meetings are usually held at night, from about 10 p.m. to give room for members to relax after their academic activities during the day, and could last average of four hours depending on the issues on ground. My first committee meeting

was no exception and I felt I had to take a nap shortly before the meeting; only to wake up 45 minutes behind schedule! As all had been programmed, I ran downstairs to the Board room for the meeting and I was promptly sent out for being informally dressed as I had left out my pair of socks in the rush. I got back to the meeting, made some contributions which got the nodding of every member present and thought my lateness would be overlooked, only for the issue to be brought up by Mr. Ogunleye- my big brother- towards the end of the meeting. *'How could he do this to me'*? I queried within myself. I was subsequently told to turn in a letter of apology to the Editor-in-chief, Mr. Ogunsua.

Mr. Ogunsua has got the stature and charisma of a leader, as well as his commanding tone, and I had this explainable awe for him since my encounter with him at the brief meeting he had with we *boardlings* shortly after our admission on Board. I made sure I went to drop the letter of apology at his room late in the night when he would either be asleep or out of his room. Unfortunately for me, he was still awake as I slid the letter under his door, but I was already on the next floor before he got to the door!

My redefining moment was already knocking on the door, during my second committee meeting. I was right on time and our discussions were going on smoothly before the arrival of the *chief*, the Editor-in-chief. The mode of address had to change; *'Editor-in-chief, fellow Board members'*. Along the line, he raised the issue of my lateness, blamed the committee chairman for mollifying the expected punishment as per Board standards. He reminded me that my admission and that of other *boardlings* was under probation, for a period of 6 months, and we could be *kicked out* at any time. He went on ranting, endlessly, repeating the words *'nobody is above* **DOKITA***; Board duties first'*. I got so emotional that my eyes were now filled with tears and I made every conscious effort not to blink. I tried until the tears dried up! He called me out at the end of the meeting and gave me a hug to my surprise. He told me, *'when you are in the Board room, you are in for business, no sentiments here'*. And I truly appreciated the gesture which still lingers in my memory. He was to later become my mentor on Board.

My entire 35 months'-stay on Board was filled with responsibilities right from my first day. I rose among my colleagues to hold three executive offices; Acting Publicity Editor, Production Manager and the Editor-in-Chief, which I modestly believe is a record in the history of the Board. You may wonder how I rose rapidly on Board even as a *boardling*. It may surprise you to know that I may not be able to conveniently respond to this, but I believe my seniors saw the potentials in me and put me in appropriate committees and departments where I struck the tune of excellence!

It is in the tradition of the Board to share non-executive members across the 8 departments on Board for a period of 2 months. My first rotation was the Publicity department where I worked with the head, Miss Kufoniyi. I was not surprised when I was nominated, to head the same department 2 months later, by my predecessor; though in an acting capacity as I was yet to be confirmed as a full member.

Even as the youngest executive member, my energy was needed in the Journal committee headed by the indefatigable Mr. Ekanem whose mental energy could be measured in Mega joules! The production of that journal set a new standard for the new improved **DOKITA** journal. I eventually succeeded him as he was to become the Editor-in-Chief.

The production of **DOKITA** is the primary responsibility of the Editorial Board and a lot goes into the production of the journal. The peer-reviewing of the journal started during my tenure and many thanks to Prof. T.O. Alonge, FRCS- the amiable Deputy Board Chairman, and former editor of **DOKITA**, who was actively involved. Pooling of articles from authors and the proof-reading of the same are duties of members before going to press, and a lot is learned on Board in this regards especially in the field of writing of articles and research work as members often work with medical professionals in and out of the Ibadan Medical School.

People have divergent views about **DOKITA** and her members. We were once labeled cultists for holding our meetings late into the night and being secretive with our activities, until when made public. We are no cultists, for record purposes, but a group of young male and female administrators who are focused and determined to cultivate those habits that will be required of leaders.

Our guiding principles include the motto of the Board; *Discipline, Diligence and Dedication*- the three D's of **DOKITA**. Every member is expected to be developed in these three virtues. It is often said that one needs to be disciplined to get on Board,

diligent to carry on with Board activities and dedicated to stay peacefully throughout one's stay without being suspended or expelled! In all positive perspectives, **DOKITA** comes first and others follow. This is the team spirit that reflects in our activities.

Discipline is a virtue that is worth mentioning and **DOKITA** is above board when it comes to discipline. The constitution is strict, restrictive, giving no room to insubordination, laziness or attitudes that may be detrimental to the public image of the Board. Every member is expected to learn on the job and prove to have developed those qualities before one can progress or hold executive positions. We are known to admit the best of students and we do not hesitate to flush weaklings or clogs in the wheels of our progress.

Deadlines are pivotal to the smooth running of our programmes and hardly are you given an assignment without an attached deadline. This keeps us focused, though we are known to be extemporaneous, ensuring our activities remain excellent. The Board could take one's energy off the primary responsibilities- academics, little wonder we expect members to be above par in their academics, and not struggling to pass, so as to conveniently combine these two duties. And the records are straight enough- members are known for excellence. One really needs to have his/her psyche well-tuned to survive on Board. These are the things that make us confident and prepared to face any challenge whatsoever because the mind and body have already been primed for this.

Sentiments are dispensed with in **DOKITA**. Primarily we are medical students, group mates, floor mates, even roommates and there is always a natural room for nepotism, favouritism which the constitution effectively makes us deal with. I will not hurriedly forget Mr. Ogunsua querying the Financial Controller Miss Ayodele during a Board meeting over the presentation of her report, even though it was public knowledge that they were lovers- and are still at the moment! I would have loved to delve into the issues of relationships and marriages between Board members, but I would rather leave that to another date, as it is as romantic as entertaining. These love birds on Board sha.

I will forever be grateful to have got life's education from the Board. She has taught me to be resilient, principled, and more creative in my mental processes and above all, to be disciplined, diligent and dedicated. A close friend once told me that I hardly run out of ideas. Yes, because we were taught to put on our thinking caps all the time! I have learnt how to be a good administrator as opposed to being a politician. The administrator progresses on merit but a politician does not necessarily do so. It is out-of-place to hear of financial misappropriation or other vices on the part of members, most especially.

I was a good student in the school of **DOKITA** paying full attention to the dos and don'ts, combining the leadership and no-nonsense qualities of Mr. Ogunsua, the meticulous eyes of Mr. Salami with the vibrant energy of Mr. Ekanem. So, I had no difficulties in the discharge of my duties on assumption of the office of the Editor-in-Chief on the 15th of April, 2007. I had it so smooth and enjoyed good followership and companionship with the executive members. Our symposium on *Infertility* was adjudged the best so far and many awards came our way. This team spirit led us to the path of excellence and looking back on the day I handed over, I could hardly believe I was leaving the Editorial Board that had groomed me for almost three years!

I have a passion- a strong one- for **DOKITA** and I often turn around anytime the name is mentioned. The present crop of members would agree with me and I can boastfully tell prospective members who are interested in leadership and administrative trainings that this is where they should be.

I would not have done complete justice to this piece if I did not acknowledge the assistance of the many people who I call *secondary Board members*. The chief orator himself, *Professor Mellifluous*, Emeritus Prof. O. O. Akinkugbe loved us as his grandchildren. He was instrumental in many ways most especially in the establishment of the **DOKITA** *ethical fund* which came into existence during my leadership of the Board. The ever-listening and amiable Board Chairman and Provost of the Medical College, Prof. A. O. Omigbodun was a father to me and he was always available for the Board. Many thanks to Prof. T. O. Alonge, my namesake who would *harass* me often times, making me understand that hard work precedes excellence. The Faculty Adviser, Dr. J. A. Adeleye contributed immensely to the progress of the project **DOKITA**, same for all our Editorial consultants.

It is two years since I left **DOKITA** and I do not consider myself as an ex-member, because I am always a member- ready to

learn again and again. **DOKITA** indeed is a school of life.

Congratulations to our dear tropical jewel.

THE PIONEER CLASS OF UCH IBADAN TRAINED DOCTORS (THE 1955 ENTRY)

Professor S.B Lagundoye*

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HISTORICAL BACKGROUND

The training of doctors in Nigeria commenced in 1930 with the opening of the Yaba Higher College, Lagos. This institution was designed to fill vacancies in the Public Service. However the products of the Yaba Medical School were appointed Assistant Medical Officers (A.MO.) on a salary of 120 – 560 pounds per year while their colleagues who trained in Medical Schools in Great Britain and Ireland were appointed Medical Officers (M.O.) on a starting salary of 400 pounds per year (Ogunlade 1970). The diploma awarded was called "The Licentiate in Medicine and Surgery" (L.M.S. Nigeria) and was not accorded as the equivalent of the "Bachelor of Medicine Bachelor of Surgery" (M.B.,B.S. or M.B., Ch.B.) degrees and the Yaba trained doctors could not be registered to practice in the United Kingdom or Ireland and therefore in European countries. The General Medical Council of Britain granted a concession in 1946 but backdated to 1941 and not 1935 when Yaba Medical School doctors were first produced for Yaba graduates to go for further training of an abridged one year course that led to permission to sit the for the award of the Licentiate of the Royal Colleges of Physicians and Surgeons of London and /or Dublin (L.R.C.P &S) which had been in existence as an equivalent qualification to the University awarded M.B.,B.S. or M.B., Ch.B. degrees and internationally accepted. Of the total of 62 Yaba Medical school graduates from 1935 – 1947, 32 (52%) availed themselves of this concession and went to obtain the L.R.C.P &S qualification. Furthermore, 27 (84%) of those who did proceeded to residency training to obtain Specialist qualifications. It is noteworthy to note that the Nigerian trained doctors were highly efficient and passed the L.R.C.P &S examination in flying colours as those who in later years after being asked to withdraw from the University College, Ibadan, the successor to the Yaba Higher College, on failing 2 attempts at the 2nd M.B examination of the University of London under Special Relationship between 1950 – 1961 were rescued from failure to become doctors if they could find the fund to go to Britain (and some Medical Schools in Germany also obliged) and use the L.R.C.P & S. route for their salvation. Indeed some of the Ibadan sets that had their clinical training in Britain sat this examination aside of the MB BS in their final year and thus obtained both equivalent qualifications before returning home.

With the establishment of The University College Ibadan (UCI) in January 1948, the Yaba Higher College was closed. The Faculty of Medicine was one of the 3 Faculties, along with those of Science and Arts that came into being. The pioneer Principal, Kenneth Mellamby, shared the concern of the Nigerian populace that the mistake of Yaba Medical School should not be repeated and this was guaranteed by the special relationship status with the University of London whose Senate designed its academic programmes, conducted its examinations and approved its results. This gave international recognition to its degrees and certificates. He also ensured that the best caliber teachers were appointed for the Faculty and to emphasize this he found it impossible to retain any of the Yaba Medical School full time teachers thus breaking completely from the controversial past of that Institution. He ensured that 30% of the annual budget of the University College went to the Faculty of Medicine. He himself had been a Reader in Parasitology at the world famous Liverpool School of Tropical Medicine and had supervised the Ph D dissertation of a Nigerian, Mr D. Sanni Sanya Onabamiro on his work on the Guinea worm (Dracunculus medinenis variety Onabamirensis) as a Professor of Parasitology in the UCI sub-department of Parasitology in the Department of Zoology. After the end of his tenure in 1953, he left Onabamiro in charge till the later left the University to become a Minister of Education in the Western Region under the Premiership of Chief Ladoke Akintola in 1965 after which the sub-department ceased to exist.

The last set of clinical students of Yaba Medical School took their LMS (Nigeria) Diploma in 1951. It was an epic battle to convert their Assistant Medical Officer to Medical Officer and this was first effected by the Government of Western Region of Nigeria under Chief Obafemi Awolowo who had in his cabinet a former product of Yaba, Chief Akin Deko, who had suffered the indignity of being Assistant Education Officers along with some of his contemporaries teaching at the Government College Ibadan. The Association of Medical Students and former Yaba Trained Doctors like T.O. Ogunlesi and J.O. Ogunlesi immersed themselves in the struggle till all Assitant Medical Officers, Assitant Engineering Officers

etc who had Yaba diplomates were elevated to the Senior Service cadre in the Public Service throughout the country.

For those admitted to UCI for Medicine in 1948 and had reached the end of preclinical studies in Anatomy and Physiology at Yaba in 1950, Adeoyo Hospital in Ibadan which had been arranged for the commencement of their Clinical Training could not meet the requirement of London University for that purpose. The Inter-University Council of Britain came to the rescue and got the assurance of UK medical schools to admit Ibadan students who have passed the 2nd MB examination of London University for their Clinical training from 1951 till 1954 while construction work on the new University College Hospital was in progress. A total of 86 thus completed their MB BS degree in the UK by this arrangement from 1954-1959 (Akinkugbe 1973).

The turning of the sod for the project was done on 1st October 1953 by Sir Sydney Phillipson, the Chairman of the UCH Board of Management from 1952 and also the Chairman of the Provisional Council of UCI from 1951. It was a quiet ceremony witnessed by the new successor to Kenneth Mellamby since September 1953, Mr J.T. Saunders and also the newly appointed first Nigerian and the second Registrar of the College, Dr S.O. Biobaku who resumed on 1st August 1953. This was unlike the elaborate ceremony of turning the sod of the University College on its permanent site on November 17, 1948 performed by the Secretary of State for the Colonies, Sir Arthur Creech-Jones and witnessed by the Olubadan Fijabi II, The Sultan of Sokoto and the Chief Commissioner for the Western Provinces, Sir Chandos.T. Hoskyns-Abrahall after an academic procession in the presence of all the students transported from the Temporary site at Eleiyele for the occassion. The final movement from Adeoyo Hospital to the UCH was completed in May 1957 and at a solemn ceremony on November 20 of the same year, the first Teaching Hospital in Nigeria was officially opened by the Princess Royal, Alexandra of Kent, on behalf of the Queen Elizabeth II whom she was in Ibadan to represent on the ceremony marking the grant of internal Self Government to the Western Region of Nigeria.

The last set of Ibadan medical students to proceed to the UK for their Clinical training was the 1954 set leaving the Class of 1955 to be the first to complete their clinical years in the UCH at Orita Mefa on the outskirts of the City of Ibadan on the large tract of land (183 acres) carved out of the Agodi Forest Reserve. The was part of the plantation of Acacia species of trees (called *AGALA in Yoruba, hence the name IGBO AGALA*) that the Government Forestry Department had made along the banks of the Ogunpa River complex which from time immemorial had formed the nexus of the water supply and waste disposal of Ibadan metropolis. The Ibadan people called the area before the UCH came into being *ORITA MEFA (the Junction of six roads)*, a name still used today if you call a taxi to take you to the Teaching Hospital as the Total petrol station had been located long ago at the confluence of 6 roads linking the inner city with the Government Offices and Residences for the Senior Officials who in those days were predominantly British hence the name Total Garden Round-About at the eastern south eastern corner of the extensive UCH land. The site had previously housed the Infectious Disease Hospital (IDH) which had to be relocated on a new site further East just before the present Electricty Power Distribution Station which separates it from the Nigerian Television Station before the Agodi Prisons.

OUR FIRST LECTURE IN MEDICAL SCHOOL

It was a Monday morning, 17th October 1955. The subject was Anatomy. The time was 8 am. We were all seated. 5 minutes later came in the great teacher, and his first words were **"HOW MANY ARE YOU IN THIS CLASS?" We answered 33.** Then he said **"DIVIDE THAT BY 2 AND THAT IS THE NUMBER THAT WILL PASS".** A rumble went through the class and the lecture on the Anatomy of the Upper Limb which was to last for the first term commenced. That lecturer was none other than the one and only Professor Alastair Smith. More about him later under Some Pioneer Staff.

His prediction was to come true 2 years later when at the first attempt at the 2nd MB examination of June 1957, 16 of the 32 of us who sat for the examination passed and 16 failed. In May 1955, one member of our class was found dead in a pool of blood on his bed in his room in Hall 3 (before it was renamed KUTI Hall at the end of the 1955/56 session. Some non-Yoruba students did not like the name but in the next session they were the greatest of **"Kutites"** and the and advocates of the jargon **" Kutism is no jingoism"**). The alarm was raised by the stewards who usually came to clean our rooms and make our beds every morning opening the door with duplicate keys like in hotels world-wide. They also served us during meal times in the dining halls. Each time I pass the road separating Kuti Hall from the Arts Theatre till today I always shudder as his room was on the ground floor towards the lavatory located at the North end of that corridor.

The tradition in the London curriculum was for those whole failed the first attempt to be given a second and final repeat 2nd MB examination always in February hence it was called the February Examination. 16 of us including the author took the examination and the result was woeful as only 7 passed including 1 who had a reference in

Pharmacology. 3 were allowed a third chance and 6 were asked to withdraw from the course. I was the only one from Kuti Hall. I was carried shoulder high by my well wishers who helped pack my personal effects particularly those heavy books that adorn the shelves of medical students and bundled into a taxi at the taxi park now fenced off for packing the official cars of the Vice-Chancellor, his deputies and the Registrar.

THE CLINICAL STUDENTS' HOSTEL

On arrival at the Clinical Students' Hostel at the UCH, I was welcomed by the Domestic Warden, Mr Badejo, an elder of the Owo community in Ibadan and one of those who along with my father had organized a reception by the Ibadan branch of the Owo Progressive Union for Michael Adekunle Ajasin on his return from overseas as the first Owo university graduate in September 1947. Room 1 at the top floor of Block A was the room allotted to me. The Hostel was built by the Hospital and not by the University College although in the pattern of the Blocks in the Halls of Residence with one exception. It had a mural embossed high up on the dinning room block, of a Surgeon wearing an operating theatre dress with gloves in hand and a face mask while the clinical student squats at his feet on the floor resting on the right hand while his left hand is placed on an open book while his face and total attention is directed to his teacher under whom he is undergoing his apprenticeship as in ancient Greece in the time of Aristotle regarded as the father of the Medical profession. No wonder the student is wearing the Roman dress – the so-called "*toga virilis*", a symbol of his arrival in manhood (it is a style used by village elders in Africa throwing their wrappers across the left shoulder and leaving the right uncovered, In fact in Ghana it is the national attire for males old and young). Both teacher and the taught are attired in white indicating purity, patience and perfection. I would not have bordered about this detail but for the fact that my mother told me some 20 years after leaving the hostel that it was those murals that she used to identify my abode in the almost identical complex of concrete buildings that bewildered strangers coming into the UCH till this day. Her visits were memorable because after leaving, my room was always besieged by friends to partake of the tasty fried bush meet and other Owo delicassens she was sure to bring.

Accommodation at the Hospital was limited to 150 rooms based on the projection that UCH at full capacity will be producing 50 doctors a year since the clinical years of training lasted 3 years. I was now to join 14 of the 16 members of the 1955 set who had come into residence in September 1957. Two members of the class that passed the first attempt of 2nd MB of June 1957 did not turn up as they Ukeje and Obinwa had accepted the offer to the newly Independent country, Nigeria, now being courted by other nations outside the British sphere of influence to undergo their Clinical Training in Germany by the Federal Republic of Western Germany. So in February 1958, we became 21 clinical students accommodated on the top floor of Block A. The remaining 4 rooms on this floor as well as the 50 rooms in the first and second floors as well as the 75 rooms of the 3 floors of Block B were left empty for the rest of the 1957/58 session. In July 1958 I had a fever and the rashes of chicken pox soon followed. I had to be quarantined from my colleagues. I was moved to a room in the ground floor of Block B. For two weeks I lived as the sole occupant of one half of the Hostel. The situation changed in September 1958, when at the commencement of the 1958/59 session 20 clinical students from the 1956 Class who had passed the 2nd MB of June 1958 came into residence and the 110 rooms were allocated to non-medical students who were all freshers (JJCs). The Hostel became an out of campus Hall of Residence with free bus rides provided for commuting between UCH and the University campus 8km to the North. It was a 10 minutes ride as after the Government Secretariat and the Bodija Estate and the SS Peter and Paul Seminary which predates it, all on the right side it was all forest till University gate on Oyo Road. So also was the alternate route 3km longer from Mokola to the UCI. The non-medicos were vociferous and immersed themselves in University students Inter Hall activities, such as Sports, Clubs, Drama, and Debates. They used their numerical strength to gain political office in the Student's Union and also in the Hall Committees but conceding ceremonial positions as Chairman to the "Medics" in whose Hostel they temporarily lived and called themselves "**sojourners**". The inundation of the Clinical Students eventually put an end to the cordial relationship between the Hall and the School of Nursing Hostel to be mentioned below.

SOCIAL ACTIVITIES OF THE PIONEER CLASS

We as already stated were on the top floor of Block A. Our class leader was Ambrose Folorunso Alli. We called him ROCKY the shortened form of Rockefeller, one of the richest men in America, and founder of the Rockefeller Foundation that from 1962 started to fund several projects in the UCI. This nickname arose as he was the winner of the first Western Nigeria Lottery in 1957 with a prize of 3000 pounds. He dispensed with his scooter (motorbike) which he used to ride to classes in our preclinical years and bought two Morris Minor saloon cars out of the prize money. One he let out to run a taxi in the city and the other he reserved for himself. We used to gather in his room to

help him count the money in six pence coins (which taxis charge per person per drop) at the end of the day when the hired driver must deliver to the owner a fixed agreed sum unfailingly while keeping the rest as his profit. When the Western Region started the first Television Station called WNTV-WNBS FIRST IN AFRICA in October 1959, the University Halls of Residence were given one each for the Students' Common Room. The Clinical Student' Hostel was given one. Rocky bought the giant size one which we used to watch instead of going down to the Common to watch the medium size donation watched by all and sundry in the now fully populated Hall.

BALL ROOM DANCING

We had a **Dancing Club** and one of us Fred Odunze was the Instructor in European type Ballroom Dancing teaching us quick step, waltz, tango and jazz all of which he had mastered while working as a teacher in Onitsha the town on the East bank of the Niger reputed for having the largest market in West Africa. We had non-paying female members from the School of Nursing Hostel almost a next door neighbour. Many life partnership were germinated by this interaction with the recruitment starting from the wards. We organized Dances every other Saturday night using the Clinical Hostel's Dinning Hall as the venue and invited senior staff and non members from the School of Nursing. Fred was the disc jockey and records of the popular on coming Nigerian High life maestros such as Victor Olaiya, Bobby Benson, Roy Chicago, Ebenezer Obey, I.K.Dairo, Eddy Okonta, Agwu Norris, Rex Lawson, Fatai Rolling Dollar and the Ghanaian E.T. Mensah were played. Although European jazz, waltz, quick step and tango featured, these were gradually being displaced by indigenous High life music in which individual dancers improvised steps and gyrations of the hip, trunk, arms and legs with no intimate body contact with the partners proved more relaxing and before long was exported to other parts of the world leading to the eventual collapse of ball room dancing worldwide. The popular 'joints' we patronized in the city at that time were the Paradise Hotel (located where the 2nd skyscraper in Ibadan – the all glass BROKING HOUSE is sited) and The Central Hotel at Adamasingba (now used as the Dr Obembe's Christus Hospital). The Central Hotel was the choice for big events because of its stage for the band and the large dancing floor and 'inexhaustible' bar. The first beauty contest for Miss Western Nigeria was held there in 1957 and we witnessed the crowning of the "Queen" who happened to be a Radiographer in the UCH Radiology Department. I recall my wedding reception which was well attended by my teachers was held there on 2nd May 1963. The West African Club at the back of Lebanon Street was established by the Syrian and Lebanese shopkeepers who run the place originally exclusively for their community and because of its specialization in European and Middle East dishes and kebab became popular with University lecturers and their spouses who were at that time mostly Europeans and predominantly British for their dinner parties.

The incoming of the sojourners eventually led to a break in the cordial relationship between the Nurses' Hostel and ours as their new Principal stopped the nurses from the social activities of the previous session for reasons which I cannot now recall.

THE ASSOCIATION OF MEDICAL STUDENTS OF NIGERIA

This started in Yaba Medical School and commenced a yearly Journal called "*The Journal of the Association of Medical Students of Nigeria*" abbreviated as *J.A.M.S.Nig.*which ran into 11 volumes with the last in 1958 which means the first issue was in the last year of Yaba Medical School. The Association was at the vanguard of the nationalist agitation against the inferior certificates awarded by the Yaba Higher College and the notoriety of the High failure rate at the institution with passes determined by the few vacancies in the Public Service. Contributions to the Journal were not restricted to medical students. J. B. Lawson, the Head of the Department of Obstetrics and Gynecology, wrote an article on "Ibadan Teaching Hospital" in 1955 volume 8 and Sir Sydney Phillipson, the Chairman of the UCH Board of Management, wrote one on "University College Hospital, its origin and development" in 1957 volume 10. The last issue had an end of session group photograph of the *PIONEER CLINICAL STUDENTS OF THE U.C.H. (1957/58 session)* with all their names as caption below. The photograph marked the end of an era as two weeks following it came the influx of non-medical students along with those of the 1956 set who had of the U.C.I as the Mellamby, Tedder, Kuti and Queen Elizabeth Halls. The last formerly called Women's Hall and temporarily located in what later became the Sultan Bello Hall was opened officially by the Her Majesty Queen Elizabeth II herself on 14th February 1956 after the state dinner in Mellamby Hall as part of her Royal visit to Nigeria). On that day she had made two stops on her itinery before arriving in UCI campus. The first was at the UCH almost nearing completion where she named the dual carriage way entering the main gate and by extension the major road passing in front of the Hospital from Mokola to Agodi Gate "THE QUEEN ELIZABETH ROAD". The plaque is still in place on the left side as Nigeria was still driving on the left like in Britain at that time. It is now on the right as

one leaves the UCH since Nigeria changed to driving on the right on 1st april 1972. The second port of call was the campus of the Nigerian College of Arts, Science and Technology. In all three places she was received by one man who was the pioneer Chairman of the Governing Board /Council of the 3 Institutions, - Sir Sydney Phillipson.

As the entourage came into the UCH, a man carrying a placard broke through the cordon of British and Nigerian security men to deliver a letter to the Queen protesting his sack by the Hospital and demanding to be re-instated. In the pursuit, he fell, only to rise again and got the letter delivered to the security but failed to get his job back as he had been dismissed for presenting false credentials for employment as a Radiographer in the X-ray Department then still at Adeoyo Hospital (Monekosso 2010 - personal communication).

THE STUDENTS' CLINICAL SOCIETY, UNIVERSITY COLLEGE HOSPITAL IBADAN,NIGERIA

The week the 2nd MB repeat examination was out and the 7 who passed moved to join the classmates who had passed at the first attempt and had come into residence in September, 21 of us met in the room of Ambrose Folorunso ALLI the President of the Association of Medical Students on 14th February 1958 and decided to form a Students' Clinical Society and the executive was mandated to draw up a constitution. The Foundation officers who were to hold office till the end of the 1957/58 session were Mr John Ehanire (formerly Agbonkonkon) as President, Mr Nelson I. Esimai as Secreatary, Mr W.G.T. Annan (from Ghana as the University College at Legon, did not have a Faculty of Medicine, they transfered their Medical stuents to the Ibadan Faculty after passing the Intermermediate B.Sc in Accra as an interim measure.) as Financial Secretary and Bunu Uche Ugo, Uchenna Nwokolo and A.F. Alli as Organising Secretaies. Professor Alexander Brown was appointed the PATRON. The inaugural meeting of the Society was on 28 March 1958 under the Chairmanship of Professor Patrick Collard, Head of the Department of Bacteriology (later changed to Micobiology & Virology before Virology gained full Department Status). The Inaugural address entitled "Undergraduate Medical Students' Activities" was given by Professor E.T.C. Spooner, Professor of Bacteriology at the Liverpool School of Tropical Medicine. He got the Abernathian Society of his former hospital, St Batholomew's Hospital London (or St Baths for short), to donate a gavel to their Ibadan counterpart to be used by the President to bang the table to maintain order at our meetings. Dr F.O. Dosekun, the pioneer Hall Master of the Clinical Students' Hostel gave a talk on the Biological Society of Dublin. The activities for the day was rounded up by Dr M.D.W. Low of the Department of Medicine on the Students' Clinical Society of his alma mata the University of Edinburgh. Dr Low after retiring from UCH Ibadan and UCI returned home to become the Dean of Students at Edinburgh Medical School. He and his wife Dr Mrs Low formerly of the General Out Patient Department at UCH were to interact with Ibadan Students who came to undertake the post graduate training at the University of Edinburgh like the author and successive colleagues who became Nigerian eminent Professors of Psychiatry at Ibadan, Lagos and Benin under WHO sponsorship arranged by Professor T.O. Lambo. Others came to Edinburgh every six months to take the examinations of the Royal Colleges of Surgeons and Physicians and often paid courtesy call on their former teacher. Professor Alastair Smith in retirement also gave revision courses in Anatomy at the Royal College of Surgeons. He once recognized one of our classmates, and said to him in his imitable drawl – "ehhh I have seen this face before". Yes sir, at Ibadan, he replied, but refused to add that he was one of those asked to withdraw after failing the second attempt at 2nd MB of February 1958. He went through the LRCP MRCS route of succour to eventually obtain the FRCS before returning home.

The new set of Clinical Students were a class by themselves. They had 2 females – Bopo Cameron-Cole (later Prof Mrs Osuntokun) and S.O. Daramola (later Prof Mrs Oduntan). They had to remain in Qeens' Hall while arrangement was made for a temporary wooden block within the Clinical Students' Hall compound. The class unlike our self effacing class was full of vivacity and were led by a trio made of Osuntokun-Osunkoya-Salako in classwork and maintained that reputation after graduation. There were other talented high achievers and highly visible members who participated in campus sports and clubs. They took advantage of the commuting bus between the main UCI campus and the Hostel to maintain the link like the non-medicos. They embraced the Students' Clinical Society with zeal to emphasize that the Ibadan Medical School had grown beyond the pre-Clinical years of fear of Anatomy, Physiology and Organic Chemistry (later replaced by equally daunting Biochemistry) that were notable for terminating the ambition of ever becoming a "dokita" as medical practitioners are called in the local languages of West Africa. By its very name the Students' Clinical Society excluded non-clinical members of their Hall. In this they were following the example laid by the early group of preclinical students who were transferred from the Yaba Higher College campus where they remained for the next

2 years after 1948 because the Anatomy dissection facilities at Ibadan was not yet in place. When it was ready they were accommodated at the Temporary Site of UCI at Eleiyele and had to commute daily to the Permanent site in a pick-up van which they named "autonomous". One day as Tunji Otegbeye recalled in his autobiography, they commandeered the van and took residence in the yet to be allotted junior staff quarters at Abadina Village on the permanent site which was within walking distance to the Anatomy and Physiology classrooms. They paired themselves up two to each house of two bedrooms and the females in a house. The rebellion would have earned expulsion in olden days of Yaba, but the authorities dare not do this in a country in dire need of doctors for their health services. Instead of punishment, Mellamby, the Principal arranged for cooks and stewards for them in their Abadina Village abode and doused the crisis. Professor Alastair Smith was to remark the next Anatomy class that if what they did had been in Edinburgh his old medical school the class would have earned "rustication".

THE FIRST STUDENT'S RIOT AND RUSTICATION EPISODE OF NOVEMBER 1957

This word "rustication" was to feature some 7 years later. On November 3, 1957, following a Student's Union meeting in Trenchard Hall that went far into the night to protest the erection of burglar proof wire nettings on the balconies of the ground floor in the Halls of residence on the campus, the barriers were hacked down against majority decision by some militant students who moved rapidly from Hall to Hall saying they were being caged like the animals in the University zoo. The barricades had been erected during the long 'summer' vacation as the administration's response to a tragic episode in which a female student had died in a male students room in the process of an illegal abortion. Then ten days later, by the authority of Senate, the University College was closed for the rest of the term and the students were sent away on rustication. We searched in vain in the dictionaries for the meaning of rustication. Are we being told that we were being sent back to our villages for our uncivilized behaviour? We were allowed to resume on January 8, 1958 after signing an undertaking of good behaviour and paying a fine to cover the damages to replace the vandalized "cages". But the missed lectures were not repeated and the session was not extended as became the practice in later years. The first casualty was the woeful result in the 2nd MB resit of February 1958 affecting 50% of the class of 1955 in which 6 passed fully, 1 had a pass with referral in Pharmacology (the only reference permitted), and 3 were allowed a third attempt while 3 "were sent down", the euphemism in those days for being "asked to withdraw" which in effect means expulsion for "poor academic performance". The high failure rate was even more calamitous for the rest of the students who took their Intermediate and Final degree examinations in June 1957 making an unhappy ending to the Rustication episode. The Clinical Hostel was not affected being 8 km from campus and also had no "cage" to break as the design by the Hospital architects put the Dining Hall in such position that you and your visitors just have to pass through the porter's bay and not a lodge to enter the Hostel like on campus. Moreover, the "dokitas to be" have no time for undergraduate activities as their colleagues were already wage earners occupying important positions with their cars to show off 3 years ahead of us in Medicine. We even declined to use our short length white coats to the wards unless you were going to Mr. Oritshejolomi Thomas Surgical Unit for your postings. A big cabinet with compartments and locks for each Lab coat was placed by the corridor between the Dean's Office and the first medical school Lecture Theatre (now transferred to the B Sc Physiotherapy students) after the then Medical Library facing the Medical Out Patient (MOP) Clinics. If you want to see those lockers, go the Radiographers' Common Room in the Central X-ray Department. I got this donated to the UCH School of Radiography when the school was started in 1972 as it was part of the items demanded by the Society of Radiographers London for approval of Schools of Radiography in the Commonwealth for which they conduct examinations at that time. We avoided the lab coats as we did not want our identity as apprentice doctors to be recognized by our patients in the wards and clinics. The short length lab coats is still used today at the Lagos University Teaching Hospital by medical students as they were introduced by Professor Oritshejolomi Thomas, the foundation Provost of the College of Medicine University of Lagos in 1962..

THE JOURNAL 'DOKITA' AS SUCCESSOR TO THE 'JOURNAL OF THE ASSOCIATION OF MEDICAL STUDENTS OF NIGERIA'

With increased membership of the Student' Clinical Society the number of meetings with emphasis on medical science and patient care throughout the 1958/59/60 sessions coupled with overwhelming support by our teachers, the Society felt the need to have a new journal to replace the JAMS to be named Dokita, This is the name by which medical practitioners are universally addressed in Ibadan and various parts of Africa

The maiden issue revealed the extensive consultations that led to the production of the Journal. It opened with Good Will Messages from:

1 The Governor General of Nigeria, Sir James W. Robertson, who is the "Visitor" to the University College and a Patron of the Society.
It reads:
"It gives me great pleasure to take part in the launching of your journal '**Dokita**'. It's appearance will be welcomedby all the friends of the University College Hospital, and by 'friends' I mean all those people who seek to further the prestige and influence of the Hospital, which already stands high. They specially include all Members of the University and all members of the Medical Profession in Nigeria, but also many others both in Nigeria and abroad. The activities of the Students' Clinical Society have an important place in the life of the University as a whole. This magazine will help to emphasise that, and it will also help the Society to keep in touch with Nigerian medical students abroad and with old students who have finished their university careers and are now practicing medicine. I look forward to seeing that this journal appears regularly and frequently and wish the editorial staff every success in their enterprise."
Signed J.W. ROBERTSON.

Credit for that unique maiden issue must be given to the indefatigable efforts of the officers of the Society led by the 1959 President. Uchenna Nwokolo and his 1960 successor Ameneche Anumoye, Ambrose Alli the President of the AMS and Michael Bankole all of the 1955 set. But it was the dynamism of a group in this 1956 set led by David Olatunbosun who combined several functions (business manager, editing, liason) and Moses Ilo the Editor and motivator and others which included Modupe Soyannwo, Ogbuehi, Frank Eke and F.O. Owosina that saw to the production of the maiden issue soon after the release of the results of the first ever MB BS examination taken in Ibadan under the special relationship with the University of London in which 13 of the 14 candidates passed with one referred in Obstetrics and Gynecology and one obtaining a Distinction in Surgery. It also announces the promotion of J.B. Lawson to Professor in the Department of Obstetrics and Gynecology with effect from October 1, 1960. the day of Nigerian Independence.

EPILOGUE

The 1955 class came to the medical school, saw and conquered. All with the exception of 4 became medical doctors as the following breakdown shows:
13 in October 1960, MB BS London at Ibadan,
6 in April 1961, MB BS London at Ibadan,
5 in October 1961, MB BS London at Ibadan,
2 in October 1961. MD in West Germany,
1 in 1961, MRCS Eng., LRCP Lond.
1in 1962, LLM, LRCS Ireland.
1 in 1963, MD, Heidleberg, West Germany,
This amounts to a total of 29 or 88% and not the 50% predicted on our first day in medical school.
Of the 29, 24 (83%) gained the MB BS at Ibadan.
Of the 4 that did not become medical doctors, one went on to Germany and returned with a Ph D. in Economics and joined the Federal Civil Service and rose rapidly to become one of the powerful Permanent Secretaries in the Federal Military Government under General Yakubu Gowon. He eventually established his own Bank after the regime was overthrown. One went on to take a Science Degree and when we stumbled into each other at Kano Airport in 1986 while I was on secondment to the University of Maiduguri as their first Nigerian Provost of the College of Medicine, he was the Principal of a Federal Government College, in the North, I believe it was Kazaure. The remaining 2 had died tragically. The first death it will be recalled was in our first year, suicide was the coroner's verdict. The second and last was Ibrahim Taqi, who gave up medicine and entered Politics on return to his native land , Sierra Leone, and was executed for political activities not in conformity with the ruling Prime Minister's party, I don't know which of the Magai' s brothers it was but he met his tragic end, roped in, a victim of the murky intrigues of African politics.

POSTGRADUATE STUDIES.
100% SUCCESS FOR THE 1955 SET

All the 29 doctors of our class went on to specialize in one branch or the other of Medicine. One after the other, members of the class took appointments in the U.K. for those with British or Irish medical qualifications and in the Federal Republic of Western Germany for the 3 with German MD qualification to train in various Medical specialties. In this the class of 1955 was to set an enviable standard for Ibadan Medical School graduates of the post independence era. Of the 29 of us 10 eventually became Professors in Nigerian Medical Schools at Ibadan, Lagos and Nsukka. They held the Professorial chairs in Neurosurgery, Paedriatic Surgery, Cardiothoracic Surgery, Orthopaedic Surgery, General Surgery, Obstetrics & Gynecology, Psychiatry, Pathology and Radiology.

SOME OF OUR PIONEER TEACHERS

It is not possible to mention all of our teachers. Nevertheless, some of them that made the greatest impression on the 1955 set.

Professor Miss Beatrice Jolly

The first staff to arrive in March 1948 was Miss Beatrice Jolly who had recently retired from the Indian Medical

Service at Independence of India. She was appointed Professor and Head of Department of Surgery based on her wealth of administrative and professional experience on the Surgical management of Tropical diseases common to both India and West Africa. She was immediately appointed the pioneer Dean of the newly created Faculty of Medicine for the 1947/48 academic year. She was re-elected Dean in the 1957/1958 session at a time when her pioneer role was once again needed in the first year of the movement from Adeoyo Hospital Ibadan to the newly completed national monument. She was also the Hall Mistress in charge of the Queen Elizabeth's Hall, the only female student's Hall of residence at UCI during her time. She was single and to the girls of Queen's Hall who were 31 (6%) out of a total student population of 514 in 1957. She showered them motherly affection and called all of them by their first and last names. She also took my class, the 1955 set, which was destined to be the pioneer clinical students of UCH on a guided tour of the Teaching Hospital complex nearing completion on at least three consecutive occasions in 1957. In January of that year, there was an epidemic of small pox in the inner core of Ibadan city (Cockshott and MacGregor 1958). She drafted all of us in the preclinical years to undertake a mass vaccination of all children and adults free of charge as part of the campaign to contain the epidemic. One of the greatest joys in her life was to address our class on the occasion of the first Introductory Lecture Series ever given in UCH to medical students prior to the start of Clinical postings on Monday 23rd September 1957 at the Pathology Laboratory on the ground floor at the Northern entrance to the SW wing of UCH now a specimen collection point for the Department of Microbiology then called Bacteriology. There were 30 of us instead of 32 because of the 2 who opted to undertake their Clinical training in Germany on account of the Scholarship to Nigeria as previously stated. When the news of her retirement from the University at the end of the 1957/58 session came to us, we formed a DRAMA GROUP with only one female member from the School of Nursing of course. We organized an evening of songs and dances as our contribution to the send off parties for her. The venue was the School of Nursing Hall and the evening was rounded up by acting a play entitled ***"This is Our Chance"*** authored by Ene Henshaw who was a Yaba Medical School doctor and had won fame from this published book used as a text in many secondary schools. The day before her departure from Nigeria, we had a group photograph with her and that was the end of the Drama Group.

Professor Alexander Brown

The next to arrive in October 1948 was the energetic and brilliant Scotsman Alexander Brown, a physician of physicians, much beloved by all. He was appointed Professor and Head of the Department of Medicine, a position which he held till he died on 22nd February 1969 in his bed at his two storey house on the UCI campus with the Catholic Chapel parallel to it and the giant Cross on the mound later screened from the University mosque separated from it by the road leading to the Abadina village and the road which every medical student must pass to reach the dreaded Anatomy Department passes by its entrance. He succeeded Professor Beatrice Jolly as the Dean of the Faculty of Medicine in the 1949/1950 academic year as the tenure of Deanship in the Faculty was a year throughout the period 1948 to 1962 coinciding with the period of Special relationship with London University. Professor Brown was at his best during his bed-side teaching at his ward rounds in the Medical Wards located at West 3 and SW 3 wings of the UCH complex. At every patient he would tell the story of a relation or acquaintance in his native Scotland with a similar disease. That linkage was the trick that instills the knowledge in our memory for many years to come. Alexander Brown was not all work and no play. He patronized the various night clubs in Ibadan which had been previously mentioned and danced to the tunes of the local "juju" and "owambe" music with energetic gyrations of the waist and trunk better than the Nigerians who gave him the applause that shook the hall. At home he had one of the largest collections of "high life" musical records to entertain his visitors. He was a thoroughly Africanized "oyinbo" (the Yoruba word for a white man whom they distinguished from whites from the Middle East whom they called "kora"). During his 21 years of his life in Ibadan he was a friend and mentor to the students that passed through Ibadan Medical School. It is in recognition of that selfless service that the Clinical Students' Hostel is named in his memory as the Alexander Brown Hall of the University of Ibadan and the only Hall of Residence outside the main campus with effect from Monday the 8th March 1971.

Professor Alastair Smith

Alastair Smith was a famous name in Anatomy in the University of Edinburgh before he was appointed Professor and Head of the Department of Anatomy in the UCI at the beginning of the 1948/1949 session. He is one Professor that every medical student in Ibadan that passed through him can never forget. He is both admired and mortally feared as you know that your career depends on passing Anatomy. Even though at the end, the sister subject of Physiology may be your undoing, the blame of those who fail to go through the dreaded 2nd MB Examination before proceeding to the more relaxed

atmosphere of the Clinical Years in a Teaching Hospital is placed unjustly on Anatomy and in essence the great teacher who proudly refers to himself as Alastair Smith of Edinburgh. He would seem to have no other interest but Anatomy and would make you do the same. Unfailingly at the end of every term there is a class test in Anatomy. He would paste the result on the notice board and draw a line below the 50% pass mark. The line became known as the **"Duncan Line"** by successive generation of medical students who never knew who the Duncan was. He was J. I. Kofi Duncan of the 1953 set whose name was directly above the line at successive end of term tests. His classmates among whom was our own Emeritus Professor O. O. Akinkugbe invented the term Duncan line which has gone into the history of the Ibadan Medical School and surprisingly others that came later, most of whose teachers had been products of Ibadan. Kofi Duncan says it was Alastair Smith himself who adviced the class if they want to pass to always strive to go above the Duncan line. Kofi Duncan went on to be the first doctor to specialize in RADIOTHERAPY & CLINICAL ONCOLOGY in West Africa rising up to Associate Professor at the College of Medicine of the University of Lagos before retiring into private practice in Lagos which he regards as home as in spite of the Kofi indicating his Ghanaian ancestry, he was born and bred in Lagos and represented the Kings' College Lagos in all the major sports in his days and did not give up playing Cricket at UCI in spite of Alastair Smith's warning that sports and Anatomy do not go together. He has however retired into Golf.

If anyone could be called imitable then Alastair Smith fits that sobriquet. As previously stated, his daily attire was a light green safari jacket on top of a pair of shots. We never saw him wear trousers and any shoes other than white tennis shoes without socks. The jacket had four pockets with triangular flaps as covers. In the left breast pocket he carried a monocle (eye glass for one eye) which is hung from the neck. Once in a while he fits the monocle smugly into the socket of his left eye to read or sign a document. Alastair Smith was so knowledgeable in morphological anatomy that he could take one little artery or nerve or muscle and talk on its course and relations for one hour providing interludes of jokes and end up with his voice rising up quivering to a pitch **"WHEN ANATOMY WAS ANATOMY, AND MEN KNEW THEIR STUFF, I ALASTAIR SMITH OF EDINBURGH WAS NUMBERED AMONG THE GREATS"** to the thunderous applause of the class. His famous book titled ***Anatomical Mnemonics*** was so small, as it can disappear in the breast pocket as it was not more than 10cm x 5cm x 1cm in size, but it was an internationally recognized classic as an aid to memory and taught us to manufacture our own way of remembering things easily forgotten throughout life. The memory of Alastair Smith is one difficult to erase for those who went through Ibadan medical school whether successfully or not. The multicoloured anatomical drawings drawn on the blackboard in the course of his lectures were based on many years of dissection of the human cadavers preserved in that eye smarting chemical, formalin *(acetaldehyde)*, are so beautiful to behold and in their clarity often help to reinforce those in the ones in those intimidating Textbooks of Anatomy (by *Gray, Cunningham or Buoleux Grant*) which he stimulated us to read from cover to cover if we must pass the almighty 2nd MB examination or forever forget or ambition to become doctors. It is no wonder that Ibadan products go on to perform so well in anatomy in postgraduate examinations and they are asked who taught them, and the name of Alastair Smith is mentioned, the response, was invariably – "no wonder".

Professor Oladele Ajose

Professor Oladele Ajose is a man of history. He was born a prince of the Royal House of Oba Ologuntere, the Eleko of Eko as Lagos was called before the British annexed it as a colony by a treaty of 1861. He was succeeded by his eldest *son in the Ado (Benin) tradition, Esilokun, who reigned* from 1749 to 1775 and established the ruling House that has produced the Oba of Lagos since 1749. When the Eleko, Oba Falolu, joined his ancestors, Ajose was a candidate but he conceded the title to Oba Adeniji Adele on account of his commitment to Medicine as the first Professor in black Africa. He left home in 1927 and graduated MB ChB (Glasgow) in 1932 and returned home only to go back to Scotland to obtain the DPH and MD (Glasgow) in 1935 and 1939 respectively. He was the first African Senior Staff recruited from his post as the prestigious Medical Officer of the Lagos Town Council. He had been the Examiner for the Royal Sanitary Institute (RSH) examination for British West Africa (made up of the Gambia, Sierra Leone and the Gold Coast as Ghana was called before her Independence on 15th March 1957). He was a Lecturer and Examiner in Public Health and Forensic Medicine for the Yaba Medical School. He was appointed Professor and head of the Department of Preventive and Social Medicine by Kenneth Mellamby, the Foundation Principal and chairman of the Provisional Council of the UCI in 1948. He thus made history by becoming the first black African Professor and was for many years the only one in the expatriate dominated Senate of the UCI.

Oladele Ajose was soft spoken and unassuming yet he was respected, earning himself enormous influence within and outside the University community. He got an imposing 2

storey building for his Department which was detached from the main UCH complex and was quite visible as one enters or passes the main double carriage way Entrance to the Hospital, which was named by the Queen herself as the Queen Elizabeth Road on her visit to the almost completed buildings on 14th February 1956 as part of her Royal Visit to Nigeria in which she had Lunch at the UCI Mellamby Hall dining hall and met students (of which this author was one of the population of less than 300 including about 30 females), assembled at the Trenchard Hall.

Although he had no clinical students to teach in the first 10 years of his appointment, he was not idle. He pioneered, to use today's terminology, an OUTREACH programme. This was based at ILORA, the nearest of the satellite towns to the historic city of OYO. This is the new Oyo, a successor to the ancient city called OYO-ILE, the capital of the OYO EMPIRE which was disbanded by the Fulani cavalry of the Sokoto caliphate at the beginning of the 19th century and finally relocated in its present site around 1820. He not only ran a Health Welfare Clinic but caused the community to convert the life wire of the town, a river which was its water supply to be converted into a lake–like reservoir into which was introduced a certain type of fish, *Tilapia species* which is known to feed on mosquito larvae and breeds rapidly. In this way the large harvest of fish all year round provided sustenance and livelihood for the people while decreasing the incidence of malaria, the most important cause of ill health in the population and high death rate in children in the Tropics and Sub-tropical regions of the world.

When clinical teaching commenced in UCH, he took successive classes from 1958 – 1962 during their PSM postings to live with him in a rented quarters (the first bungalow as one enters Ilora about a km from the Ibadan – Oyo highway) practicing Community and Family Medicine for a period of 3 weeks. We ran the Maternity and Child Welfare Clinics, did home visiting to advice on environmental protection and collected data on the population for our group write up at the end of the posting. We went to Lagos for a week during which we lived in another rented accommodation and visited the Iju waterworks learning about how the water supply to the city of Lagos was processed before distribution. We visited the abattoirs where butchers prepared meat for sale in Lagos markets and visited a large bakery owned by an Ijebu man Tugbobo after retiring from public service and were impressed by the efforts of the factory workers to maintain hygienic standards in food processing and packaging.

Both at Ilora and Lagos, his wife, an English lady, was also there looking after her husband and his wards after 10 years of waiting for this event.

Those of us who were Yoruba speaking were astounded about her fluency in that language complete with proverbs and current jokes and in the impeccable Eko accent of Lagosians. In recognition of his contribution to Ilora, he was honoured by the Bale of Ilora with the chieftaincy title of the BADA of Ilora. Her Majesty Queen Elizabeth II had honoured the wife, Beatrice Spencer Ajose, with the MBE and at a later date he himself with the OBE titles. The crowning glory of his public life was his appointment in 1962 as the Foundation Vice-Chancellor of the newly established University of Ife (now the Obafemi Awolowo University, Ile-Ife). Inheriting the campus of the Ibadan Branch of the Nigerian College of Arts, Science and Technology (originally excised from the South West corner of the UCI land acquisition) as a Temporary Campus. At the same time, the Zaria Branch of the abrogated Nigerian College AST became the campus of the Ahmadu Bello University while the Enugu Branch was made the Enugu Campus of the University of Nigeria Nsukka. Thus in 1962 each of the 3 Regional Governments of Nigeria had their own State Universities and the Federal Government established the University of Lagos and UCI became autonomous from the Special Relationship with the London University. This balancing of the political equation of the "three legged Nigerian State was expedited with the founding of its own University at Nsukka by the Eastern Regional Government in 1960, a University that started to award his degrees without any affiliation to any other University as Ibadan had been since 1948. Professor Ajose was to repeat his pioneering efforts at UCI and Ilora to prosecute a Master Plan for the University at its Permanent site at Ile-Ife, the legendary city which the Yoruba people of South Western Nigeria and in the diasporas in West Africa, North and South America and the Caribbean including Fidel Castro's Cuba regard as not only their ancestral home but that place in which man first walked on planet earth. It was to his eternal credit that this great son of Africa was to carve out of the virgin forest a University campus that many regard as the most beautiful in scenery and architectural magnificence in Nigeria till today. Papa and Mama Ajose had lived a virtuous and exemplary life and were called to the great beyond on July 3, 1978 and March 5, 1988 respectively. Mama died when she was attacked by armed robbers in their Lagos Isale Eko home. Her youngest daughter was born in that home and was carried on her mother's back like all the children in the neighborhood. She incidentally was killed by the same attackers.

May their gentle souls rest in perfect peace.

ASSOCIATION OF MEDICAL STUDENTS OF NIGERIA 1954&1955 SETS

Picture of the last Set to finish clinical training in UK and 1st set to finish at IBADAN

PIONEER CLINICAL STUDENTS OF THE U.C.H. (1957/58 Session)

Standing L. to R.: Bankole, M.A.,; Esimai, N.I.; Essien, D.P.; Odiase, V.O.N.; Annan, W.G.; Lagundoye, S.B.; Nkere-Uwen, O.T.; Lawson, E.A.; Orimolade, C.A.; Udo-Akang, B.A.; Agboola, J.A.

Sitting L. to R.: Agbokkonkon J.I.; Ugo, H.B.; Alli, A.F.; Obi G.O.; Odunze, F.O.; Rilwan W.B.; Nwafor, D.C.; Adeloye, R.b.; Nwokolo, V.U.

QUEENS HALL 1956/57 WITH HALL MISTRESS, PROF (MISS) BEATRICE JOLLY

PIONEER CLINICAL STUDENTS' DRAMA GROUP SENDING OFF PROFESSOR MISS B. JOLLY SEPT. 1958

LIST OF EDITORS-IN-CHIEF

YEAR	NAME
1960	ILO M. O.
1961	ILO M. O.
1962	SOYANWO M.A.O
1963	ADEYOKUNNU A.
1964	ADEYOKUNNU A.
1965	MAKANJUOLA O.
1966	SMITH J.A.
1967	JAIYESINMI F.
1969	AYOOLA O.
1971	ODUTOLA A.B.
1972	UDEZUE E.O.
1973	UDEZUE E.O.
1974	AGBAYEWA O.
1975	ONWUBALILI J.K.
1976	IBE E.C.
1977	SANGUA A.
1978	EYONG E.
1979	OTUKA A.I.
1980	ALONGE T.O.
1981	ALONGE T.O.
1982	AGBOGU B.N.G
1983	OMOIGUI O.A.J
1984	UKEOMA J.C.
1986	ADEYEMI T.
1987	ADEGOKE A.
1990	ALAGH T.B
1991	COLE C.R
1992	OGUNYEMI L.
1993	SOGAOLU O.
1994	SOGAOLU O.
1995	AJILEYE O.
1996	AJILEYE O.
1997	OJESINA A.I
1998	SOYINKA S.
1999	OTELAJA A. O. (1st Female Editor-in-Chief)
2000	FILANI O.T.
2001	ITAKPE S.E.
2002	ITAKPE S.E.
2003	LAMIKANRA O.
2004	OGUNSUA A.O
2005	SALAMI S.
2006	EKPENYONG E.
2007	AJAYI T.O
2008	ONWUKA N.
2009	OYENUGA A.
2010	OLALERE O.

LIST OF PAST PROFESSOR J.A ADELEYE ESSAY COMPETITION AND THEIR WINNERS

Year	Topic	Winner
2010	Sustainable alternate energy sources in lieu of diminishing oil reserves in Nigeria	Amechi Ezeogba
2008	The Climatic Change: A Ticking Time Bomb	Ebekozien Osagie(University Of Ibadan)
2006	Health Sector Reforms in Nigeria Meeting the Millenium Development Goals.	Ogodo Elisha(University Of Ibadan)
1998	Medical practise and ethics in Nigeria: strange bedfellows?	V.I.P Ugoala
1996	Financing health services in a depressed economy	Adesanya O.A

LIST OF SOME PAST DOKITA JOURNALS

YEAR	TITLE OF JOURNAL
2009	Tropical Disease Edition
2008	Child Health Edition
2007	Trauma Edition
2006	Laboratory Health Edition
2005	Public Health Edition
2003	Emergency Medicine Edition
2001	Reproductive Health Edition
2000	40th Anniversary Edition
1999	Heart and Lungs Edition
1998	Oncology Edition
1996	Hepatology Edition
1995	General Edition
1993	Maternal and Child Health
1991	Parasitoses Edition
1990	Recent advances in Neurosciences Edition
1988	Special Features Edition
1985	Sexually Transmitted Diseases Edition
1984	Recent Advances Edition
1982	General Edition
1980	General edition
1979	Hypertension edition
1978	General Edition
1977	General Edition
1976	General Edition
1975	General Edition
1971	General Edition
1970	General Edition
1967	General Edition
1966	General Edition
1960	General Edition (Maiden Edition)

LIST OF PAST BIENNIAL EMERITUS PROFESSOR O.O. AKINKUGBE INTER-MEDICAL SCHOOLS QUIZ

DATE	VENUE	WINNER
*1st - 15th March, 1996	College Auditorium, University College Hospital, Ibadan.	Department of Medicine and Surgery, U.C.H., Ibadan.
*1st – 14th April, 1998	College Auditorium, University College Hospital, Ibadan.	Department of Medicine and Surgery
12th - 14th November, 2002	University College Hospital, Ibadan.	University of Ibadan
30th – 2nd February, 2005	University of Benin, Benin.	University of Ibadan
21st – 24th January, 2007	University College Hospital, Ibadan.	University of Ibadan
18th – 21st January, 2009	University College Nigeria, Nsukka., Enugu	University of Ilorin

** was organized as an inter-disciplinary quiz among the departments of the College of Medicine, University of Ibadan*

LIST OF PAST DOKITA SYMPOSIA AND ISSUES DISCUSSED

YEAR	SYMPOSIUM THEME/TRAINING WORKSHOP	SUB-THEMES AND ACHIEVEMENTS	SPEAKERS
2009	Epidemic – Prone Diseases in Nigeria: A Threat to Human Security	• Infectious Outbreaks in Nigeria: An Overview • Socio-Economic Impact of Epidemic-Prone Diseases • Role of Clinical Epidemiology in the Control of Epidemic Prone Diseases • Stemming the Out-Break of Epidemic-Prone Diseases in Nigeria	Professor Adenike Abiose Professor William R. Brieger Professor M.C. Asuzu Dr. Peter Eriki
2008	The Nigerian Child: An endangered species?	• Concept of the Nigerian child • Childhood morbidity and mortality: The major culprits • The role of nutrition in child health • Procuring a healthier future for the Nigerian child through active political will	Mr. Karim Akadiri Professor G. O. Akpede Professor Tola Atinmo Dr. E. A. Abanida
2007	Infertility: Dread of the African couple	• Infertility: The Nigerian situation • Current trends in the management of infertility • The role of the family, government and Non-Governmental Organizations in infertility	Dr. C. O. Chovwen Dr. A. B. Ajayi Dr. O. A. Roberts
2006	Caging the HIV/ AIDS monster- No time to lose	• The socio-economic impact of HIV/ AIDS • HIV/ AIDS in women of reproductive age • Combating HIV: The Nigerian situation	Professor Kunle Odumosu Dr. O. Olayemi Professor B. O. Osotimehin
2005	Curbing the menace of malaria- The new agenda	• Malaria control- The journey so far • Socio-economic impact of malaria endemicity • Current trends in the case management of malaria and its complications	Dr. Bayo Fatumbi Professor A. Soyibo Professor O. Sodeinde
2004	World without polio	• Facts about polio • Global polio eradication initiative • Polio eradication in Nigeria- Another deadline?	Professor E. E. U. Akang Dr. Brandoa Co Dr. (Mrs) Dere Awosika

2002	*A Beautiful Mind*: Re-examining social isssues in mental health		Dr. Olaosebikan Dr. C. O. Mume Dr. O. Aina Dr. O. Olley
2001	The Nigerian Child: Truly tomorrow's leader		Professor Adenike Grange Professor Akinyele Dr. O. Ogunkunle Dr. O. J. Fatunde Dr. Akenzua
1999	Man and Microbes, who is winning?(infectious diseases in Nigeria)	• An overview of infectious diseases in Nigeria • HIV in Nigeria, stemming the tide • STDs and their gynaecological sequelae • Effective control and management of malaria • Management of tuberculosis: The • Damien foundation experience • Tuberculosis and the child	Dr. (Mrs) Lola Dare Professor Femi Soyinka Professor A. U. Oronsaye Dr. O. A. T. Ogundahunsi Dr. J. A. Osho Dr. (Mrs) Sadiq
1998	Preserving the future: Child care in the Tropics	• Overview of child care in the Nigeria • Nuturing the developing mind • Common paediatric emergencies • The rights of the child	Professor V. A. Notttidge Dr. (Mrs) O. O. Omigbodun Dr. O. Sodeinde Dr. (Mrs) Onifade
1997	Reproductive Health in Nigeria; Before, During and After.	• Management of Infertility in Africa • Reproductive Health in Nigeria: An Overview. • Promoting Safe Motherhood	Professor F.O Otolorin Professor E.E Onafua
1995	The Veil of Sanity (Mental health in Nigeria)		Professor Dele Sijuwole Hon. Justice S. O. Ajileye Prof A. O. Odejide Dr. Jude Ohaeri Dr. (Mrs) P. T. Sotumbi
1991	The many faces of death: Suicide, abortion, euthanasia	• The presentation and management of suicide behaviour in Nigeria • Suicide, euthanasia and abortion-historical perspective and ethical consideration • Medicolegal investigation of deaths from euthanasia, suicide and abortion	Dr. Jude Ohaeri Dr. M. C. Asuzu Professor W. O. Odesanmi
1988	Training workshop on "Primary health care implementation in Ibarapa local government"	• Far reaching resolutions were made concerning the implementation of Primary health care objectives in the Local Government Area.	

I

II

III

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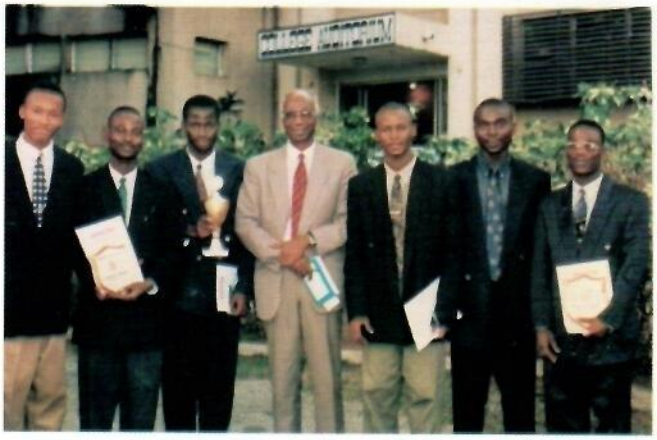
VII

VIII

IX



X

XI

XII

XIII

CAPTIONING

I

1995 **DOKITA** Editorial Board Symposium

II

This was taken when Professor Babatunde Oshotimehin was the provost of College of Medicine from 1990-1994.

III

Emeritus Professor O.O. Akinkugbe in one of the Emeritus Professor O.O. Akinkugbe Inter-Medical School Quiz Competitions

IV

One of the **DOKITA** Editorial Board Dinners with the Chairman of the Board and Provost of the College of Medicine, Professor A. O. Omigbodun. (2006-2010)

V

DOKITA Editorial Board in her early years

VI

2002 **DOKITA** Editorial Board members
Sitting Left-Right: Mr. Young Odebala (R.I.P), Miss Nike Adeyinka, Mr. Emeka Osisiogu, Mr Shopekai Itakpe (Editor-in-chief), Miss Tomi Lamikaran, Mr Mutaleeb Shobode, Miss Moji Olawoye
Standing L-R: Mr. Chuma Esomonu, Mr. Ayo Ajiboye, Miss Bimbo Abolarinwa, Mr Adewumi Babajide, Mr Osato Asemota, Miss Dorcas Adesokan, Mr Yinka Afolabi-Brown, Mr Kunle Onasanya

VII

DOKITA Editorial Board's 1999 Symposium, chaired by Late Professor Olukoye Ransome Kuti

VIII
DOKITA Editorial Board members with Professor M. T. Shokunbi in the Symposium held in 1999

IX
2009 Symposium of the **DOKITA** Editorial Board

X
Winners of the Professor J.A. Adeleye Essay Competition with Emeritus Professor O. O. Akinkugbe

XI
DOKITA Editorial Board in the 70s

XII
Front Row: Left to right
Dr(Mrs.) Baiyeroju (formerly Miss Kufoniyi), Dr Ogunsua, Dr. Adetosoye, Dr. Ajiboye
Back row: Dr(Mrs) Ogunsua (formerly Miss Ayodele), Dr. Fadipe, Dr Okulate, Dr Akinola, Dr Ikeagboluwa

XIII
CURRENT BOARD PICTURES
Standing: Mr. Oriniowo Olusola, Mr. Popoola Oluwatobi, Mr. Akannoh Nnaemeka, Miss Alabi Omolabake, Mr. Okwumezie Chima, Mr. Adeyalo Bankole, Mr. Ameh Samuel
Sitting: Miss Ajiboye Oyintayo, Miss Akinde Olasunkanmi, Mr. Olalere Olatunji (Editor-in-Chief), Mr. Koyejo Temitayo, Miss Ehimudiamen Anetor, Miss Shittu Atinuke

REVIEW OF JOURNALS

1960 EDITION

This is the maiden edition of DOKITA published in December 1960, with Moses Ilo as the Editor-in-Chief. The foreword was written by Sir Kofo Abayomi and it contains a goodwill message from the Governor-General of Nigeria J.W. Robertson. Its content include Nuclear Appendages in Neutrophil polymorphs, staphylococcal pneumonia and Inter-lobar empyema in infancy, Tetanus - management and treatment, sickle –cell disease in Nigerian children, petrol poisoning, pernicious anaemia, quark doctors in Yoruba village and practise of Medicine by lay men.

GENERAL EDITION 1975

This general edition features a number of articles on the various trends in the management of important medical conditions.

The causes of haemostatic failure and their methods of management have been clearly outlined in the article on management of acute haemostatic failure in Ibadan.

In 2 cases of lymphogranuloma venereum, similarities and commonly overlooked symptoms are pointed out in addition to the need for public health intervention and further research for more enlightenment.

In the article on skin diseases in Ibadan, the topic is discussed from first principles and common skin conditions seen in the University College hospital Ibadan are explained.

The role of physiotherapy in modern medicine and health care delivery is outlined in the article on physiotherapy and patient care.

The hand mirrors the man is an article that answers the question: what information could be derived from the clinical examination of the hand? This article equips the medical student and the young doctor with vital information for effective diagnosis and management of diseases.

Other articles like "Cigarette smoking- Not for your comfort" and "City and rural road traffic accident patterns in Nigeria" are very informative.

GENERAL EDITION 1977

This issue features:

Abortion in our community; Clinical studies on chloroquine as local Anaesthetic Drug; The sick child and his family; Ignorance and disease in our community ;A pilot study into several aspects of Student reactions to Psychiatric and Rural Posting; A Case of surgically Managed Rectal Prolapse in a 6-year Female Nigerian Child.

HYPERTENSION EDITION 1979

This edition dedicated solely to hypertension poses some questions like:

Why is there a marked rural – urban difference in the mean arterial pressures?

Why does the Blood Pressure not rise with age in some pockets of the population?

What is the relevance of infection and infestation on the pathology on the shrunken kidney in young male patients with marked hypertension?

Why does the female carry the hazard of sustained rise in blood pressure more robustly than her male counterpart?

Why is the female "stroke" more easily recoverable in middle age?

These questions are thoroughly treated in articles on Regulation of arterial blood pressure, Epidemiology of hypertension, Hypertension and the kidney, Hypertensive heart disease, Hypertension and the eye, Hypertension in Obstetrics and Gynecology, among other important articles.

GENERAL EDITION 1982

This general edition treats diverse but cogent issues in different specialties in medicine and surgery.

Featured in this edition are original research articles by final year medical students on Blood pressure levels in a rural community (Idere), Infant and child mortality in Igbo-Ora, and the incidence of tongue-tie in the age group 0-5 years in Igbo-Ora. These articles together, spell out vividly the health conditions of individuals in the Nigerian rural environment.

The article on Malnutrition in the Nigerian child deals with key issues prevalent in Nigeria and highlights the prevention and management of malnutrition.

"Controversial aspects in benign gestational trophoblastic neoplasm" discusses extensively the issue of molar pregnancy including histological grading, its relation to blood groups management and prophylaxis.

Other key health issues are discussed in articles on Past, Present and Future of psychiatry in Nigeria, The Surgeons Advice, Oral contraceptives among other articles.

RECENT ADVANCES EDITION, 1984

This edition focuses on the "Recent Medical Advances" over the previous decade. It periscopes those advances in the understanding and management of some common medical conditions prevalent in our environment. Subjects so treated include: Fluid and Electrolyte Imbalance(diarrhoea & dehydration in children); Diabetes Mellitus; the Lymphomas; Depressive Illnesses; Rheumatic Heart Diseases; Acute Cholecystitis; Trichomoniasis and Fungal infections.

Devoting an edition of a medical journal to 'Recent Medical Advances' may appear a rather ambitious venture in a developing country. This is because of the paucity of the necessary gadgeting required for any big time research. Though the edition may sound high falluting, all the subjects treated in it are extremely palatable and useful by the undergraduate medical students.

SEXUALLY TRANSMITTED DISEASES EDITION 1985

This edition focuses special attention on sexually transmitted diseases and treats the different aspect of their occurrence and management. It also features in addition, a special interview with the Honorable Minister of Health, Dr. E. N. Nsan.

The article on "Some historical aspects of veneral diseases" enlightens the reader about the general historical trends of veneral diseases.

The etiology and general management of gonorrhea, candidiasis, trichomoniasis, and non specific infections of the genital tract are treated fully in the article on 'The four commonest sexually transmitted diseases in Nigeria.

The article on "Epidemiology of sexually transmitted diseases" discusses the public health implications and relevance of sexually transmitted diseases

Specific diseases like genital herpes and AIDS are discussed in addition to the social factors responsible for the spread of sexually transmitted diseases.

Other articles include Clinical presentation and treatment of sexually transmitted diseases, sexually transmitted diseases in urological practice, sexually transmitted diseases in Obstetrics and Gynecology practice and sexually transmitted diseases in the newborn.

SPECIAL FEATURES EDITION 1988

This edition can be described as one that focuses attention on some "Public Health Crises" in Nigeria and in other developed and developing countries. It highlights the areas of interest of the Federal Government in providing comprehensive health care package via the production of Primary Health Care with an integrated functional Family Planning service.

In this edition, the aetiology, pathogenesis, epidemiology and search for cure of AIDs are reviewed and brought up to date.

It is thus believed that this edition will not only educate Medical Doctors, but will also encourage our government

and health administrators to budget more money for research and prevention of these diseases and work out better strategy, that can easily be implemented to improve the health of our nation and world.

RECENT ADVANCES IN THE NEUROSCIENCES EDITION 1990

This edition explores the various discipline in the neurosciences with a view to highlight those advances in recent times that have led to the transformation of the field.

This special edition also tells the story of how the University College Hospital Ibadan came to be designated as the centre of excellence in neurosciences and reviews the frontier and emerging knowledge in neurosciences with special reference to the control, cure and care of neuropsychiatric disorders of relevance to clinical practice in Nigeria and Africa.

The article on recent advances in the basic neurosciences treats among other things, new trends in the management Parkinson's disease, myasthenia gravis, schizophrenia and Alzheimer's disease.

Recent advances in investigations in neurology explains novel investigation techniques in neurology like the Positron Emission Tomography (PET) scan, nuclear Magnetic Resonance Imaging, digital subtraction angiography in addition to others.

Current trends and advances in neurosurgery are also considered in detail. Crouzon's syndrome is reviewed thoroughly and its management outlined fully as well as headache which is by far the most common symptom of neurological problems.

PARASITOSES EDITION 1991

Here, the Board presents a contemporary issue of Medical and Public Importance, both nationally and internationally – Parasitoses. Parasitoses, coupled with its complication are a major cause of morbidity and mortality in developing countries. Various aspects of the common parasites in Nigeria have been explored. Measures taken towards the eradication of Dracunculiasis and Onchocerciasis are discussed in depth. This is intended to increase awareness of the problem caused by parasites.

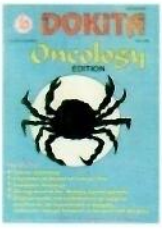
In a bid to encourage and improve the art of scientific writing amongst medical students, the winning essay of the Professor J.A Adeleye Essay competition titled "Africa and Parasitoses: what hope for the year 2000?" was published.

The proceedings of the symposium for the year 1991 titled "The Many Faces of death, (Suicide, Abortion, and Euthanasia) are included as a supplement in this edition.

GENERAL EDITION 1995

This edition focuses on Renal Disease in Nigeria and deals also with related problems of diabetes and Hypertension, two of the most important non-communicable disease in any environment. The focus on renal medicine is on the continuum of Chronic Renal Failure in Nigeria, the ultimate end of which is End Stage Renal Failure. Attention is also given to the problem of refractory Ascites. Road Traffic Accidents is viewed from the angle of management of various injuries suffered by a victim vis-a-vis hope for rehabilitation. The law and medicine is again periscoped in an article titled "Road Traffic Accident: Legal Implication. Other interesting articles include: Doctor, Ethics and Economics; Burns, A concise review; Anti Helicobacter pylori therapy and management of petrol poisoning.

ONCOLOGY 1998



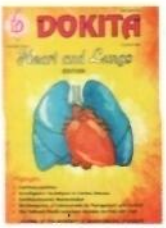
This edition of DOKITA emphasizes the importance of cancer. The articles cover Cancer of the Cervix, Primary Liver Cell Carcinoma, Prostate Cancer, Breast Cancer, Nasopharyngeal carcinoma, Tumours of the orbit and eye, Odontogenic Tumour, Bone tumours in childhood, ; and indicate that cancer can affect all the organs in the body.

The spectrum of paper in the edition covers various

aspects of oncology; from cancer screening through molecular basis of carcinogenesis, clinical presentation, to management with the available treatment modalities- surgery, chemotherapy, radiotherapy, separately or in combination.

The "special features" of this edition draw attention to the principles of rural surgical practice, surgical infections, and contributions to modern surgical practices by the Department of Surgery, University College Hospital, Ibadan, Nigeria.

HEARTS AND LUNGS EDITION 1999



This edition encompasses a multidisciplinary spectrum with articles drawn from Medicine, Cardiothoracic Surgery, Paediatrics, Obstetrics and Gynaecology, Radiology and Anaesthesia. Topical issues such as current concepts in Heart Failure, Sudden Cardiac Death, Tuberculosis, Modern Imaging Techniques in Cardiopulmonary Medicine, all received robust attention. This edition also discusses the progression and complications of diseases affecting the Heart and Lungs as well as the overall systemic effects.

Highlights of this edition include: Cardiomyopathies; Investigative Techniques in Cardiac Diseases; Cardiopulmonary Resuscitation and Re-emergence of Tuberculosis, Its Management and Control.

Incorporated in this edition is the winning essay for the 1999 Professor J.A. Adeleye Annual Essay Competition titled "National Health Insurance Scheme; its pros & cons"

There is no doubt that this edition meets the highest standards of its forerunners.

40TH ANNIVERSARY EDITION 2000

This is a multi- faceted edition of DOKITA commemorating the 40th Anniversary of the board. The articles in this edition cover different aspects of the medical profession such as haematology, genetics, microbiology, medicine, paediatrics, obstetrics and gynaecology and surgery. Also included were articles narrating past events and history of the board and pictures depicting them. One of such articles is that written by Professor A. Soyannwo on "DOKITA: The Early Years"

In this special edition is the first prize-winning essay in the DOKITA Editorial board-organised Biennial Professor J.A. Adeleye Inter-medical School Essay Competition. The essay is on "The National Programme in Immunization, successes, failures and prospects for the Future" and was written by Mr. Okafor O.N. (Now Dr. Okafor O.N)

REPRODUCTIVE HEALTH EDITION 2001

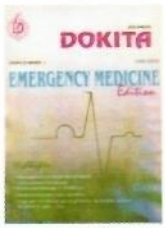
The primary aim of Reproductive Health is to eliminate morbidity and mortality risks from the chain of events leading on to the eventual birth of a child and its early growth.

This edition lays emphasis on women and men's access to a wide choice of effective contraceptives delivered in settings that provide quality service and in ways that are appropriate to local culture.

Highlights include:

- HIV/AIDs in Childhood
- Unsafe Abortions
- Why our Children die
- Female Genital Mutilation
- Home management of Malaria by mothers of under the age of 5 in Igbo-Ora.

EMERGENCY EDITION 2003



In this edition, specific attention is paid to the aetiology of emergency and the utilization of management skill required. To the surgeon, Emergency may mean Acute Abdomen, Ruptured Viscus, Fractured Long Bone, Fractured Skull, Chest Trauma, Compartment Syndrome, Severe Accidental or Traumatic Injury etc. To the Obstetrician and Gynaecologist, it could be ruptured

Ectopic Pregnancy, Ruptured Uterus or Foetal Distress. To the physician, it could be Bronchial Asthma, Glycaemic Emergency, Myocardial Infarction etc. An anaesthetist would consider a patient with severe Tetanus, Full Stomach and accidental or suicidal poisoning as a serious emergency. The common denominator is the need for initial active resuscitation and maintenance of the Airway, Breathing and Circulation.

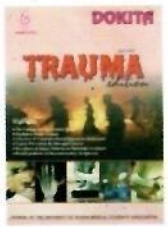
PUBLIC HEALTH EDITION 2005

This edition focuses on important public health issues in our tropical environment including specific diseases like malaria, tuberculosis, schistosomiasis and hypertension.
Broader topics are also discussed such as the organization and management of health services, primary health care and environmental health.
Specific issues are discussed in articles like that on Reproductive and child health which among other important things, the necessary evolution from the concept of maternal and child health and family planning to that of reproductive health and reproductive rights and their importance for the health of the individual and national development.
Important articles on bioinformatics and guidelines for evaluation of health information available on the internet equip the individual on how to cope in this computer age.

LABORATORY MEDICINE AND DIAGNOSTICS EDITION 2006

This edition covers component disciplines of haematology, chemical pathology, immunology, microbiology, virology, molecular genetics and histopathology.
In the article on the usefulness of D-dimer Assay, enzyme linked immunoassay is compared with the newer latex agglutination methods of measuring D-dimer and points out limitation to its application to clinical diagnosis.
The article on safe laboratory practices and universal precautions highlights major hazards encountered in the clinical chemistry laboratory and precautions that will minimize occupation related diseases in the clinical laboratory.
The pivotal role of cervical smear screening in the reduction of the incidence of cervical cancer is highlighted in the article on the role of papanicolaou smear screening in the prevention and control of cervical cancer.
In general the laboratory medicine and diagnostics edition is a cornucopia of articles written by experts reflecting the wealth of knowledge of experts in the various fields of laboratory medicine.

TRAUMA EDITION 2007



Trauma is the leading cause of death in the age group fifteen to forty-five years. This edition holds firmly to the tradition of presenting relevant scientific information of work done and original discoveries made at the University College Hospital, by dedicating its pages this time to TRAUMA, the leading cause of death in the most productive years of life.
The different aspects of care of the injured patients, measures ensuring efficiency and effectiveness of the health care services, importance of accurate diagnosis, and the role of good nursing care were aptly discussed.
Highlights of this edition includes: The concept of the Trauma Team; Paediatric Penile Trauma; A review of Traumatic Dental Injuries in Adolescents; @Cancer prevention by Diet and Lifestyle; Prevalence of injury patterns in Motor Bike Accidents; Health Problems of Charcoal Workers in Igbo-Ora.

CHILD HEALTH EDITION 2008

This edition focuses on the health of children and adolescents and contains 23 articles covering the specialties of paediatrics, public health, anaesthesia, psychiatry, obstetrics and gynaecology, surgery, dentistry, haematology and histopathology. The article on physical

growth and its assessment in children and adolescents gives the importance of using growth and development as an indicator of the health status of a child.

Some other issues treated include the problem of initiation of breastfeeding in newborns, the peculiarity of the paediatric patient for the safe practice of anaesthesia as well as the health and social problems of children in an institution for motherless babies in Ibadan.

Also articles dealing with oral health care and management of sickle cell anaemia comprehensively discuss these issues.

TROPICAL DISEASES EDITION 2009

The edition of DOKITA treats the readers to update on varying aspects of a wide range of diseases including malaria, Tuberculosis, HIV, Lassa fever, Leprosy, Poliomyelitis and Lymphatic Filariasis.

By concentrating on a handful of tropical diseases and dealing with them in a selective manner, the "Tropical Diseases" Editions of DOKITA presents on a platter of gold indispensable information in these diseases.

UIMSA NEWS

UIMSA NEWS (as at 6th July, 2010.)

The 45th Executive council, Senate and Congress of UIMSA were sworn in at a memorable event on Saturday, 15th May, 2010 at the Famewo Common Room, Alexander Brown Hall, University College Hospital.

The newly inaugurated executive council immediately started work, building on foundations laid by previous executive councils, putting the interest of all Uimsites foremost, and keeping up the tradition of excellence for which UIMSA is known for; thus, the tenure swung into action with the slogan 'orchestrating for excellence'.

The list of Sworn-in officers is as follows:

EXECUTIVE COUNCIL

Mr. Kabiru Oladimeji Raheem	President
Miss. Olohirere Ezomo	Vice President
Mr. Odunayo Odewole	Gen. Sec.
Mr. Ibrahim Adebowale	Asst Gen. Sec.
Mr. Samuel Aladejare (Jnr)	P. R. O
Miss. Funmilayo Abiru	Treasurer
Mr. Adeniyi Fagbemi	Fin. Secretary
Mr. Babatunde Falade	Sports Secretary
Mr. Ayobami Adeyemo	S. D. O (Clinical)
Mr. Habeeb Oyewola	S. D. O (Preclinical)

SENATE OFFICERS

Mr. 'Nonso Nwaokorie	Senate Chairman
Miss. 'Tola Adewunmi	Dep. Senate Chairman
Mr. Abdulmaleek Sado	Senate Registrar

CONGRESS OFFICERS

Mr. IORPAGHER PAUL KATOR	Congress Chancellor
Miss. Omotooke Babalola	Dep. Congress Chancellor
Mr. Franklin Nnakwe	Congress scribe

ACTIVITIES OF THE EXECUTIVE COUNCIL SINCE ITS INCEPTION

Courtesy Visits

The Executive council paid a courtesy visit to the Chairman, Medical Advisory Committee, (CMAC) UCH, Dr. A.A. Adenipekun. We also visited our dear Patron Dr Kayode Obembe, (Christus Specialists' Hospital), and the Dean, Basic Medical Sciences, Professor O.D. Olaleye. This was to appreciate their parental guidance and support, which UIMSA enjoys, and to intimate them on activities of the association for the new tenure. We were warmly received, and we obtained an assurance of their continued encouragement.

Appointment of Advisory Consultants

The Executive council deemed it fit to appoint another advisory consultant for the association, following the retirement of Prof. Mrs. M. Onadeko. Prof. B.L. Salako, Consultant Nephrologist, Department of Medicine, University College Hospital was unanimously nominated. He was approached, and he graciously accepted. He has been of immense support in achieving success in our programmes. We hereby use this medium to appreciate his contributions towards the association.

MBBS Part One Examination Members' Welfare Package

In keeping with our tradition of striving for excellence in all we do, the executive council organised a welfare package for the class writing the MBBS Part One Examination. The welfare package included an interactive session, stationeries, goodwill text messages, a beautiful card bearing all the names of the candidates, and refreshments.

Acquisition of UIMSA Secretariat in ABH

Building on the foundations laid by the previous executive council, a secretariat has been approved for the association in Alexander Brown Hall (ABH) by the Hall warden. This tenure is however faced with the challenge of furnishing the new secretariat, and bringing it back to befitting standards.

Hepatitis B Screening and Vaccination

The Executive council continued the tradition of vaccinating the 200 level students against Tetanus. They were vaccinated free of charge. The screening for the Hepatitis B vaccination for the same members of the association has been planned, and will be conducted free of charge, as the support and relentless efforts of the Dean, Faculty of Basic Medical Sciences, Professor O. D. Olaleye will make it possible.

Post-MB;BS Part One 5-aside Football Competition

The 2010 post MB 5-aside football competition amongst halls of residence was fully sponsored by UIMSA this year. At the end of the event, Sultan Bello Hall emerged as the winner, with Mellanby Hall coming second and Nnamdi Azikiwe Hall. This provided a good avenue for relaxation after examinations.

World Blood Donors' Day

The World Blood Donors day was marked on 12th June, 2010. UIMSA played a part by encouraging and mobilising its members to donate blood voluntarily, whilst working with other organisations in the Alexander Brown Hall, viz: Hamstrings Club, and the Nigerian Red Cross UCH detatchment, making it a memorable event.

Part 2 MB;BS Examination Welfare Package

The Executive Council made a beautiful card, bearing the

names of all students writing the examinations, and a good will message from UIMSA. The association also sent texts wishing the candidates the best in their examinations. Refreshments were also provided after one of their papers.

Participation of UIMSA at FAMSA General Assembly

UIMSA was represented at the recently held General Assembly of the Federation of African Medial Students' Associations (FAMSA) at the University of Ghana, Legon, Ghana, from 16th to 21st May, 2010. We are proud to say that UIMSA is hosting two standing committees of the association; The Standing Committee on Foreign Exchange, (SCOFE) headed by Mr Olatunji Olalere, and the Standing Committee on Medical Education and Research, (SCOMER) headed by Mr Raheem Kabir.

UPCOMING EVENTS

·UIMSA 50th Anniversary

·Community Health Awareness Programme in conjunction with College of Medicine, to mark 30th Anniversary of the College

·600 level Examination Welfare Package

·Reviving Clinical press

·1st, 2nd and 3rd editions of UIMSA Quarterly newsletter

·Welcome football match between 2010 intakes and senior colleagues

·Friendly matches with OAU, LAUTECH, UNILAG

·Launching of UIMSA website

·Upgrading, and formation of new centres for UIMSA ventures

·UIMSA sports fiesta

·Beffiting Welfare package for all Uimsites

·100 level welcome programme

·The 2010 UCH clinical students intake welcome and orientation programme

·The annual Late Prof B.O Osuntokun inter level quiz competition

·The annual Late Dr V.O Awosika memorial lecture

·World health day

·Provost's games

·Health week

·Publishing of the Ibadan Medscion magazine

CONCLUSION

We appreciate all UIMSITES for all the support we have received since the beginning of the tenure. Lets all continue to work together, as we orchestrate for excellence. With God's help, we'll have the UIMSA of our dreams.

Odunayo Odewole
General Secretary, UIMSA 2010 Executives

POETRY

Olatunji Olalere *

*At the time of the writing of these poems * was a second year clinical student, College of Medicine, University of Ibadan*

YOU PERCH AND DRINK TO CARNAGE!

Dainty droning diva,
Damned damsel of dolor and death,
Subtle, brutal, your call;
Your aim to maim and fall.

Chalice of disease and death.
You perch and drink to carnage!
Two caskets a minute,
You wipe your mouth with our dreams!

You drone a deadly aria,
A malediction to Africa-
MAL-icious, MAL-ignant, MAL-efficient...
...Oh MAL-aria!

JOKES

Bankole Adeyalo*

*At the time of the writing of these jokes * was a second year clinical student at the College of Medicine, University of Ibadan*

1.
The boss asked the personnel manager on a letter describing Paul Smith:
Paul Smith, my assistant manager, can always be found
hard at work in his cubicle. Paul works independently without
wasting company time talking to colleagues. Paul never
thinks twice about assisting fellow employees, and he always
finishes given assignments on time. Often Paul takes extended
measures to complete his work, sometimes skipping
coffee breaks. Paul is a dedicated individual who has absolutely no
vanity in spite of his high accomplishments and profound
knowledge in his field. I firmly believe that Paul can be
classed as a high-caliber employee, the type which cannot be
dispensed with, Consequently I duly recommend that Paul be
promoted to executive management, and a proposal will be
executed as soon as possible.
A memo was soon sent following the letter:
That idiot was reading over my shoulder while I wrote the report sent to you earlier today. Kindly read only the odd numbered lines(1,3,5,7,etc ...) for my true assessment of him.

2.
A new manager spends a week with at his new office with the manager he is replacing. On the last day the departing manger tells him, "I have left three numbered envelopes in the desk drawer. Open an envelope when you encounter a crisis you cannot solve."
Three months later there is a major crisis, everything goes wrong- the usual stuff-and the manager feels very threatened by it all. He remembers the parting words of his predecessor and opens the first envelope. The message inside says "Blame your predecessor!" He does this and gets off the hook.
About half a year later, the company is experiencing a dip in sales, combined with serious product problems. The manager quickly opens the second envelope. The message read, "Reorganize!" This he does, and the company quickly rebounds.
Three months later at his next crisis, he opens the third envelope. The message inside says, "Prepare three envelopes."

3.
Little Tim was in the garden filling in a hole with earth when their next door neighbor peered over the fence. Interested in what Tim was doing he asked: "What are you doing up there, Tim?"
"My goldfish died" replied Tim tearfully without looking up, "and I have just buried it."
The neighbor frowned. "That's an awfully big hole for a goldfish, isn't it?"
Tim patted down the last piece of earth. "That's because it's inside your stupid cat."

4.
"What flavors of ice-cream do you have?" inquired the customer.
"Vanilla, strawberry and chocolate" answered the new waitress in a hoarse whisper.
Trying to be sympathetic, the customer asked, "Do you have laryngitis?"
"No... ... ... " replied the new waitress with some effort, "just... erm, vanilla, strawberry and chocolate."

STUPID LAWYER QUESTIONS

a. Your son, the twenty-year old, how old is he?

b. Were you present when your picture was taken?

c. Was it you or your younger brother who was killed in the war?

d. How many times have you committed suicide?

e. How far apart were the cars at the time of collision?

f. Did he kill you?

CLUE STEW

Olatunji Olalere*

*At the time of the writing of these poems * was a second year clinical student, College of Medicine, University of Ibadan*

E	N	V	U	L	C	A	N	O	E
R	C	P	A	T	B	I	S	P	T
G	A	O	K	R	O	O	T	I	S
O	M	A	N	Y	N	N	A	C	A
O	A	C	A	G	G	A	L	A	C
G	L	H	H	V	O	S	I	S	A
O	D	A	W	E	K	S	N	S	R
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A	V	I	C	T	O	R	I	A	C
N	E	R	I	S	I	S	A	L	T
A	S	I	S	S	A	N	O	M	A

CLUE

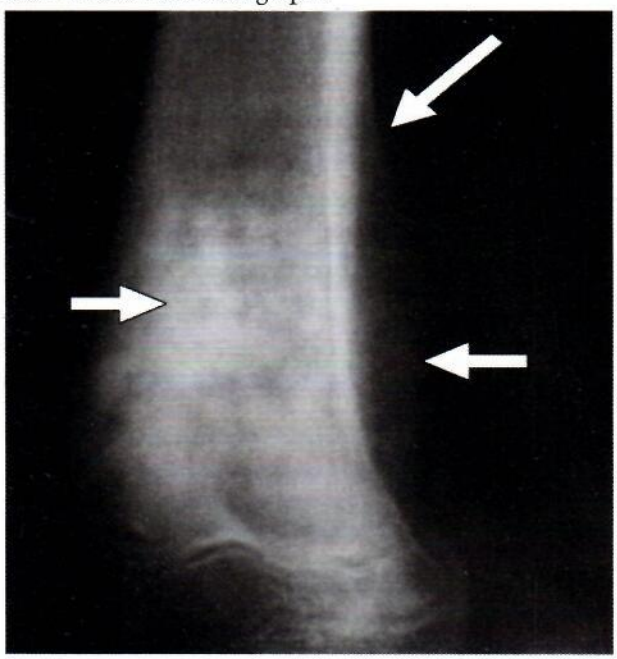
1. Even if my reasoning is NOT STRAIGHT, NOR DIGITAL, I can't travel THIS NARROW BOAT on the SECOND LARGEST RIVER IN AFRICA, to see the PRESIDENT OF GABON.
2. I may not have A LAKE IN EGYPT NAMED AFTER ME , but my gender, which I share with the FIRST UNITED NATIONS SECRETARY-GENERAL, a RUSSIAN MAN OF STEEL is also the capital THIS COUNTRY.
3. If in the CAPITAL OF A COUNTRY WHERE AN ANGEL FALLS for her sister- THE SMOKE THAT THUNDERS in the heart of Africa, there were SOCIAL CLASSES, where would she place THE ROMAN GOD OF FIRE.
4. Both compatriots, both dead. One A SHIPPING MAGNATE, the other Odysseus had himself tired on his own ship while he enjoyed THEM sing.
5. In SONNI ALI'S EMPIRE, they must have used it for DRAW SOUP, even if only as A SEASONING.
6. He was a SPANISH PAINTER, A PIONEER OF CUBISM for Gods sakes! How could he have won A LITERARY PRIZE FOR AFRICAN-BORN WRITERS- an ANAGRAM OF AN ASIA COUNTRY.
7. In Medicine, you don't need a brain with $\mathbf{10}^{100}$ neurones working at an ASTRONOMICAL SPEED OF 3.26 LIGHT YEARS, just know HE INVENTED THE ELEVATOR though we insist you use A ROPE MADE FROM THIS PLANT, or at least be able to STEAL IDEAS from the ILK OF SHREK.

DOKITA QUIZ

Bankole Adeyalo*

"At the time of writing this Quiz, was a second year clinical student of the College of Medicine, University of Ibadan."*

1.
A 14-year old boy was brought by his mother to the Accident & Emergency Department of UCH on account of difficulty in breathing and the presence of a large painful, swelling on the Antero-Lateral aspect of the middle of the left thigh. History revealed that the swelling started about 6 months ago and has progressively gotten larger. There was no history of trauma. Difficulty in breathing started 3 days ago.
On examination, the swelling was firm, warm to touch, mildly tender with visible veins on the overlying skin. The patient was dyspnoeic and tachypnoeic.
A chest X-ray and an X-ray of the limb were ordered. The latter showed the radiograph:

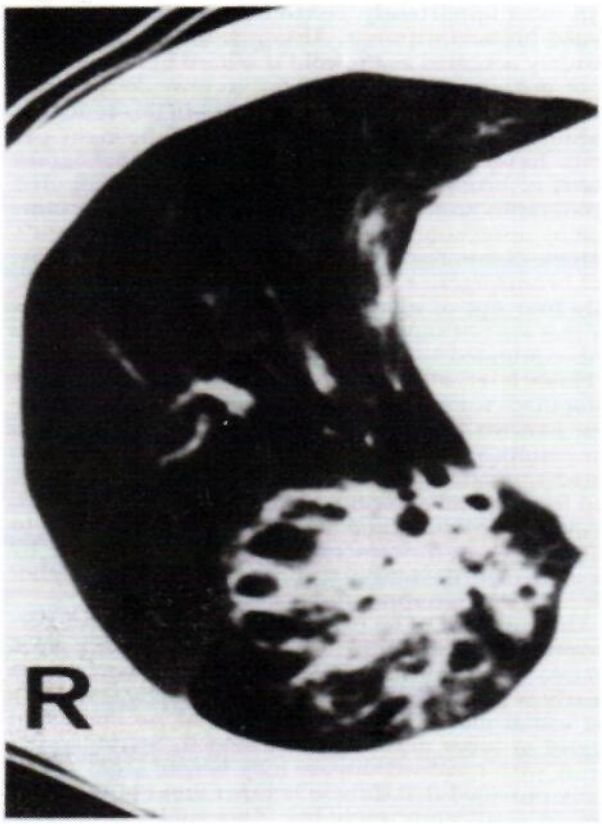


What is the most likely diagnosis in this patient?

2.
A 55-year old bank manager with a history of Ischaemic Heart Disease is rushed to the hospital after he complained of a severe, crushing pain over his heart and collapsed to the ground. At the hospital, he was quickly examined and was found to delirious. His extremities were cold and the blood pressure was 85/60mmHg. The heart sounds were muffled and could not be distinguished. The neck veins were visibly distended.
What is the most likely pathology in this patient? What is the eponymous name given to his constellation of signs?

3.
Curing kidney stones without surgery has become possible in recent times. What is the name of the method which uses certain waves to smash kidney stones?

4.
A 52-year old night guard at a company went to see his doctor on account of 6-week history of cough. The cough was described as "soft" with the production of large amounts of yellowish sputum. History also revealed that the man had been smoking cigarettes for the past 12 years and recently recovered from a febrile debilitating illness about 2 months ago.
On examination, he was to have a low-grade fever and the doctor noticed the patient had a bad breath. She ordered a chest X-ray and an axial computed tomography scan of the chest, all paid for by the company



What is the most likely diagnosis?

5.
Correctly pair the following

Grey Turner's sign - Acute Cholecystitis..

Raynaud's phenomenon - Acute Pancreatitis.

Jod-Basedow phenomenon - Cryoglobulinemia.

Murphy's sign - Rheumatic heart disease.

Aschoff bodies - Thyrotoxicosis.

6.
A 26-year old female presents with carcinoma of the left breast. Her 30-year old sister was recently diagnosed with Ovarian Cancer, and her maternal aunt had a mastectomy 3 years earlier for Ductal Carcinoma of the left breast. Which of the following genes is most likely to be affected in the process?

a) p53

b) APC

c) K-ras

d) BRCA-1

e) c-myc

MEDICAL DOCTORS AND THE LITERARY WORLD

Dr. Wale Okediran* *(BSc, Mb ChB, FGMP)*
Former National President, Association of Nigerian Authors

ABSTRACT

The organic linkage between Literature and Medicine goes back to ancient times when the ancient Greeks recognized and honored the connection by placing both Medicine and Poetry under the dominion of Phoebus Apollo, their god of sun. This connection stems from the belief that the physician and the writer can both be healers. In the same vein, Rudolf Virchow, the German pathologist had as far back as 1847 made that great observation that, Medicine and Literature are both social sciences in the sense that they are involved in the socio-economic good and advancement of man and society. The foregoing suggests that Literature and Medicine are closely interwoven. Ultimately, doctors as well as those who dare to straddle the two legs of Literature and Medicine, are only as good as the reader, the patient and the reader who sit in judgment over their every effort and action. As such it is necessary to amend medical school curricula to allow a longer interplay of science and arts subjects among our students as well as the establishment of departments of medical humanities in our universities. This would better prepare medical graduates for their future roles in governance or being governed.

LITERATURE AND MEDICINE

The organic linkage between Literature and Medicine goes back to ancient times when the ancient Greeks recognized and honoured the connection by placing both medicine and poetry under the dominion of Phoebus Apollo, their god of the sun[1]. The invocation of Apollo as the patron of Medicine and Poetry stems from the belief that the physician and the writer can both be healers. "They share a common goal in their efforts to maintain light and order against the chaos of darkness and disease and to create or restore the beauty and harmony of health. In this quest, medicine serves the body, writing the spirit"[2]. It is also believed that story telling is the basic unit of medical epistemology[3]. Interpretation in clinical settings takes place when the physician listens to the patient's story of illness, filters it through the knowledge of similar cases and returns the now interpreted story to the patient to check its validity. Therefore, much of clinical practice is about telling stories. Case presentation, grand rounds and seminars are ways in which doctor tell tales to each other. It is a relatively short step from clinical storytelling to reflecting and creative writing by the doctor. This task encourages the setting down of personal view and events into fiction. The famous Russian writer, Anton Chekhov's description of his double life, "Medicine is my lawful wedded wife and literature is my mistress" is a famous characterization of the appeal of two demanding and absorbing occupations[4].

The list of men and women who have combined medicine and literature is long and varied depending on the inclination of the compiler. A writer like Chinua Achebe began but perhaps wisely did not finish medical school. By contrast, William Somerset Maughan finished his studies but never practiced. Others like the poet John Keats eventually abandoned practice for full time writing while the greater number of doctors whose list is long and still continues to be long juggled both occupations throughout their lives.

Famous literary physicians include Oliver Goldsmith (Circa, 1730) John Keats (1795-1821) Sir Arthur Conan Doyle (1859-1930) Tobias George Smollett (1721-71) Anton Chekhov (1860-1904) Somerset Maughan (1874-1965) William Carlos Williams (1883-1963)[5]. Nearer home, the likes of the late Professors Olatunde Odeku and Anezi Okoro, Professor Adeloye, Ewa Henshaw, Tony Marinho, and Femi Olugbile among others were able to combine literature with their medical practice.

Several scholars continue to be intrigued by the connections between Literature and Medicine. Writing in the Lancet (Vol 348), M Faith Mclellan of The Institute of Medical Humanities, University of Texas believes that physician – writers use the specialised knowledge medicine gives them including access as "privileged observers and participants" to people and situations to which other writers let alone ordinary people may never be exposed" As she puts it, "doctors may daily witness pain, suffering, joy and transcendence matters at the heart of human experience. They are often privy to the most vulnerable and intricate moments of their patients' lives with medicine becoming 'a window to look at the human

endeavour"[6]. It happens to be one that puts the doctor very close physically and emotionally to the story. From delivery to death to deliverance, doctors usually have experience. That is the only reason why this window is a variegated and interesting one because it has so much humanity in it.

Apart from the mechanics of writing, the most compelling link between the dual professions of the physician-writer is the construction of narrative[7]. Doctors and writers share certain fundamental values and interests even though these connections are not always obvious. Both share a curiosity about other people's lives as well as the needs and desires to communicate. Both are engaged in an often-complex process of identification with and detachment from their subject – close enough for compassion, distanced enough for critique. It is obvious also that formulating a diagnosis, like constructing a text, can be a complicated task, involving experience, intuition and interpretation. Both processes cumulate in a narrative, the case history, the medical chart entry, a grand rounds presentation. In short a story. For me, my literary career has benefited immensely from the discipline of studying for long hours as a medical student. This, I believe, is an advantage over some others who even though have a lot of stories to tell, are too restless to sit down and write.

However, in spite of the deluge of similarities between Medicine and Literature, the question still remains, what drives a doctor to write? Also important to our discourse is whether or not being a physician gives one the advantage of producing better literature and vice-versa. It is also pertinent to know 'at what stage does a doctor/writer cross into politics?' From personal relationships with many doctors/writers it appears that doctors go into writing for different reasons. Some doctors go into literature because they are unfulfilled in their medical profession and therefore want something more to their liking. Some doctors start writing in order to give voice and actuality to what they have seen and experienced in the course of their medical practice. On the other hand, some doctors having been confined for too long in the obscurity of their clinics now want to be recognized. While not everybody will be interested in reading a doctor's x-ray report, many will certainly be enamored by a doctor's good novel.

It is however pertinent to note that none of the doctor/writers I have encountered decided to go into literature for economic reasons since it is obvious that writing at least in Nigeria, is not about making money. Doctor/writers such as Femi Olugbile and Tony Marinho have variously confirmed that they sometimes write out of anger as a cathartic to some social problems or injustice in the system. Thus their writings, like much of the literature of a depressed society, are socio-political. This kind of literature is thus problem-identify and solution-providing. This you will agree with me is but a very short step to politics because with this kind of literature, the society soon identifies you as someone with a social conscience while government labels you a critic who requires close monitoring. It is important to add that my own trajectory from doctor to writer and then politician has taken this same pattern.

Also important to this debate is the often hurried conditions of medical practice which have sometimes driven the form and length of what physician-writers produce. Anton Chekhov has often said that his writing goal was 'to talk briefly about big things' while David Stone and William Carlos William have confirmed that poetry writing made them better doctors[8].

The advantage of a medical background for a writer lies in the fact that having seen life and death, the doctor/writer may feel more compassionate than someone who only tackles files and machines in his daily life. Files and machines as we all know do not bleed or cry or die. It is this compassion that is expected to permeate throughout the doctor's literary activities.

THE WAY FORWARD

From the foregoing, it is suggested that Literature and Medicine are closely interwoven. Like the physician, a philosopher and a writer are expected to consecrate their lives to the service of humanity through their chosen professions. Unfortunately, in view of the general decadence in the country, altruism is fast becoming a thing of the past among Nigerians. The love of money and position has become the driving passion of our people to the detriment of scholarship, statesmanship and moral standing in virtually all aspects of our daily living.

More importantly than the above, perhaps, is the need to improve the quality of our university products be it Medical doctors, Philosophers, Writers or Politicians. This is where the academic community can be of tremendous importance. The academic being the repository of our thoughts and ideas, as well as the conscience of the nation has a key role to play in our socio-

economic development.

There is also the need for a curriculum change in Primary, Secondary and Tertiary education in order to give our students a much broader reading and social science skills. This will empower them in the fight for a decent life.

In the same vein, the period at which students are expected to pick between arts and science subjects appear too early and should be extended.

Our universities can demystify the teaching of Literature by including the subject in the medical curricular. This same curricular can be broadened to accommodate short courses that link the arts, science and philosophy together. This way, our students would have had a good grounding in philosophy and by extension, the art of managing people irrespective of whatever profession they may eventually find themselves. This is especially true for potential professionals like medical students who will eventually have to hold positions of authority and probably be active later in partisan or general politics. This is more so when no amount of medical knowledge can pay for a hospital bed. The hospital bed or a tablet of Panadol is strictly speaking, a political decision. You can be the best-trained doctor but if you cannot convince the politician on the need to fund your hospital, all your medical education would have come to naught and you will have plenty of frustrating free time. This is also true for other professionals. It is generally believed that it is partly the absence of political savvy among Nigerian professionals including medical doctors that led to frustration and the brain drain phenomenon which continue to deplete the nation's hospitals and society of skilled personnel.

It is also been established that the use of literature in the education of the doctor is now well established and increasingly recognized as a powerful learning tool. Apart from being concerned with emotions, feelings and reactions to illness and suffering, literature is also relevant in debates on health and social issues and ethnic matters. Its purposes are to help in the development of an educated, compassionate and caring doctor complementary to and supportive of the scientific knowledge. As a result of changes in US medical education that began in the 1960's, the relationships between literature and medicine have been explored in myriad ways. Beginning with the appointment of the first full time professor of literature and medicine at a US medical school, the field has grown in the past 25 years to the extent that literature is now taught in about one third of all US medical schools. This was done in the belief that to teach a student to read, in the fullest sense is to help train him or her medically[17].

From the foregoing, it is now time for our Universities to establish a Department or Institute of Medical Humanities where medical students can be exposed to literature and the arts. This way, the practice of Medicine, Writing and Philosophy which require attention to character and plot, theme and the nuances of language and the management of man- in short to all that makes up contingent human life can be formally and scientifically integrated. When physicians become writers whatever their subject, they are in a sense only transferring their storytelling from one arena to another, reaffirming that, whether it originates in the clinic or at the writer's desk, "the sound of story is the dominant sound of our lives"[18]. In the same vein, for Doctors and Writers the patience and tolerance needed in dealing with a difficult patient and their craft is also taught through the discipline of learning to write well. One of the lessons I learnt during my stay in the National Assembly is the need to have lots of patience in the course of one's legislative work. This fact is predicated on my observation that because of its diverse nature, every issue involving the country needs to be seen from a holistic approach. It is the sort of patience one needs when attending to a difficult patient or writing a difficult story line.

In conclusion, through the appropriate integration of arts and science subjects in our universities, African Literature will continue to be enriched by this harmonious interplay of Medicine and Literature.

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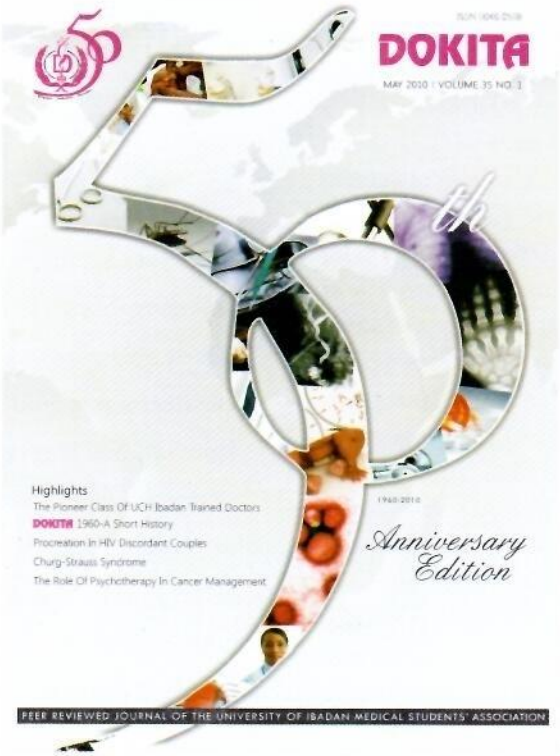

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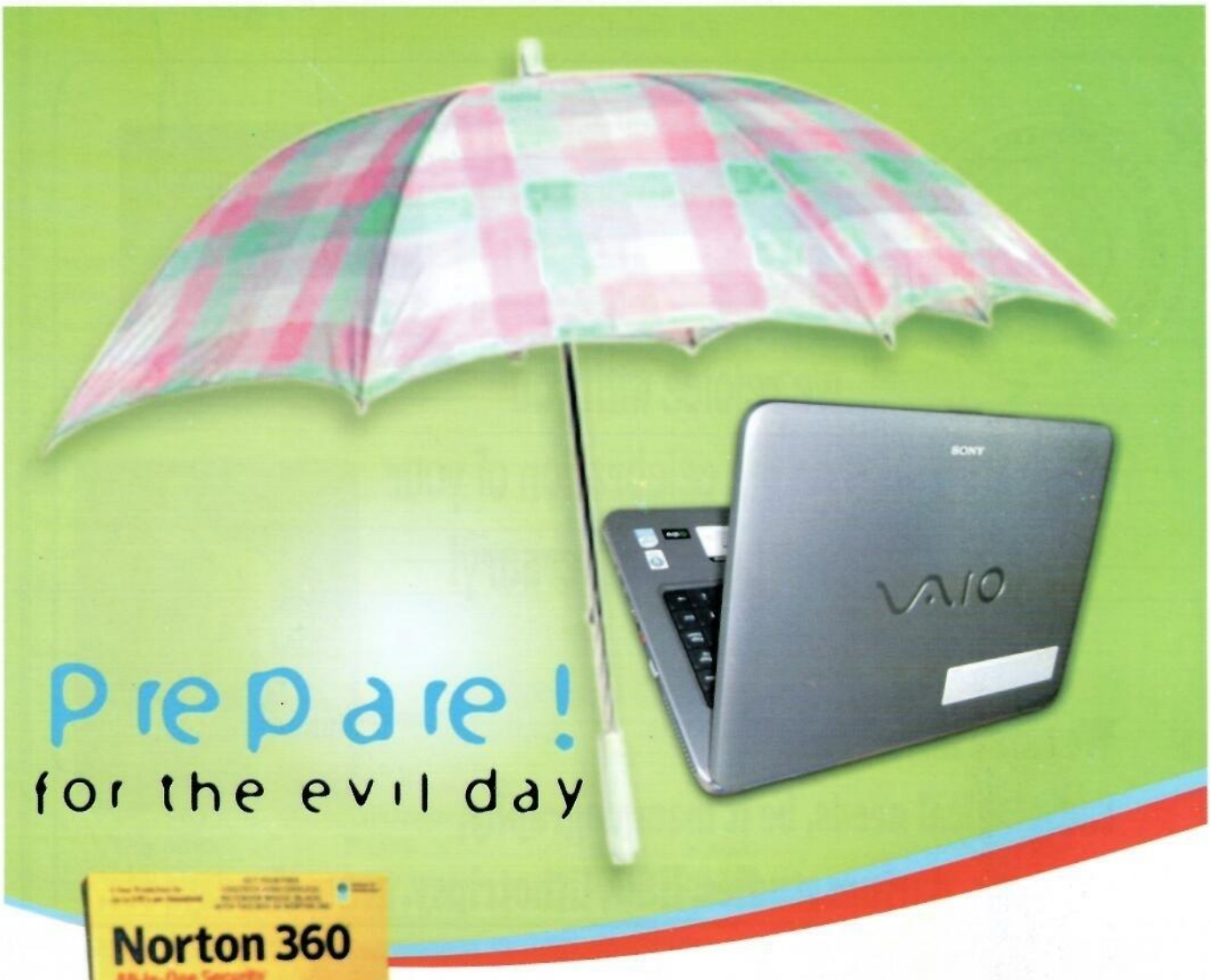

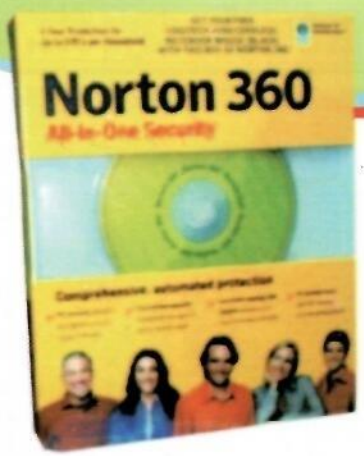

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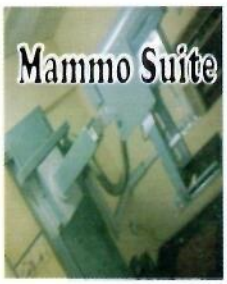

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