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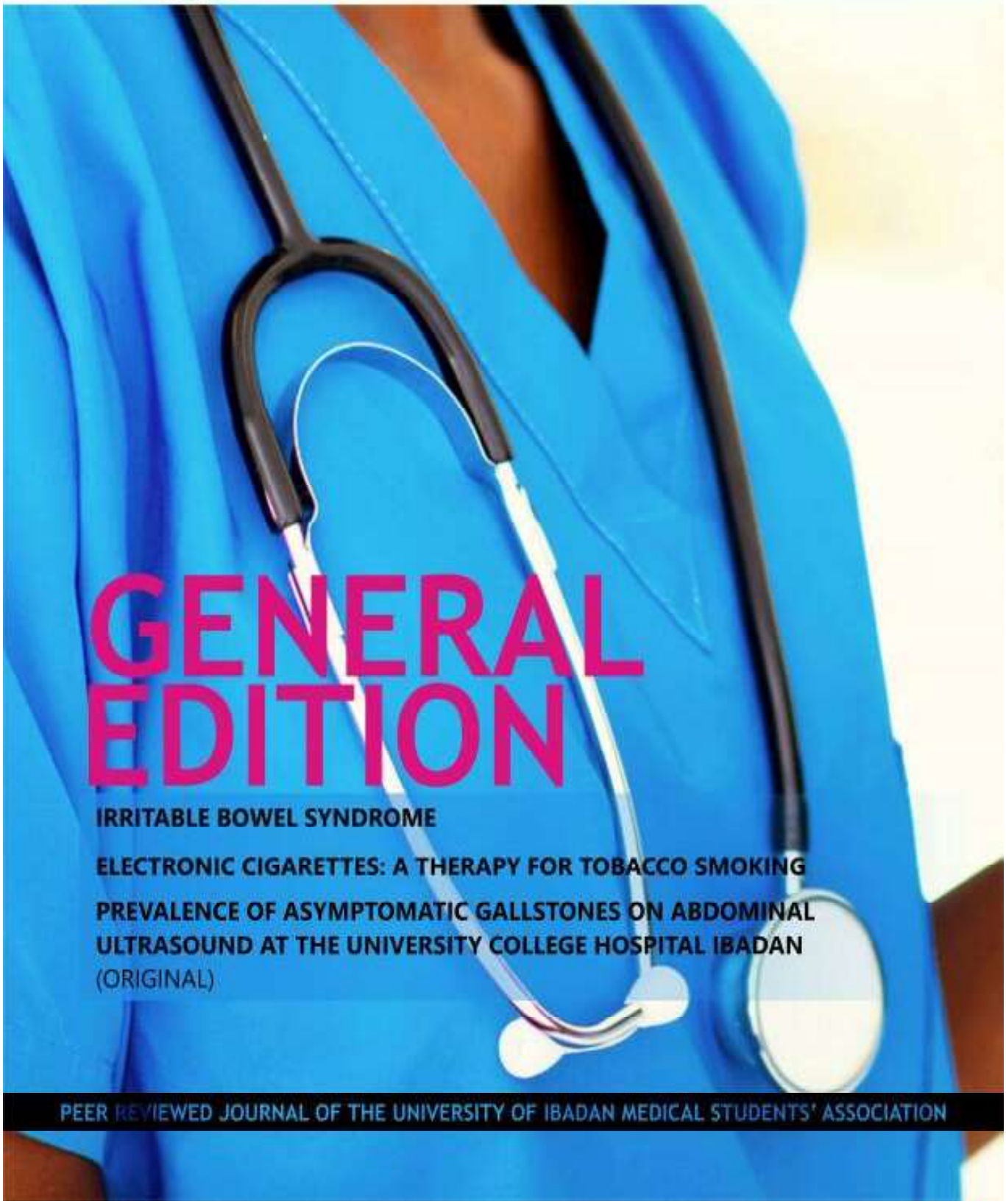

GENERAL EDITION

IRRITABLE BOWEL SYNDROME

ELECTRONIC CIGARETTES: A THERAPY FOR TOBACCO SMOKING

PREVALENCE OF ASYMPTOMATIC GALLSTONES ON ABDOMINAL ULTRASOUND AT THE UNIVERSITY COLLEGE HOSPITAL IBADAN (ORIGINAL)

PEER REVIEWED JOURNAL OF THE UNIVERSITY OF IBADAN MEDICAL STUDENTS' ASSOCIATION

1977 Graduating Class of the College of Medicine, University of Ibadan

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THE INSTRUCTIONS TO AUTHORS

MANUSCRIPTS REQUIREMENTS

The requirements for submission of articles to **DOKITA** are in accordance with the "Uniform requirements for manuscripts" (the Vancouver style) as revised and published by the International Committee of Medical Journal Editors in the British Medical Journal (BMJ 1991; 302; 338-41). All papers should be submitted in duplicate original script (No carbon copies). Double spacing with ample margins is desired throughout the text except for quotations. The manuscript 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 authors' full names and highest academic degrees and departmental institutional affiliations.
2. Running title of not more than 40 characters (letters and spaces included) and the name, address of author responsible for the correspondence about the manuscript.
3. An abstract or 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
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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 "Unpublished observations" and "personal communications" may not be used as references but may be inserted (in parenthesis) in the text.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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TABLES AND ILLUSTRATIONS

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Electronic copies of manuscripts accompanied by a letter signed by all co-authors addressed to:
The Editor-in-Chief,
DOKITA Editorial Board,
Alexander Brown Hall,
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EDITORIAL

EDITORIAL FOR 39TH EDITION OF DOKITA

Medicine and Science are evolving and becoming more research driven. It is important that medical students across the world, especially those in sub- Saharan Africa, where there are numerous ideas yet to be tapped, refined and accessed, begin to look more into the field of research. They need to become more inquisitive and aware of their environment. This way, they can harness the unlimited resources available to them to make the practice of Medicine more interesting, meaningful and impactful. Waiting for the outside world to bring solutions to our many challenges may mean that we have to wait *ad infinitum*. However, when we harness our experiences and results from well-tailored research, we can improve the quality of our lives and provide a leverage for ourselves.

The DOKITA Editorial Board continues to encourage student research and writing, as this habit once inculcated can be translated to practice as clinicians and therefore improve patient's care and outcome. The 39th edition of DOKITA- a general edition allowed students brainstorm into a vast array of subjects and it also very importantly encouraged original research amongst the students. Some of the subjects include: Major Depressive episode with Peripartum onset (a review) by Omoniyi O. F. and Oluwasola T. A. which aimed at reviewing the peripartal onset of depression, the need for early detection, prompt intervention and prevention. Bendopnoea: a novel feature of heart failure by Adebayo O. describes this new concept in heart failure that further helps to characterize the disease. Idowu O. M. and Iyoke U. O. in their article 'Electronic Cigarettes: a therapy for tobacco smoking' highlighted the various forms of therapy aimed at tobacco cessation and aimed to determine whether electronic cigarettes are a safe and effective method for cessation of smoking. Sado A. I. in the article 'Irritable Bowel Syndrome: current and future trends in pharmacologic treatment' highlights treatment modalities for Irritable Bowel Syndrome (IBS) and elucidates the need for exploring pharmacogenomics in improving patient care.

Ogunleye O.O, *et al* in their article 'Prevalence of asymptomatic gallstone on abdominal ultrasound at the University College Hospital, Ibadan', sought to identify the prevalence of asymptomatic gallstones and risk factors. In Otoki A. O. and Odufuye Z. O.'s article on 'Awareness of health insurance among adult patients in two health centres in Ibadan metropolis', they found that more than half of the population knew about health insurance, however, less than ten percent of the population had taken up health insurance. The factors responsible for this have been carefully outlined in this article.

These and other interesting and educative articles are available within this journal for your read. This is just the beginning of exploring grand ideas in the field of Medicine. We believe other students would be encouraged and that in the not too far future, we can indeed translate our findings into policies and protocols.

I sincerely appreciate every author for their effort and our awesome team of peer reviewers for painstakingly going through manuscripts to ensure that it is worth the read. The guidance of the supervisor of this edition- Professor A. Ogunniyi has immensely put shape to this edition and allowed this wonderful outcome; we are very grateful sir. The Board Chairman, Faculty Adviser, Editorial Consultants and Board members have also contributed greatly to make this edition a success; thank you for your continuous unflinching support for the Board.

Joy Oluwaniyi
Editor-in-Chief (2016/2017)

FOREWORD

Foreword to 39th Edition of DOKITA

The 39th edition is welcome to the DOKITA collection which has become a "must-have" for early career researchers. The nine manuscripts in the issue cover topics of interest in Internal Medicine, Surgery, Radiology, Psychiatry and Public Health. On the history of Medicine, Hippocrates' contributions were highlighted. Five of the papers were written by medical students, three by Resident Doctors and one by a Consultant.

Two original research papers based on studies conducted by the medical students were featured. Data showing low coverage of the National Health Insurance scheme was presented in one and advocated concerted efforts at raising awareness about the scheme. The second was on the epidemiology of gall stones from ultrasound studies. The review on "Bendopnoea" introduced readers to a new vocabulary in heart failure. It refers to shortness of breath on bending down which is very apt because most of the patients would likely notice such discomfort while bending down in the course of their daily activities. Hearing impairment is becoming a major challenge and has been reported to increase the risk of dementia, therefore the paper on cochlear implants is a good read. The same applies to the review on electronic cigarettes and vaping. The details of surgical site infections are well presented and every resident/student doing surgery rotations must find this very relevant and useful. The reviews on irritable bowel syndrome and perinatal depression are equally compelling.

Writing is an art and demonstration of good writing skills by these early career researchers is a thing of joy which also reflects good mentoring. This edition of DOKITA is commended for the depth of the coverage of each article and the useful information that can shape health care in Nigeria. The Editorial Board of DOKITA deserves our accolades.

Professor A. O. Ogunniyi
Editorial Consultant

BENDOPNOEA: THE NOVEL FEATURE OF HEART FAILURE

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KEYWORD:
Bendopneoa, heart failure, dyspnoea

ABSTRACT
Heart failure is a major public health issue globally and there is continued enquiry to unravel the problem and improve management. Currently, there are some respiratory features in heart failure that are known to be associated with various body positions such as orthopnoea, paroxysmal nocturnal dyspnoea (PND) and dyspnoea on exertion however in the last few years, a new feature was added. Bendopoea was first muted in a paper by Thibodeua et al where they noticed that patients with heart failure have increased shortness of breath when bending over. Since then a number of literatures have been written about this feature and it is now being referred to as an important feature of advanced heart failure. Bendopnea occurs as a result of increased filling of cardiac chambers due to bending down which increases venous return.

Although more information is emerging regarding its relevance and role in clinical decision making, it is currently known to provide information on the cardiac filling pressure and would help in differentiating heart failure from other diseases like chronic obstructive pulmonary disease (COPD) and chronic liver diseases that could mimic the disease. It is also being noted to affect mildly to moderately the quality of life (QoL) of patients with heart failure among other things. This article sought to exhaustively discuss this novel feature of heart failure which a writer has opined should be called "kamptopnea".

INTRODUCTION

2016 ESC Guidelines defined heart failure as" *a clinical syndrome characterized by typical symptoms (e.g. breathlessness, ankle swelling and fatigue) that may be accompanied by signs (e.g. elevated jugular venous pressure, pulmonary crackles and peripheral oedema) caused by a structural and/or functional cardiac abnormality, resulting in a reduced cardiac output and/or elevated intra-cardiac pressures at rest or during stress*". [1] Heart failure is a significant public health issue globally although prevalence varies from country to country.[2-4] The problem is particularly more among the elderly. [5] The burden is as much as 1-2% globally and an estimated figure of about 37.7 million are affected and is expected to increase. [6-9] This burden is not without an associated huge socio-economic implication.[10, 11]

The "epidemic" of heart failure (HF) was first recognized in the 1980s and 1990s.[5, 12] The attributed factors include ageing population, increased associated risk factors such as diabetes mellitus, hypertension, and survival from myocardial infarction and a greater sensitivity and ability to detect the disorder.

The incidence is approximately 1–2/ 1000 and 3.8/1000 in United States and Sweden respectively.[13] While prevalence is 3% of the general population (10% of the elderly) in United States of America compared to 2.2% in Sweden and 3.96% in Germany.[13, 14] _ENREF_14 The burden of the disease is significant in African too.[15] Previous study in Sub Saharan region have put the intra hospital mortality at 8.3%.[16]

There are various respiratory features in heart failure that are known to be associated with various body positions such as orthopnoea, paroxysmal nocturnal dyspnoea (PND) and dyspnoea on exertion.[17, 18] The most current addition is bendopnoea.[19-22]

Bendopnoea is shortness of breath or uncomfortable feeling of fullness of the head within 30 seconds of bending forward.[21] Or simply, it is an uncomfortable sensation of breathing when heart failure patient bends down.[23] It may be observed by heart failure patients while sitting and bending as though to put on shoes or stockings.[21, 22] It is also called flexo-dyspnea while another writer opined it should be called "kamptopnea".[21] *Bend-* is an old English word while *opnea-* is a Greek word.[24] Kamptopnea was suggested because the Greek word *kamptos* (Greek) meant *bent over* therefore to allow for linguistic consistency there may be a need to combine *kamptos* with *opnea*.[24]

From 1,500 BC when heart failure was first described in Eber Papyrus, various features such as orthopnoea, paroxysmal nocturnal dyspnoea (PND), dyspnoea on

exertion were gradually unveiled and characterized.[25] Among these, orthopnea is the most common feature suggestive of heart failure. Bendopnoea the latest was first muted by Thibodeau et al in 2012 in the conference presentation-*Bendopnoea, a Novel Symptom of Heart Failure, is Mediated via Elevated Left Ventricular Filling Pressures* of a prospective study of 84 patients.[20, 26] The topic subsequently gained traction. Although, Pub Med search showed only two articles as at May 1st 2017, however other search engines such as Google Scholar have shown increased articles published since 2012.

A Spanish study reported the prevalence of bendopnoea in ambulatory patients with heart failure (HF) as be 28% while 48.8% in those with decompensated HF was reported. [27]In a prospective observational study in India, the prevalence of the symptom was found to be 21.2% among those with systolic heart failure.[2]

Relevance and significance

Among the respiratory features in heart failure which are associated with various body positions such as orthopnoea, PND and dyspnoea on exertion, bendopnoea play a unique role. It is relevant in non-invasive assessment of hemodynamics in heart failure patients. [20, 28]

It is very useful in identifying decompensated chronic heart failure and differentiating HF from other diseases like chronic obstructive pulmonary disease (COPD) and chronic liver diseases.[22, 25] _ENREF_22 In a study of 633 individuals aged between 45 and 99 years in Brazil, PND and bendopnoea were found to be associated with HF. The study went on to highlight the discriminating value of bendopnoea compare to other type of dyspnea when differentiating HF (both preserved ejection fraction type and reduced ejection type) from chronic obstructive pulmonary disease, coronary heart disease and myocardial infarction.[29] Bendopnoea has an excellent discriminating capacity in differentiating HF from other disorder such as cardiopulmonary disease, coronary heart disease and myocardial disease.[19,21,23,29]

Although it has also been described in respiratory disease such as allergic broncho-pulmonary aspergillosis (ABPA).[30]

Bendopnoea is commonly associated with orthopnoea, PND, oliguria, oedema and elevated JVP.[31] (See Table 1) Very important haemodynamic correlates of bendopnoea include higher supine right atrial pressure, pulmonary capillary wedge pressure(PCWP) and high pulmonary artery systolic pressure(PASP).[25] (See Table 2)

Bendopnoea, has been postulated by some authors to be the next important physical prognostic marker of advanced heart failure although non-specific.[26, 31] Short term prognosis is worse especially in elderly persons with heart failure with reduced ejection fraction.[31] In addition, it is associated with worse 3 months outcome of heart failure[32] if present after 3 months.

Bendopnoea in decompensated heart failure has a great implication on patient quality of life(QoL) for mild to moderate term.[25] It is not associated with increase body mass index (BMI) in decompensated HF in contrast with general population.[25, 27, 29] Bendopnoea has been found to be independently associated with elevated ventilation and CO2 production or ventilatory efficiency(VE/VCO2) slope in advanced HF patients.[33, 34] It is also associated with echocardiographic indices of left-sided filling pressures. [22]

Assessment

Table 1: Assessment of Bendopnoea as done by previous studies

Authors	Method used in assessing Bendopnoea
Baeza-trinidad R et al [25]	Patient was seated in a chair and later asked to incline forward to touch their ankles, and sustain it as long as possible. The duration is timed until the patient experiences shortness of breath, headache, palpitations, or general malaise then the patient was asked to stop. The cut off for assessment of bendopnoea was 30seconds.
Thibodeau, J T et al[32]	The participants were specifically instructed not to hold their breath during bending while the test is being done. The patient is then asked to sit on a chair and instructed to incline forward at the waist as if putting on their shoes or socks, while timed till onset of shortness of breath is expressed by the participant.

Table 2: Selected studies on bendopnoea

Authors	Year of publication	Country of publication	Type of study	Prevalence	Study population	Aims of study	Main findings
Thibodeau JT et al[36]	2014	USA	Prospective observational study	28% with bendopnoea	102 systolic heart failure subjects	To determine the frequency and hemodynamic correlates of shortness of breath when bending forward, in patient with bendopnoea.	• Patients with bendopnoea had higher supine right atrial pressure and PCWP· • There is similarity between cardiac index of patient with bendopnoea and those without bendopnoea
Baeza Trinidad R et al[25]	2016	Spain	Prospective observational study	48.8%	250 decompen-sated heart failure patients	To evaluate the characteristics, degree of limitation, and short-term prognosis of patients with bendopnoea and decompensated heart failure	• Bendopnoea was found to be related to advanced HF symptoms • Higher Pulmonary artery systolic pressure (PASP) • Body mass index and LVEF are not associated • Commonly associated orthopnoea, paroxysmal nocturnal dyspnoea, oliguria, oedema, elevated jugular venous pressure, abdominal fullness, and worse • It is associated with mortality in the short term and advanced NYHA functional class • Cause moderate to severe limitation of QoL
Thibodeau JT et al[32]	2016	USA	Prospective convenience sampling	18%	179	Relationship of bendopnea is associated and clinical outcomes.	Bendopnoea was more strongly associated with worse 3 months outcomes

Pathophysiology

Bending down leads to increase venous return as well as right and left filling pressure of already high PCWP which leads to shortness of breath.[21, 24] Increased intra-thoracic pressure and increased intra-abdominal pressure also play a role while bending over.[24, 35] All these aid the ultimate stimulation of pulmonary receptors and vascular receptors which increase the respiratory drive.(See Figure 1)

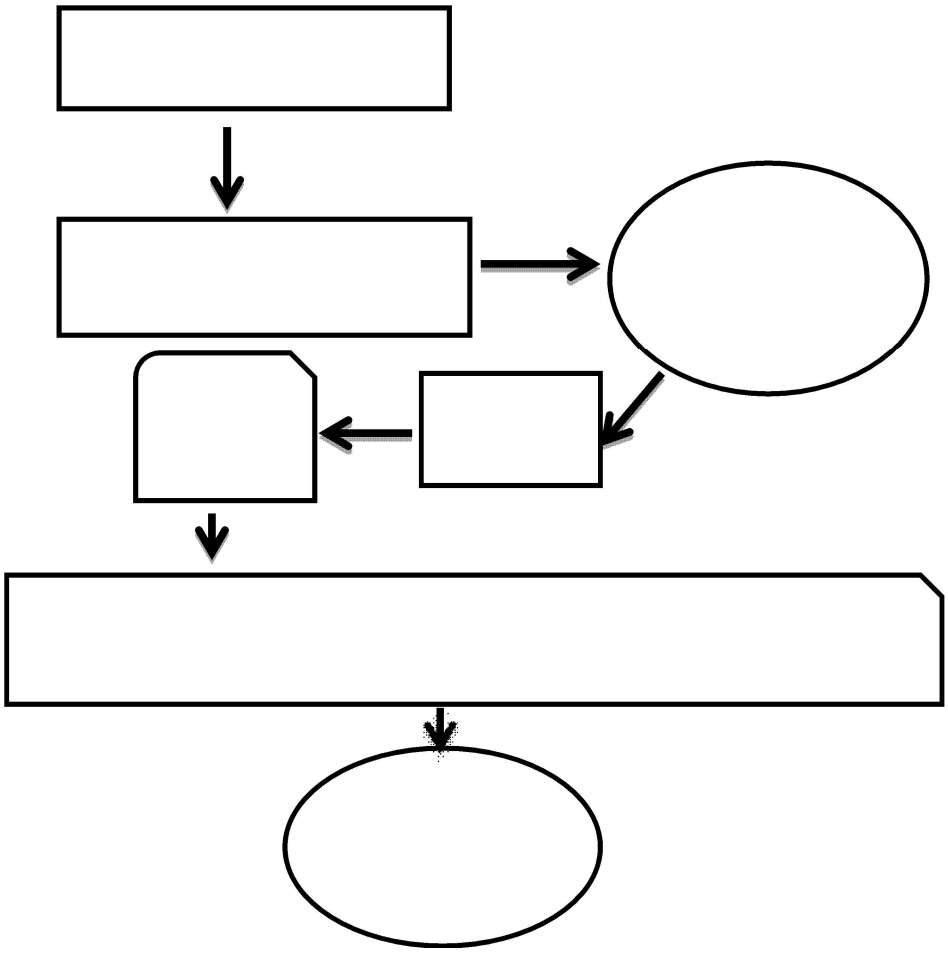

Figure 1: Hypothetical pathophysiology model of bendopnea

CONCLUSION

Bendopnoea is a very important, novel and prognostic feature gradually being characterized among heart failure patients. There is need for more research to unveil its relevance among patients with heart failure across different population groups.

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COCHLEAR IMPLANT: CURRENT TRENDS, ADVANCES, LIMITATIONS AND FUTURE PROSPECTS

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KEYWORDS
Cochlear implants; sensorineural hearing loss; auditory nerve stimulation; electric and acoustic stimulation; Neural stem cell; Rehabilitation

ABSTRACT

Cochlear implant is an effective advancement in modern medicine used in the treatment of sensorineural hearing loss or deafness.And it is the most successful of all neural prostheses developed to date. It is the most effective prosthesis in terms of restoration of function, and the people who have received a cochlear implant outnumber the recipients of other types of neural prostheses by orders of magnitude. A lot of effort has been put in place to improve Cochlear implant over the years by different professionals including otologist, physicist, neurosurgeon and clinicians.

This rapid and remarkable development has helped a lot of recipients to converse easily with their cell phones. However, there is still room for improvement in device design and performance on the existing devices as well as development of new devices. This can only be achieved by more active researches.

The objective of this article is to give an overview of current advances in cochlear implants, describing the limitations of these implants and also to state future prospects. This will help create an awareness on the effectiveness of cochlear implants on the recipients which many researches have confirmed and also to help researchers highlight the areas of cochlear implants that need to be worked on for better outcome and client's satisfaction.

INTRODUCTION

Cochlear implants are the only medical intervention that can restore partial hearing to a totally deafened person via electric stimulation of the residual auditory nerve.[1-3]

Cochlear implantation (CI) is a safe and efficacious surgical procedure for hearing rehabilitation in patients with bilateral moderate-to-profound sensorineural hearing loss with inadequate hearing aid amplification. A patient is considered a CI candidate when they score <70% of the correct keywords on open-set, prerecorded sentence materials presented at 65 dB in the best aided conditions. The external components include a sound processor, which is connected to the transmitter. This is magnetically attached to the implanted receiver and stimulator, which converts sound energy into electrical energy and is transmitted to the electrode array within the cochlea. The electrode array replaces the function of hair cells and directly stimulates the cochlea nerve.[4]

Just fifty years ago there were no effective treatments for deafness or severe hearing impairments. The advent of cochlear implants (CIs) changed that, and today implants are widely regarded as one of the great achievements of modern medicine.[1]

Cochlear implants date back to over 50 years ago and it is by far the most successful medical prosthesis. The first report of auditory percepts elicited with electrical stimulation was done by Alessandro Volta in 1790, although it is not certain whether the percepts were produced with direct electrical activation of auditory neurons or via electro-mechanical effects, such as those underlying electrophonic hearing.

Djourno and Eyriès in Paris in 1957 performed the first implant by directly stimulating the auditory nerve but this failed after several months of use. The patient was able to sense the presence of environmental sounds but could not understand speech or discriminate among speakers or many sounds. He could, however, discriminate among large changes in frequencies of stimulation below about 1000 Hz, and speech sounds in small closed sets (e.g., with three words in a set), most likely on the basis of rhythmic cues. He was re-implanted with another device following the failure of the first device, but this second device also failed after a short period.

The first successful implant was done in 1961in Los Angeles by Dr. House, who was an otologist, teamed with Dr. John Doyle, who was a neurosurgeon and Jack Urban,an engineer continued from where Djourno and Eyries stopped by improving the devices. This enabled the patients to hear sounds in the environment but could not understand speech

These first implants consisted of either a single wire with a flamed ball contact at the end or an array of five electrodes made in the same way. A surgical approach was developed to allow insertion of the electrode(s) into the scala tympani through an incision in the round window membrane. The surgical approach implemented by Dr. House yielded a promising result with the patients being able to identify words in small closed sets and to discriminate some basic frequency.[1]

The first generation of cochlear implants were only used by individuals with profound bilateral deafness and for only monaural implantation but with improvement in the devices, the candidacy criteria for cochlear implant has been expanded to include individual with measurable amount of hearing impairment.[5]

The mechanism of action of cochlear prosthesis is to bypass the (missing) hair cells by directly stimulating the surviving neurons in the auditory nerve which is produced by currents delivered through electrodes placed in the scala tympani (ST), one of three fluid-filled chambers along the length of the cochlea. (The boundary between the ST and the scala media is formed by the basilar membrane and organ of Corti, and the boundary between the scala media and scala vestibuli is formed by Reissner's membrane.)[2]

Current trends

So much attention and effort have been dedicated to improvement of cochlear implants over the years and this has improved the standard of living of the patients.

Over the past decades, developments in the field of microelectronics and advances in signal processing techniques not only helped make CIs a reality, but led to increased efficiency and effectiveness of these CI devices in patients.[1]

The early efforts in the development of CIs led to the multichannel electrode. Functionally, the cochlear implant has evolved from the single-electrode device that was used mostly as an aid for lipreading and sound awareness to a modern, multielectrode device that can allow an average user to talk on the telephone.[3]

More recent advances in user performance were gained through improvements in surgical approaches and by the development of elaborate speech coding strategies. The development of the n-of-m, the Continuous Interleaved Sampling (CIS), and spectral peak strategies allowed improvements in CI performance.[1]

Various surgical techniques and drug therapies have been developed to preserve low-frequency hearing in an implanted cochlea, including (1) deliberately shallow insertions of the electrode array (6, 10, 16, or 20 mm) so as not to damage the apical part of the cochlea and remaining hair cells there, (2) insertion of the electrode array through the round window membrane rather than through a cochleostomy to eliminate deleterious effects of drilling (loud and possibly damaging levels of noise, introduction of blood and bone dust into the perilymph, possible damage to delicate cochlear structures such as the Basilar Membrane), (3) use of "soft surgery" techniques to minimize trauma, (4) use of thin and highly flexible electrodes, (5) use of a lubricant such as hyaluronic acid to facilitate insertion of the array, and (6) use of corticosteroids and other drugs to help preserve cochlear structures in the face of surgical manipulations and the introduction of a foreign body into the inner ear.[2]

Two recent advances in the design and performance of cochlear implants are (1) electrical stimulation of both ears with bilateral cochlear implants and (2) combined electric and acoustic stimulation (EAS) of the auditory system for persons with residual hearing at low frequencies.

Each of these approaches – bilateral electrical stimulation and combined EAS—has produced large improvements in speech reception performance compared with control conditions.

Synergistic effect of combined EAS cannot be overemphasized as the patients have higher score compared to use of electrical and acoustic stimulation separately,they also have a substantial benefit for listening to speech in quiet, noisy, or competition with multitalker babble compared with either electric or acoustic stimulation alone.

Bilateral stimulation can provide a substantial benefit for recognizing speech presented in competition with spatially distinct noise compared with scores obtained with either unilateral implant alone.It also improves the ability to lateralize or localize sounds.[2]

Moderate-to-excellent preservation of residual hearing has been reported for a majority of patients using the shallow insertions and some or all of the additional procedures and techniques, although residual hearing is still completely lost for some patients with the same insertions and approaches.[3]

This advancement in cochlear implants has also made it possible to expand the candidacy criteria from bilateral total deafness (>110 dB HL) in the early 1980s, to severe hearing loss (>70 dB HL) in the 1990s, and then

to the current suprathreshold speech-based criteria (<50% open-set sentence recognition with properly fitted hearing aids)[3]. Cochlear implantation for both adults and children has received Food and Drug Administration FDA approval. It is as a result of this that the number of cochlear-implant users has reached 60,000 worldwide, including 20,000 children, and is still growing exponentially.[3]

In recent years, optical methods to manipulate excitable cells have been explored and have become an important tool for the studies of the nervous system. The techniques require that the target tissue is sensitized by light which can be achieved in several ways: by introducing and expressing the genes for light-sensitive ion channels into the cells (also known as optogenetics), by directly introducing chemicals such as caged neurotransmitters to the cells, or by utilizing the endogenous sensitivity of cells to light.[1]

On the other hand, various investigations have identified the cellular and molecular mechanisms underlying the degenerative changes of the cochlear spiral ganglion neurons.[1] Effort to manipulate these mechanisms may allow researchers to prevent the degeneration of these neurons following hair cell loss. Other strategies include directing the differentiation of embryonic and adult neural stem cells into neural cell types that extend axons toward the hair cells. This has led to exciting new research aimed at promoting the differentiation of stem cells into spiral ganglion neurons. However, more work is required to identify the best means of directing stem cell development and differentiation into the specialized neurons that exist in the cochlea, as well as to determine whether their axons can form synapses with hair cells, leading to signaling in the central auditory pathway.

A related and promising area of research is gene therapy, which recruits undamaged endogenous cells at the location of damage within the cochlea to develop into hair cell like cells.[1]

Limitations

While a substantial progress has already been made, the cochlear implants are not perfect and further challenges remain. Recent and future research effort will include several major approaches: preservation of hearing postimplantation, the improvement of the electrode design, novel strategies to increase the number of functional channels on the cochlear implants, the design of novel coding strategies, the development of a less traumatic insertion of the electrode, as well as the use of stem cells and various drugs to retain and regenerate neurons in the cochleae.[1]

There is room for improvement in performance of cochlear implant users in noisy listening environments, the performance with tonal languages, and the appreciation of music. Infrared neural stimulation of a selective population of the spiral ganglion can be extremely beneficial and may improve user performance in noisy listening environments and provide better music appreciation by providing more independent channels to encode the acoustic information.[1]

Another problem with CIs is the broad distribution of outcomes, especially for difficult tests. That is, patients using exactly the same implant system – with the same speech processor, transcutaneous link, implanted receiver/stimulator, and implanted electrode array, can have scores ranging from the floor to the ceiling for such tests. Although overall variability in outcomes is reduced but far from eliminated with these relatively new approaches of bilateral CIs and of combined electric and acoustic stimulation (EAS) of the auditory system.[6]

A similar limitation is the lack of postsurgical rehabilitation that possibly contributes to the large individual variability in current cochlear-implant users.[3]

Despite significant research effort, there is no reliable and accurate presurgical predictor of postsurgical performance in cochlear implants. Several factors such as duration and aetiology of deafness, as well as presurgical auditory and speech performance, have been shown to be correlated with postsurgical performance. However, no presurgical factors have been able to account for a significant amount of postsurgical performance variability that would allow the physician have a high level of confidence to tell the prospective candidate how well he or she may do with the implant. Innovative means such as brain imaging and cognitive measures might be used in the future to help increase accuracy and reliability of presurgical prediction of postsurgical performance.[3]

Also, the current fitting procedure needs to be improved in order to achieve better efficiency and effectiveness. At present, adjusting the threshold and maximal comfortable loudness on a single electrode stimulation basis is labour intensive and time consuming and also requires high levels of attention and cooperation that are not possible in the paediatric population.[3]

Great progress has been made in the design and performance of cochlear prostheses. However, much room remains for improvement. Patients with the best results still do not hear as well as listeners with normal

hearing, particularly in demanding situations such as speech presented in competition with noise or other talkers. Users of standard unilateral implants do not have good access to music and other sounds that are more complex than speech. Most importantly, speech reception scores still vary widely across patients for relatively difficult tests, such as recognition of monosyllabic words, with any of the implant systems now in widespread use.[2]

Future prospects

The future of cochlear implant is bright as neuro-otologists, physicians and researchers are working tirelessly to make life easier and palatable for recipients of cochlear implants. A lot of effort is being put into the various limitations listed above and if successful, there is hope for patients.

Many other promising possibilities for further improvement in implant design and function are on the horizon. Some of the possibilities include:

- New designs or placements of electrode arrays to bring the electrodes in closer proximity to neural targets.
- Detection of peripheral processes, using psychophysical or electrophysiological measures, and selective activation of the processes when present and if possible, again to reduce the distance between electrodes and their neural targets.
- Continued efforts to promote the growth of neurites toward scala tympani implants to bring the target toward the electrodes.
- Continued development of novel modes of stimulation,that may allow precise spatial control of excitation sites.
- Identification of the mechanism(s) underlying the apparent disconnect between the number of sites that can be discriminated when stimulated in isolation versus the number of effective channels in a real-time, speech-processor context, and use of that knowledge to possibly reduce the gap.
- Continued efforts to increase the transmission of fine structure (FS) information to implant patients, as may be informed and facilitated by direct measures of the transmission.
- Continued efforts to improve the representation and reception of fundamental frequency information, in the limited ways that may be available with present scala tympani electrodes and in the possibly less-limited ways that may be available with other electrode designs.
- Broaden the applications of combined electric and acoustic stimulation to include as many patients as possible, including acoustic stimulation on the side contralateral to a fully-inserted cochlear implants and with at least some residual hearing on that other side, as the acoustic stimulation part of combined electric and acoustic stimulation may be the single best way to provide salient representations of pitch and also FS information in the range of residual, low-frequency hearing. (Use of the natural system wherever possible almost has to be better than use of electrical stimuli).
- Refinement and optimization of processing strategies and other aspects for bilateral implants and for combined electric and acoustic stimulation, each of which are in their nascent stages.
- Acoustic stimulation in conjunction with bilateral cochlear implants, for persons with bilateral CIs having some residual hearing.
- Continued development of surgical techniques and adjunctive drug therapies for better preservation of residual hearing during and after surgeries for combined electric and acoustic stimulation.
- Continued development of electrical stimulation patterns and adjunctive drug therapies to preserve spiral ganglion cells and other neural structures in sensorineural hearing loss and in the implanted cochlea.
- Continued development of strategies designed to provide a closer mimickery of the complex and interactive processing that occurs in the normal cochlea.

Each of the possibilities listed above is aimed at improving the representation at the periphery.

A related possibility that may help all patients at least to some extent is directed training to encourage and facilitate desired plastic changes in brain function (or, to put it another way, to help the brain in its task to learn how to utilize the inputs from the periphery provided by a CI). Such training if well designed may reduce the time needed to reach asymptotic performance and may produce higher levels of auditory function at that point and beyond. The ideal training procedure for an infant or young child may be quite different from the ideal procedure for older children or adults due to differences in brain plasticity. For example, the "step size" for increments in the difficulty of a training task may need to be much smaller for adults than for infants and young children. However, all patients may benefit from appropriately designed procedures, that respect the differences in brain plasticity according to age.[6]

CONCLUSION

Having discussed the current trends, limitations and future prospects of cochlear implants, it is pertinent at this point to assure general public, cochlear implant recipients in particular, that there is great potentials with the exploration of cochlear implant.

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AWARENESS AND ATTITUDE TOWARDS HEALTH INSURANCE AMONG ADULT PATIENTS IN TWO HEALTH CENTRES IN IBADAN METROPOLIS

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KEYWORDS
Awareness, enrolment, health insurance

ABSTRACT
Objectives: The study was to determine the awareness and attitude towards health insurance among adult patients at two health centres located in the urban slums of Ibadan. It specifically aimed to assess the patients' awareness of health insurance, the patients' attitude towards health insurance and to ascertain the factors affecting enrolment.
Method: A cross-sectional study was conducted in February 2017 at two health centres located in a densely populated area of Ibadan on 120 eligible respondents. A semi-structured pre-tested questionnaire was used to collect data on socio-demographics, enrolment in health insurance and reasons for non-enrolment.
Results: The male and female distribution was 20.8% and 79.2% respectively. Of these, 95% had at least primary education. Slightly over half (55%) of the participants knew about health insurance and had got the information mainly from the hospital (14.2%), friends and relatives (10.8%) and radio (8.3%). Awareness of health insurance among these adult patients was documented as being above average. Although awareness was above average, enrolment was as low as 8%. The participants attributed this to poor service provision and coverage, shortage of disposable funds and high premiums charged. There was also a significant association between form of employment and uptake of health insurance ($p<0.001$).
Conclusion: Awareness of health insurance among the respondents was average, enrolment was low but attitude and willingness to participate was good. Awareness creation about health insurance and its benefits should be promoted and concerns addressed in order to improve enrolment rates.

INTRODUCTION

In 2005, the World Health Assembly (WHA) encouraged countries to move towards universal health coverage, where all citizens have access to adequate promotive, preventive, curative and rehabilitative health services at a cost that is affordable [1]. The WHA also highlighted the need to ensure that health systems are funded through processes that allow risk pooling and cross subsidisation and that services purchased for the population are of good quality and improved efficiency.

Achieving universal coverage requires amenable health systems, where domestic resources make up a large portion of health care funding [2]. User fees were initially introduced in some low and middle income countries in order to generate revenue for the organisation and management of health systems. Some health systems experienced improvement in health service quality [3] but immense evidence suggests that they constitute a strong barrier to healthcare utilisation [4, 5] and this led to a search for other options of healthcare financing [6].

Health insurance is an example of health financing system which is aimed at raising funds for health, reducing financial barriers to healthcare access and using funds in a way that promotes efficiency and equity. It covers the cost of an insured individual's medical and surgical expenses [7]. Other forms of health financing systems include: taxation, medical savings account, out-of-pocket payments, loans, grants and donations [8].

Studies conducted in sub-Saharan Africa have shown that employment in the formal sector was significantly associated with access to health insurance in contrast to being employed in the informal sector [9]. Most of the individuals in the informal sector reside in the rural areas while a proportion live in urban slums. Majority are poor, more likely to get sick, less likely to use preventive and curative health care, and consequently, have higher mortality rates. One of the factors responsible for these challenges is high out-of-pocket payments for health [10]. Many of the studies done on health insurance have focused on individuals in the urban and rural areas. Findings have shown that awareness of prepayment schemes and subsequent enrolment is poor in rural areas [11]. However, not much research has been done among informal sector employees who reside in urban slums.

This study aimed to determine the level of awareness and attitude towards prepayment schemes (health insurance) as well as factors that could affect the

participation informal sector employees in said schemes.

MATERIALS AND METHODS

The Setting and Study Population

This descriptive cross-sectional study was conducted at Kola Daisi Foundation Centre for Primary and Community Health in Ibadan North Local Government Area of Oyo State and Idikan Health Centre in Ibadan North West Local Government Area of Oyo State in February, 2017. Kola Daisi Foundation Centre for Primary and Community Health was commissioned on February 10, 2011. In partnership with University College Hospital, Ibadan, it provides all aspects of primary health care to communities in Ibadan North Local Government Area and serves as a model for primary health care delivery in Ibadan. The Leslie Kish formula was used to calculate the sample size using the prevalence of 6.4% [11].

Recruitment Procedure

Although the calculated sample size was one hundred and two, one hundred and twenty consenting participants were recruited into this study. A convenience sampling technique was employed to select eligible participants. Only consenting adults aged 18 years and above were eligible for the interview. The patients were met at clinic and after an informed consent was sought and the study was duly explained to the participants, the questionnaires were administered.

Data Collection

An interviewer-administered questionnaire was adopted for the purposed of this research. The questionnaire was divided into four sections which assessed the socio-demographic information of the participants; the knowledge and awareness of health insurance; attitude towards health insurance and the factors affecting enrolment. A pre-test of the questionnaire was carried out among seven patients who access care at Idikan Health Centre, Ibadan North West Local Government Area, Oyo State. After careful data entry and cleaning, frequencies and percentages were used to summarise and describe all categorical data such as sex, age, level of education and others with presentations in tables and charts. Cross tabulations and chi-square test were used to test for association between independent variables such as: age, sex, marital status, highest level of education and income of respondents; and dependent variable, enrolment. All analyses were carried out using IBM Statistical Package for the Social Sciences (SPSS) version 21 for Windows.

RESULTS

Socio-demographic Data of Respondents

A total of 120 respondents comprising 95 (79.2%) females and 25 (20.8%) males were recruited for the study. Of these, 95% had at least primary school

Table 1: Demographic Information of Respondents

Variables	Frequency	Percentage (%)
Sex		
Male	25.0	20.8
Female	95.0	79.2
Age (in years)		
18- 24	15.0	12.5
25-34	53.0	44.2
35-49	34.0	28.3
>50	18.0	15.0
Religion		
Christianity	65.0	54.2
Islam	55.0	45.8
Marital status		
Single, never married	16.0	13.3
Married	194.0	86.7
Educational qualification		
No formal education	6.0	5.0
Primary education	12.0	10.0
Secondary education	46.0	38.3
Tertiary education	56.0	46.7
Employment		
Farming	2.0	1.7
Artisan	29.0	24.2
Cleric (Christian or Muslim)	5.0	4.2
Trader	57.0	47.5
Teacher	9.0	7.5
Others	18.0	15.0
Monthly income		
Less than N5,000	11.0	9.2
N5,001-N10,000	24.0	20.0
N 10,001-N25,000	36.0	30.0
N 25,001-N50,000	29.0	24.2
Above N 50,000	20.0	16.7
Number of dependent family members		
Nil	20.0	16.7
1	20.0	16.7
2	12.0	10.0
>2	68.0	56.7
Average monthly medical expense of the family		
Up to N500	21.0	17.5
N501-1,000	25.0	20.8
N1,001-2,000	26.0	21.7
Above N2,000	48.0	40.0

education while only 7.5% had a formal employment. About 60% of the respondents earned below ¦ 25,001 and a similar number had more than two dependents (Table 1).

Awareness of Health Insurance

Fifty-five percent of the respondents were aware of health insurance as a means of healthcare financing. About 14% heard of health insurance from the hospital, 10.8% from friends and relatives, 6.7% from television and outdoor advertisements (Table 2).

Table 2: Respondents' Reported First Source of Information

First source of information	Frequency	Percentage (%)
Newspaper	2.0	1.7
TV advertisement	8.0	6.7
Friends & relatives	13.0	10.8
Outdoor advertisement	8.0	6.7
Insurance company	4.0	3.3
Radio	10.0	8.3
Hospital	17.0	14.2
School	1.0	0.8
Work	3.0	2.5

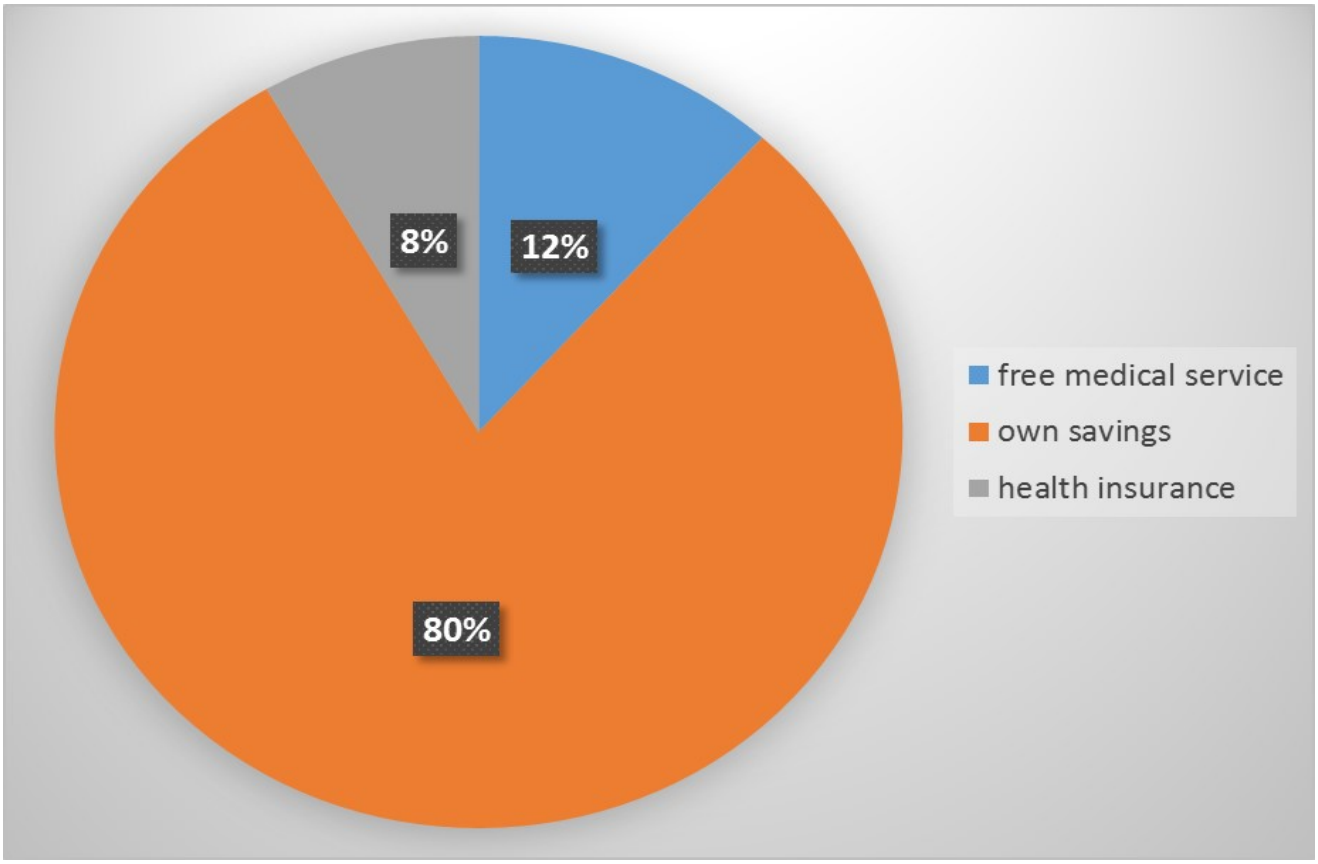

Figure 1: Source of Healthcare Funding

ABBREVIATIONS

NHIS-MDG-MCH: National Health Insurance Scheme- Millennium Development Goals- Maternal and Child Health
CDC: Centre for Disease Control
NGO: Non- Governmental Organisation

Table 3: Factors affecting Enrolment in a Health Insurance Policy

	Do you have an insurance policy?		Chi square	P value
	Yes (%)	No (%)		
Age				
34 or less	9 (13.2)	59 (86.8)	0.937	0.333
35 or more	4 (7.7)	48 (92.3)		
Religion				
Christianity	10 (15.4)	55 (84.6)	3.041	0.081
Islam	3 (5.5)	52 (94.5)		
Educational qualification				
Less than tertiary education	0 (0)	18 (87.3)	2.573	0.107
Tertiary education	13 (12.7)	89 (100)		
Employment				
Informal	4 (4)	98(96)	35.400	0.000
Formal	9 (50)	9 (50)		
Monthly incomed				
” N25,000	5 (7)	41 (75)	6.606	0.158
e” N25,001	8 (25)	66 (93)		
Number of dependent family members				
Nil	2 (10)	18 (90)	0.431	0.806
1-2	3 (15)	17 (85)		
>2	8 (10)	72 (90)		
Average monthly medical expense of the family				
d”N 1,000	5 (11)	41 (89)	0.870	0.833
e” N1,001	8 (11)	66 (89)		
Where respondents and family members go to seek health care most				
Traditional medicine & chemist	1 (3)	32 (97)	9.128	0.010
Private hospital	6 (28.6)	15 (71.4)		
Government hospital	6 (9.1)	60 (90.9)		
Attitude				
Poor attitude	0 (0)	46 (100)	9.063	0.003
Good attitude	13 (17.6)	61 (82.4)		
Awareness				
Yes	12 (18.2)	54 (81.8)	8.199	0.004
No	1 (1.9)	53 (98.1)		

Attitude towards Health Insurance

Of the 120 participants, close to 90% (107 participants) had no insurance policy. The commonest form of funding was out of pocket (80%), 12% accessed free medical services while 8% had accessed health care using health insurance (Figure 1). 89 participants were willing to recommend health insurance to friends and family, 26 were not sure they would while the rest were not willing to recommend health insurance to family and friends. 61.7% were found to have a good attitude towards health insurance and 38.3% had a poor attitude towards health insurance. This assessment was based n a series of questions asked during the interview.

Factors Affecting Enrolment

The association between enrolment in health insurance and age, religion, educational qualification and monthly income were found not be statistically significant. 96% of those with informal employment had no health insurance policy (p>0.01), 100% of those with a poor attitude towards health insurance were not enrolled (p= 0.03) and among those who were unaware of health insurance 98.1% were not enrolled (Table 3). Some reasons given by respondents for non-enrolment were poor service coverage and provision, high premium charge, shortage of disposable funds and lack of awareness (Table 4).

Table 4: Other reasons for Non-Enrolment*

N= 120	Frequency	Percentage (%)
Did not feel the need	21	17.5
No returns for investment	18	15
High premiums charged	25	20.8
Alternate sources	2	1.7
Poor service provision and coverage	36	30
Shortage of disposable funds	31	25.8
Lack of awareness	22	18.3
Lack of trust	2	1.7
It is against my belief	2	1.7

**multiple response question*

DISCUSSION

About 80% of the respondents in this study reported paying from their own savings for health care, compatible with previous findings, which show that out of pocket payment is common in low- to middle-income countries like Nigeria [12, 13]. The consequences of this payment method are: delayed utilization of health care, limited health care, or failure to seek care at all [14, 15]. It could also disrupt children's education or result in poor health outcome, poverty, and sometimes death [11].

In this study, awareness of any prepayment scheme was as high as 55% as opposed to the 6.4% reported by Adewole et al [11] with over 14% of them reported having heard about it for the first time during hospital visits.

Usually, sensitization, awareness and knowledge about an issue or activity usually precede arousal of interest and possible active participation in such an activity [16] but this was not so in our study. While awareness was high, enrolment was as low as 11%, in disagreement with Nyagero and others who showed that those who were aware about health insurance were more likely to participate [17].

Participants in this study expressed interest in health insurance schemes and this could imply that they were willing to participate. This attitude is similar to findings in preceding studies. In spite of this favourable attitude to health insurance scheme, majority of African countries are yet to adopt it, those who have, like Nigeria, are still having difficulty expanding it. Some of the reasons for this are the large informal sector of the population, the role of politics and also its voluntary nature [18, 2].

The respondents however made known their recommendations to improve awareness and enrolment. Some of them include: transparency with funds, improve awareness with use of radio adverts, short plays, community outreaches and provision of incentives.

The low level of trust in government programmes could result from people's experiences in previous programs that either failed or whose financial resources were poorly managed. Studies in Nigeria and Cambodia have shown that low level of trust in government policies prevent people from participating [19, 14].

Cultural and religious beliefs could be a hindrance to buying health insurance especially in the rural areas [2]. Some of the participants spoke about paying premium in health insurance as synonymous to inviting sickness while others believed illnesses to be an act of God and interfering with this by trying to reduce costs was wrong. A lot of work would thus be required to change the beliefs of the individuals with these views, and

successfully introduce the option of health insurance [13].

Awareness of health insurance, good attitude towards health insurance and accessing care at private hospitals are significantly associated with enrolment in prepayment schemes. In a study by Kimani et al, the factors associated with enrolment identified were male respondents in the non-poor category who were in a union at the time of the study or had at least a secondary education or higher.

CONCLUSION AND RECOMMENDATIONS

In the context of our findings, and within the backdrop of our socioeconomic clime, the following recommendations are apt. There is a need to institute awareness programmes to further enlighten the public, especially those in the informal sector, about the benefits of health insurance; since they largely possess low educational qualifications, these programs should comprehensively educate them. Programmes may take the form of short plays on the radio and television, outreaches to communities or trade unions like market women associations, taxi drivers' associations, and so on. In addition, having identified some of the cultural and religious beliefs that may hamper enrolment, religious leaders alongside other community leaders should be involved in awareness and promotion programmes. With their insight, insurance plans could be formulated to ensure its methods and objectives are not in conflict with the individual's beliefs. The endorsement of the scheme by these leaders could positively affect member participation. Secondly, the amount of premium to be paid should be personalised according to the financial capability of each individual; in this way, these individuals are able to choose packages that suit them based on financial abilities. The benefit package of such individuals can then be decided. Although this may cause a feeling of segregation, it is important because the individual will have some coverage thereby reducing out-of-pocket payment and financial bankruptcy that follow serious health problems. It is also important for officials to ensure transparency with funds and strict laws should put in place to prosecute the offending parties as a major hindrance to enrolment is mistrust in government and other constituted authorities.

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ELECTRONIC CIGARETTES: A THERAPY FOR TOBACCO SMOKING

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Tobacco smoking, Electronic cigarettes, Therapy, Effectiveness

ABSTRACT
Tobacco smoking is a habit that poses exponential risk to morbidity and mortality. Smoking is an addiction problem and therapies have to be targeted at rehabilitating patients so they are relieved of the habit and lead healthier lives. Nicotine a major component of tobacco makes smoking addictive through its effect on the dopaminergic system. The sensorimotor and behavioural cues associated with smoking, puffing and holding cigarettes also make smoking addictive; this has made electronic cigarettes a popular and accepted mode of rehabilitation amongst smokers. However it is needful to know if this mode therapy is effective and safe for patients and if it can be recommended.

INTRODUCTION

Tobacco smoking is the practice of burning tobacco and inhaling the smoke consisting of particle and gaseous phases. Smoking is the commonest form of tobacco consumption. Tobacco can be taken in the form of cigars, cigarettes, hookah, kretek, pipe smoking, vaporizer and passive smoking. Asides smoking, tobacco can be also consumed as snuff (inhalation into the nasal cavity), chewing, dipping tobacco/snus(moist tobacco is placed in the maxillary labial frenum). Dried tobacco leaves are mainly used for smoking. Tobacco contains nicotine; a stimulant which is a potent para sympathomimetic alkaloid and a nicotinic acetylcholine receptor agonist. A cigarette yields up to 2mg of nicotine that is absorbed through the alveoli and buccal mucosa[1]. There is also release of endorphins and dopamine which co-opt the pleasure-reward circuitry of the brain resulting in addiction[1].

All forms of tobacco consumption result in addiction because of their nicotine content. However tobacco smoking is the commoner form of addiction and has significant health implications.

Burden of Tobacco Smoking

100 million deaths were caused by tobacco in the 20th century mostly in developed countries[2]. If the trend continues, tobacco smoking would cause death of about 1 billion people this century mostly in low and middle income countries[2].

Cessation of tobacco smoking is associated with large health benefits. Most smokers desire to quit, however only a few manage to succeed long term. About 50% of those who try to quit without support are not successful for up to a week, and less than 5% make it for a year[3]. Whilst there is no doubt that people become dependent on tobacco and find it difficult to stop smoking because of nicotine and its actions on the mesolimbic dopamine system, sensory and behavioural cues appear to provide additional reinforcement of smoking behaviour and become rewarding over time[4].

One of the limitations of most tobacco cessation treatments is that none adequately address the routine sensory aspects that smokers miss when they stop smoking (e.g. holding a cigarette in their hands, taking a puff, etc.) and the satisfaction people derive from smoking[4].

Strategies for Cessation of Tobacco Smoking [2-4]

1. Unassisted quitting (Cold turkey)
2. Nicotine Replacement Therapy (NRT) – patch, gum, lozenge, nasal spray, inhaler, e-cigarettes
3. Antidepressants: Bupropion, Nortriptyline, Tranylcypromine
4. Selective nicotinic receptor partial agonist: Varenicline
5. Anxiolytics – buspirone, diazepam, doxepin, meprobamate, ondasetron
6. Betablockers – metoprolol, oxprenolol, propanolol
7. Selective cannabinoid type 1 receptor antagonists: rimonabant and taranabant
8. Nicobrevin (a mixture of quinine, camphor, menthol and eucalyptus oil)
9. Nicotine vaccines – NIC002, NicVAX

10. Opioid antagonists, including naltrexone, naloxone and buprenorphine
11. Silver acetate – aversive stimulus

The Ideal Therapy

The ideal smoking cessation therapy would provide nicotine replacement and sensorimotor replacement without the health risks associated with the inhalation of tobacco smoke[3].

ELECTRONIC CIGARETTES: Introduction

Electronic cigarettes (ECs) are hand-held devices that deliver nicotine to the user through the battery-powered vaporization of a nicotine/propylene-glycol solution[3]. The act of smoking an electronic cigarette is called 'vaping' and it mimics smoking; there is no combustion and the user inhales vapour, not smoke[4]. Electronic cigarettes(ECs) usually do not contain tobacco[3-5]. Theoretically, vaping is less harmful than smoking as it delivers nicotine without the thousands of known and unknown toxicants in tobacco smoke[5].

ELECTRONIC CIGARETTES: Epidemiology

ECs were introduced to the market in 2004 and since then, global usage has risen very rapidly[6-7]. At least 52% of smokers or ex-smokers have used electronic cigarettes and 15% of them became everyday e-cigarette users[7]. EC use among those who have never smoked is very low but continues to rise[5]. A survey of e-cigarette users found that only 1% of respondents used liquid without nicotine[8]. ECs are proven starting points for nicotine use as data shows that some young people who have tried an EC have never smoked tobacco[7,10]. There are about 500 brands of ECs[9]. Hundreds of small distributors market them over the internet and in shopping mall kiosks.

ADVANTAGES OF ELECTRONIC CIGARETTES

According to a study by Bullen et al in 2013[11], electronic cigarettes were found to deliver nicotine into blood stream and attenuate tobacco withdrawal symptoms as effectively as other nicotine replacement therapies (NRTs). Electronic cigarettes were noted to stimulate behavioural and sensory aspects of smoking such as holding a cigarette stick or taking a puff. These tactile cigarette-like qualities give electronic cigarette an advantage over other treatments which do not adequately address these aspects that smokers miss when they stop smoking[10-11]. This same study showed that the risk of adverse events following use of electronic cigarettes was no greater than that of other NRTs[11]. The electronic cigarette fluid and vapour also contained lower levels of toxins compared to cigarette smoke[11]. Other advantages include better taste, lack of cigarette odour, ease of use and cosmesis. These cigarettes were accepted more by the smokers than other NRTs[11-12]. Electronic cigarettes have the potential of improving health because users puff out second-hand vapour which contains fewer toxins compared to the second hand smoke from tobacco smoking[11].

EFFECTIVENESS OF ELECTRONIC CIGARETTES

The use of electronic cigarettes in tobacco control is associated with controversies and ethical debates globally[13].

Researches on the use of electronic cigarettes as a smoking cessation tool include randomized controlled trials (RCTs), user surveys, cross sectional studies and cohort studies. The two well reported RCTs are the ASCEND trial done in New Zealand and the ECLAT trial done in Italy[14].

The evidence that electronic cigarettes can help smokers quit is tentative but studies assessing their potential in tobacco smoking reduction and cessation are limited. As a result, the evidence is considered contradictory by some authorities while others are of the opinion that the negative research outcomes were a result of inappropriate study design[3, 15-18].

Biener et al in 2015 conducted a longitudinal study involving 695 smokers in two metropolitan areas in the United States of America. It was found that there was six times more likelihood of quitting smoking with daily use of electronic cigarettes for at least one month[19].

In a study of 27,640 European Union(EU) adult citizens by Farsalinos et al in 2016, 35.1% of participants reported smoking cessation while 32.2% of the participants reported smoking reduction with the use of electronic cigarettes[20].

Systematic reviews by Khoudigian et al and Malas et al in 2016 found a trend showing benefits of nicotine electronic cigarettes for smoking cessation[21]. In 2016, Oreliana-Barrios et al found in their review that combined abstinence rate among smokers using electronic cigarettes in prospective studies was 29.1% [22]. Rahman et al in 2015 carried out a meta analysis on clinical trials and discovered that electronic cigarettes containing nicotine helped 20% of smokers quit compared with the results from other studies where conventional NRTs helped only 10% of smokers quit[23]. Nicotine containing e-cigarettes were thus associated with greater effectiveness for quitting smoking than those without nicotine.

However, in a longitudinal study among US smokers by Grana *et al* 2014, it was found that electronic cigarettes may not increase rates of smoking cessation[24]. Some studies in US and England reported that the users of electronic cigarettes may be at increased risk for not being able to quit smoking[25]. Some studies also suggest that there may be a decline in smoking cessation among dual smokers (people who smoke tobacco cigarettes and ECs as well) [26]. This is because the act of vaping is similar to smoking and so smokers would rather switch to ECs rather than quit smoking.

Electronic cigarettes do not seem to improve cessation rates compared to regulated NRTs in a review and trial done by Carrol Chapman *et al* in 2014 which found that 29% of electronic cigarettes users were still using it at 6 months compared to 8% of patch users who still wore patches at 6 months[27]. This shows that although patch and ECs both serve as NRTs, patients still used the ECs longer. This may be linked to the behavioural and sensory aspects of smoking ECs still give.

A 2016 meta-analysis on 20 different studies by Kalkhoran et al found that smokers who used electronic cigarettes were 28% less likely to quit than smokers who did not[26].

In spite of the controversial evidence on effectiveness of electronic cigarettes in smoking cessation, it should be noted that some authors have shown that electronic cigarettes may be helpful in quitting smoking.

LIMITATIONS OF STUDIES ON EFFECTIVENESS OF ELECTRONIC CIGARETTES

Leduc and Quoix in 2016 noted that electronic cigarettes have not been subjected to the same efficacy testing as other NRT[28]. Assessment of effectiveness is also made difficult because of difference in brands, models and composition of the fluid in the cartridge or reservoir of electronic cigarettes[28]. As a result, evidence from current studies are not considered adequate in recommending or advising against the use of electronic cigarettes as a smoking cessation method.

Another reason why evidence may be contradictory is that the RCTs done were cessation driven and not naturalistic[29]. Also, the comparative effectiveness of electronic cigarettes can not be ascertained because only Bullen *et al* in 2013 directly compared 1st generation electronic cigarettes to conventional NRTs as smoking cessation methods[12].

ADVERSE EFFECTS OF ELECTRONIC CIGARETTES

Adverse effects can limit the effectiveness of electronic cigarettes when used as smoking cessation strategy. The 5 most reported adverse events associated with e-cigarette use in ECLAT trial by Caponnetto et al 2013 were (in order of decreasing frequency): cough (26%), dry mouth (22%), shortness of breath (20%), throat irritation (17%) and headaches (17%)[30]. The side effects reported in a study by Polosa et al were throat irritation and dry cough (32.4%), mouth irritation (20.6%), nausea (14.7%), dizziness (14.7%), headache (11.8%), sore throat (11.8%), dry mouth (8.8%), mouth ulcers (2.9%)[31].

RECOMMENDATIONS

Newer models of electronic cigarettes with better delivery of nicotine should be used in researches for more accurate assessment of effectiveness. More randomised controlled trials (RCTs) should be conducted to confirm effectiveness of electronic cigarette using the most suitable study design.

Dual use of electronic cigarettes and combustible cigarettes or electronic cigarettes with FDA approved cessation medication should be studied to evaluate impact on smoking cessation efforts.

CONCLUSION

There are diverse tobacco cessation strategies which include use of electronic cigarettes. Sensory and behavioural cues play a role in the therapy for tobacco smoking cessation. Evidence from studies and reviews on effectiveness of the use of electronic cigarette use as therapy for quitting tobacco smoking are controversial and as a result, policies on its use vary across regions of the world. In spite of some evidence to favour its use, electronic cigarettes are not devoid of health risks. We await further studies, perhaps with more rigorous research designs to serve as evidence for policies on whether to encourage or discourage the use of ECs.

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PREVALENCE OF ASYMPTOMATIC GALLSTONES ON ABDOMINAL ULTRASOUND AT THE UNIVERSITY COLLEGE HOSPITAL, IBADAN

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KEYWORDS
gallstones, asymptomatic, prevalence

ABSTRACT

***Background**: Gallstones are a solid collection of cholesterol, bilirubin and calcium salts in the gallbladder. Over 80% of gallstones are asymptomatic and these are called silent stones. About 1-2% of asymptomatic patients develop symptoms yearly, however, determining those who will develop symptoms is a major challenge. Ultrasonography is the most sensitive and specific method of detecting gallstone with an accuracy greater than 95%. The aim of the study is to determine the prevalence of ultrasound diagnosed asymptomatic gallstones at UCH Ibadan and to determine its association with age and gender.*

***Methods**: Retrospective analysis of abdominal ultrasound performed at the Radiology department of the University College Hospital between January 2013 and December 2015 was done. Data retrieved included age, sex and sonographic findings. Data analysis was done by simple proportion and percentages using the Statistical Package for Social Sciences (SPSS) version 20.0 software.*

***Results**: 2138 patients, including 915 males and 1223 females had abdominal ultrasound for various reasons during the study period. Incidental findings of gallstones occurred in 52 of the subjects; giving a prevalence of 2.4%. The highest prevalence of gallstones was seen in the 5th decade. Gallstones prevalence was higher in females than in males giving a male to female ratio of 1:3.5.*

***Conclusion**: In conclusion, the overall prevalence of asymptomatic gallstones in patients presenting for abdominal ultrasound in our environment is 2.4%. It is more prevalent in patients in the fifth decade as well as in the female gender.*

INTRODUCTION

Gallstones are a solid collection of cholesterol, bilirubin and calcium salts in the gallbladder. The gallbladder is a pear-shaped organ located in the fossa for the gallbladder at the right postero-inferior surface of the liver in the right hypochondrion and is responsible for the secretion and storage of bile[1].

Three main types of gallstones exist; cholesterol, pigment (brown/black) or mixed[2–4]. Cholesterol gallstones consist of at least 90% of cholesterol, pigment gallstones comprise at least 90% of bilirubin while mixed gallstones contain varying amounts of cholesterol and bilirubin and other substances including calcium carbonate, phosphate and palmitate[3]. Cholesterol gallstones are formed when the cholesterol concentration in bile is greater than its ability to remain soluble in bile[3]. This results in crystallization and the development of stones[3]. They are usually pale yellow, oval and light weight[1] and are not common in tropical Africa[1]. Pigment gallstones result from excessive destruction of red blood cells leading to excess bilirubin in the bile. Brown pigment stones are known as primary bile duct stones. They originate in the bile duct and are associated with infections. Black pigment stones, on the other hand, are associated with cirrhosis or chronic haemolytic conditions like sickle cell disease, thalassaemia and hereditary spherocytosis[2–4] and they are common in Africa and Asia[1].

Gallstones are the most common biliary pathology[2]. The prevalence of gallstones in the general population is 5-10%. They are said to occur in 10-15% of adult Americans[1,2,5] but are less common in Africans and Asians[1,3]. The prevalence is said to increase with age[2,6] in both males and females[5]. The development of gallstones has also been linked to parity, pregnancy, hormonal therapy, use of combined oral contraceptives, genetics or race, obesity, rapid weight loss, physical activity, diet, drugs, diabetes, streptococci and salmonella infections, ileal disease or ileal resection, cystic fibrosis, etc.[1–4,7,8]. Over 80% of gallstones are asymptomatic and these are called silent stones. About 1-2% of asymptomatic patients develop symptoms yearly[2,7,8] however, determining those who will develop symptoms is a major challenge[6].

Ultrasonography is currently the investigation of choice for diagnosing gallstones[4,6,8,9]. It is the most sensitive and specific method of detecting gallstone with an accuracy greater than 95%.[6,9] High resolution real-time Ultrasound (US) can detect gallstones as small as 2mm[4,9]. It is non-invasive, rapid and cheap and does not expose subjects to ionizing radiation or contrast medium[4,9]. Transabdominal route is the most common, however, it can also be done endoscopically[3]. With transabdominal ultrasound, gallstones appear as mobile rounded hyperechoic structures in the dependent part of the gallbladder lumen casting posterior acoustic shadows (figures 1 and 2) [10]. Apart from demonstrating the presence of the gallstones, ultrasound can determine the number and sizes of these stones as well as the size of the gallbladder and its wall thickness. The presence of inflammation around the gallbladder, the size of the common bile duct, pathologies of organs in a close relationship with the gallbladder and occasionally, the presence of stones within the biliary tree can also be determined sonographically[2,4]. The questions are whether to treat or not to treat a patient with silent gallstones and what should be considered in a patient before opting for prophylactic cholecystectomy. Recently, laparoscopic cholecystectomy became popularized and its use in the treatment of asymptomatic gallstones has drawn more attention to it.

This study seeks to determine the overall prevalence of silent gallstones in patients who had an abdominal ultrasound for complaints unrelated to gallstones and to compare the prevalence among the different age groups and gender.

MATERIALS AND METHODS

A retrospective cross sectional study was carried out at the Radiology department of University College Hospital, Ibadan, Oyo state. Ultrasound reports and request cards of all the patients who had abdominal ultrasound scan done in Radiology department between January 2013 and December 2015 were retrieved. Patients with hepatobiliary diseases, right upper quadrant pain, pregnancy and hemoglobinopathies like sickle cell diseases were excluded from the study. Data retrieved from the results included age, sex, incidental findings of gall stones and the number of gall stones found.

Data analysis was done by simple proportion and percentages using the Statistical Package for Social Sciences (SPSS) version 20.0 software. The association of gallstones with age and sex of subjects was determined statistically using Chi square. A p-value of <0.05 will be regarded as significant.

RESULTS

Ultrasound results of 2138 patients, including 915 males and 1223 females, who had abdominal ultrasound for various reasons other than those excluded during the study period were analysed. Incidental findings of gallstones were made in 52 of the examined patients; giving a prevalence of 2.4% (Table 1). The age group with the highest number of patients with gallstones were those 41-50 years which accounted for 26.9% of the overall prevalence. The least number were found in

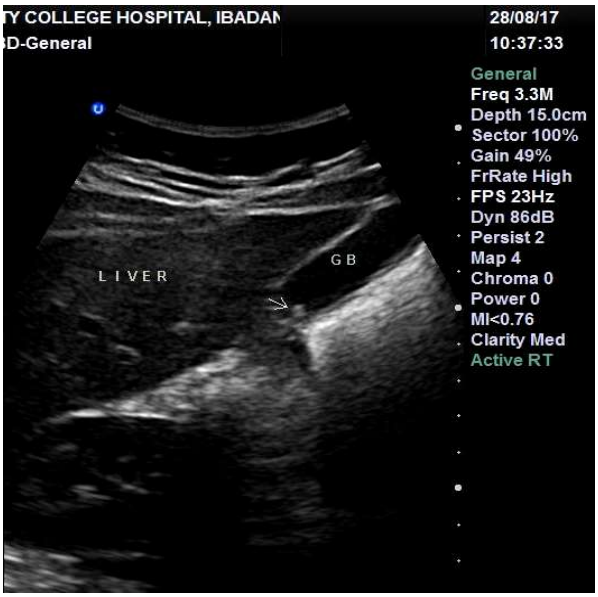

Figure 1: Longitudinal ultrasound scan through the right lobe of the liver showing the gallbladder (GB) and a gallstone (Arrow) in its dependent portion.

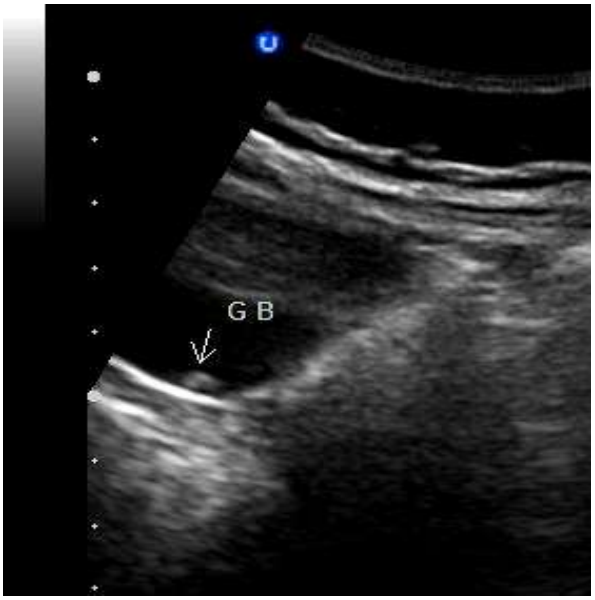

Figure 2: Transverse ultrasound scan of the gallbladder (GB) of same patient showing the gallstone (arrow)

extremes of ages 1-10 years and 91-100 years, each of which accounted for 1.9% (p=0.051) (Figure 3). Sixteen patients (30.8%) had multiple gallstones; the remainder had solitary stones (69.2%). The widest diameter of the gallstones ranged from 1.01mm to 13.3mm.

The incidence of asymptomatic gallstones was higher in females (3.5%) than in males (1.0%), giving a male to female ratio of 1:3.5 (Table 1). This was statistically significant with a p-value less than 0.05. The commonest indication for abdominal ultrasound associated with incidental gallstones was epigastric pain which was found in 7.7% of the subjects while other less common indications are right iliac fossa pain (3.8%), left iliac fossa pain (3.8%) and chronic kidney disease patients (3.8%).

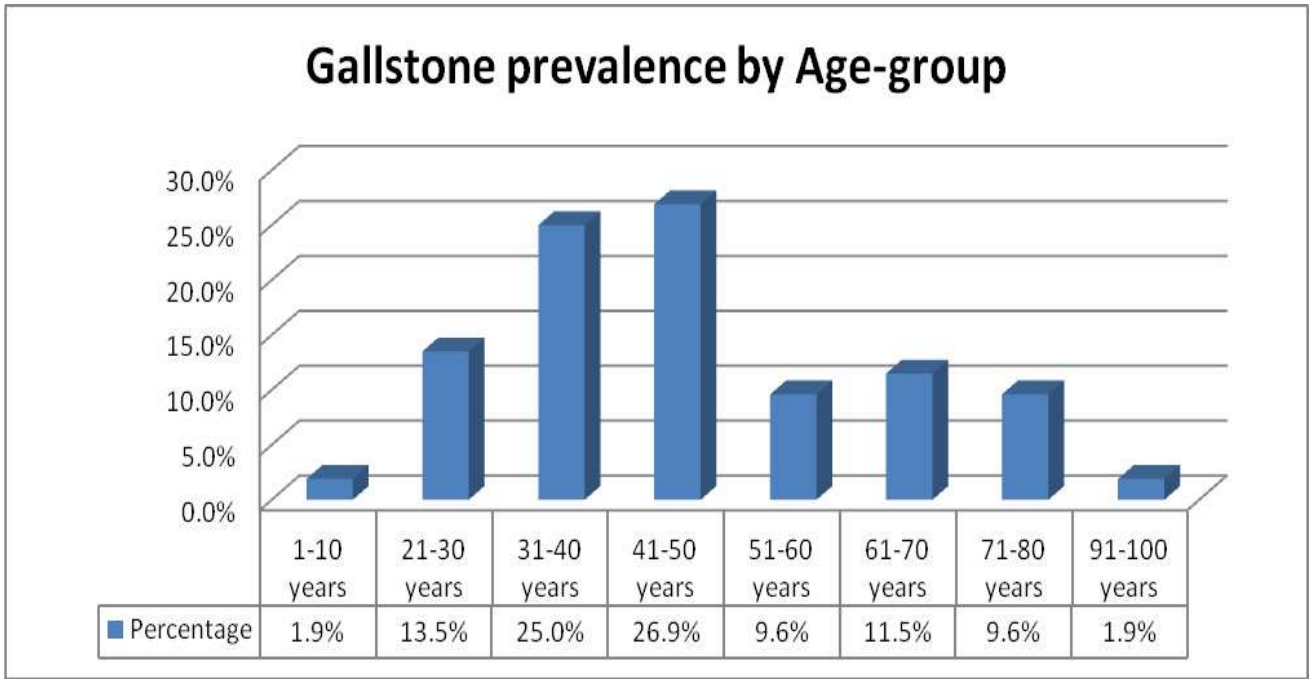

Figure 3: Distribution of asymptomatic gallstones according to age-groups.

Table 1: Gallstones Prevalence by gender

Sex	Number of patients(n)	Patients with Gallstones	Percentage (%)	p-value
Female	1223	43	3.5	0.000
Male	915	9	1.0	
Total	2138	52	2.4	

Table 2: Distribution of Gallstones amongst the different age-groups

Age Group	Number of patients(n)	Number with Stones	Percentage (%)	p-value
<1	18	0	0.0	0.051
1-10	212	1	0.5	
11-20	164	0	0.0	
21-30	308	7	2.3	
31-40	421	13	3.1	
41-50	354	14	4.0	
51-60	283	5	1.8	
61-70	214	6	2.8	
71-80	133	5	3.8	
81-90	26	0	0.0	
91-100	5	1	20.0	
Total	2138	52	2.4	

Table 3: Relationship between gender and the number of gall stones

Gender	Solitary Stone (%)	Multiple Stones (%)	Total (%)
Female	29 (67.4)	14 (32.6)	43 (82.7)
Male	7 (77.8%)	2 (22.2)	9 (17.3)
Total	36 (69.2)	16 (30.8)	52 (100)

Table 4: Commonest indications of patients with incidental gallstones

Indication	Number of patients	Percentage
Epigastric pain	4	7.7%
Right Iliac fossa pain	2	3.8%
Left Iliac fossa pain	2	3.8%
Chronic renal failure	2	3.8%
Others	42	80.7%

DISCUSSION

The prevalence of gallstones have been known to vary widely with geographic location and hereditary factors mostly influenced by race[11]. Broadly, there appears to be higher rates of gallstones in Western Caucasian, Hispanic, Native American populations and lower rates in Eastern European, African American, and Asian populations[12]. There is however a pronounced fluctuation in the prevalence between divergent ethnic populations[11,12].

In our study, the prevalence of asymptomatic gallstones was 2.4%, which is slightly lower than results reported in studies done on subjects in Japan[13] and Thailand[14]. Nomura *et al* investigated 2584 healthy volunteers in Okinawa, Japan and reported gallstone prevalence of 3.2%[13] while the prevalence reported by Prathnadi et al who studied incidence of gallstones in asymptomatic subjects in northern Thailand was 3.1%.[14] Our result is however much lower than that found in a North African country, Sudan where Bagi Abdel et al reported a prevalence of 5.2% in a similar study in adults[15]. In the Hispanic population of the United States, Maurer *et al* reported a prevalence of 13.3% in a survey of adults aged 20 to 74 years[16]. In England, Heaton *et al* studied adults aged 20 to 69 in a white population and reported a prevalence of 7.5% [17] while in Bergen, Norway, 1371 healthy adults aged 20 to 70 were studied by Glambek *et al* who reported a prevalence of 21.9%[18]. The higher prevalence in these later studies may be due to the fact that infants, children and adolescent age-groups were not included in the studies.

Among the well-recognized risk factors for gallstones are advanced age, female gender, pregnancy and obesity. The prevalence of gallstones was highest in the fifth decade in this study with a decline in the older age groups. This is contrary to findings by Hooper et al in the United States and other similar studies who found advanced age as a risk factor for development of gallstones[11,16,18,19]. However, contrary to findings from most studies, the prevalence was higher in patients less than 40 years in a study by Saha et al[20] in Bangladesh. This may be due to the geographical location or ethnicity.

Gallstones were considered to be uncommon in infants and children but have been increasingly diagnosed in the recent years, mainly due to wide spread use of ultrasonography. Factors associated with gallstones in children, haemolytic diseases, total parenteral nutrition, systemic infections, ileal diseases, and congenital biliary diseases have been implicated as the most frequent cause in many studies[21,22]. However, in different studies 20 -85% of gall stones in children are not associated with any risk factors [21–23]. In a study by Haghigat et al over a 10 year period, gallstones were found in 105 children with 99% asymptomatic and 85% had no known predisposing factors[23]. Only one child in our study had silent gall stone which accounted for 1.9% of the patients with gall stones. This can still be attributed to the variation in ethnic groups and geographical location.

Gallstones are observed to be commoner in women than men[16,18,19]. This is mostly due to the effect of female steroid hormones on hepatobiliary physiology[24,25]. These hormones, notably estrogens, increase biliary cholesterol by enhancing hepatic lipoprotein uptake and inhibiting bile acid synthesis thereby promoting the formation of cholesterol gallstones[25]. Our study revealed a higher prevalence of gallstones in females with a male to female ratio of 1:3.5. This was similar to other studies on gallstone epidemiology. However, regional variations still exist with some studies reporting higher male to female ratios. Jorgenson *et al* reported 1:1.6 in a Danish population while Lu *et al* reported 1:1 in Taiwan[26-29]. This is again partly explained by hereditary and dietary factors. The increased prevalence of gallstones in women however does not translate to increased prevalence of its complications as some studies have reported that the male gender increases the risk for gallstone complications[30–33].

Higher risk of developing symptoms and gallbladder carcinoma has been reported in patients with large stones >3 cm (10 times risk), gallbladder packed with stones and ethnic groups in high-incidence regions. Most of the gallstones found in our study were less than 1.3cm in diameter while solitary stones were found more accounting for 69.2% of the cases.

CONCLUSION

The overall prevalence of sasymptomatic gallstones in patients presenting for abdominal ultrasound in our environment is 2.4%. It is more prevalent in patients in the fifth decade as well as in the female gender.

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IRRITABLE BOWEL SYNDROME: CURRENT AND FUTURE TRENDS IN PHARMACOLOGIC TREATMENT

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ABSTRACT

Irritable Bowel Syndrome (IBS) is a functional gastrointestinal disorder (FGID) characterised by a spectrum of gastrointestinal symptoms. It affects about 5-11% of the population in most countries, although about 20% of the general population are thought to fit the diagnostic criteria. Symptoms include constipation, diarrhoea, bloating and abdominal pain. There is no blanket explanation for its pathogenesis but a constellation of triggers and pathways each act in combination or in isolation to produce IBS symptoms. A great number of cases are associated with one or more psychological/mental conditions and some successes in treatment have been recorded with hypnotherapy, cognitive behavioural therapy, and use of antidepressants. This suggests a role for a brain-gut axis dysfunction in the pathophysiology of this disorder. Other culprits include altered serotonin pathway, chloride channel modulation, cholinergic mechanisms, anomalous visceral perception and immunological mechanisms (infection and allergy). Indeed, effectiveness of drugs acting on these pathways have given some plausibility of their role in IBS pathophysiology. This article aims to elucidate and analyse the current and future trends in IBS treatment with particular emphasis on pharmacologic treatment.

INTRODUCTION

Irritable Bowel Syndrome (IBS) is a functional gastrointestinal disorder (FGID) characterised by a spectrum of gastrointestinal symptoms including diarrhoea, constipation, unexplained abdominal pain/ discomfort and change in bowel habit (1). All these symptoms occur in the absence of structural or biochemical abnormalities (2). No single pathophysiologic mechanism has been able to explain all the symptoms associated with the syndrome and symptoms vary between patients. However, IBS can broadly be classified as diarrhoea-predominant (D-IBS), constipation-predominant (C-IBS) and pain-predominant (P-IBS). Usually, there is a combination of symptoms but treatment is mainly directed at the most bothersome one (1).While traditional IBS treatment remains symptomatic, there are ongoing studies to elucidate previously unknown mechanisms which will open the doors for more efficacious therapies and improve the quality of life of the patient. However, despite the wide range of available medications, none has been found to be completely effective (3, 4).

Epidemiology

Available evidence suggests that IBS affects 5-11% of the population, although up to 20% are thought to fit the criteria for diagnosis. The cost of IBS to the economic burden of a nation cannot be overemphasized. In a systematic review of literatures which studied the direct and/or indirect cost of IBS to the economy, total annual direct costs related to the treatment of IBS was £45.6 million and $1.35 billion in the UK and USA respectively while indirect total annual cost in the USA was estimated at $205 million (2). In South Korea, IBS alone is responsible for 0.46% of over-all national medical expenditure (3). This implies that if efficiency is applied to the diagnosis and rational treatment of IBS with novel efficacious cost-effective drugs discovered, there would be less out-of-work times for IBS patients, improved workforce and an upward outlook for the economy.

Pathophysiology and Current Drugs

No single pathophysiologic mechanism explains all the symptoms of IBS (3,4), however, plausible candidate mechanisms responsible for various symptoms have been premised upon new largely efficacious drugs (4, 5). Established mechanisms include chloride channel activation, serotonin pathway modulation, cholinergic potentiation, psychological and brain-gut axis dysfunction (5, 6, 7).

Chloride Channel Activators

Activation of luminal type 2 chloride channels increases gut fluid secretions, improves stool liquid consistency and accelerates bowel transit time (5, 8). These are favourable responses especially in those with C-IBS. Lubiprostone, a prostaglandin E1 (PGE1) analogue, is a highly selective type 2 chloride channel activator and has been found to elicit these responses (8, 9). In addition, Lubiprostone improves abdominal pain, global symptoms and overall quality of life (9). It is generally

well-tolerated and with side effects being nausea, headache and diarrhoea as generally expected from prostaglandins. In April 2008, Lubiprostone was FDA-approved for treatment of C-IBS in women 18 years or older (8). Studies have shown promising results for Crofelemer and Linaclotide which inhibit and activate enterocyte Cystic Fibrosis Transmembrane Conductance Chloride Channels (CFTR) respectively. The antisecretory properties of Crofelemer has been explored in the treatment of D-IBS with inconsistent results across studies. A double blind placebo-controlled randomised-control trial (RCT) showed no improvement in stool consistency or urgency (10) while a larger study reported some improvement in stool quality in D-IBS patients (11). The inconsistency may be due to variations in study characteristic including sample size and confounding factors. Hence, a larger multicentre RCT will be required to determine its role in treatment of D-IBS.

Anticholinergics

Parasympathetic mechanisms play a role in intestinal smooth muscle contraction resulting in spasm and abdominal pain, thus anticholinergics would be expected to alleviate symptoms at least theoretically. Hyoscine butylbromide is an anticholinergic with strong avidity for intestinal smooth muscle muscarinic receptors. Inhibition causes smooth muscle relaxation and spasmolysis (4, 12). It has been widely used in the treatment of abdominal pain since its approval in the 1950s (12). Hyoscine has the additional benefit of ganglionic nicotinic receptor blockade hence inhibiting afferent impulses to central pain centres. It has a poor systemic bioavailability (estimated to be <1% from renal excretion) as absorption is poor (5, 12). This concentrates its molecules within the site of action in the GIT with minimal side effects. Ten placebo-controlled studies have evaluated the efficacy and safety of oral and rectal hyoscine butylbromide. It was considered beneficial in all of these trials, which supports its use in the treatment of abdominal pain caused by cramping (12). Thus, hyoscine appears a suitable drug for the treatment of abdominal pain due to abdominal cramping and visceral hypersensitivity in IBS. This has been substantiated by a recent systematic review (13).

Serotoninergic pathway

Serotonin is produced and stored by enterochromafin cells in the Amine Precursor Uptake and Decarboxylation (APUD) system of the GIT and plays a vital role in gut secretion, perception and motility (5, 14). There is increasing evidence to suggest a role for serotonin (5-HT) in the pathophysiology of IBS. Plasma postprandial 5-HT levels have been found to increase in D-IBS but not in C-IBS (15, 16). Decrease in mucosal 5HIAA/5-HT also occursin C-IBS. This implies that targeting the increased gut 5-HT production and its decrease in D-IBS and C-IBS respectively may play significant roles in treatment (6). Furthermore, recent studies show that the equilibrium between 5-HT production and metabolism also plays a crucial role (14). The Serotonin transporter (SERT), present on the apical membrane of enterocytes is responsible for the uptake of gut serotonin for subsequent metabolism by monoamine oxidases (17). Recent studies have shown that SERT expression abnormalities contribute to the development of IBS (14,17).

5-HT3 antagonists (e.g Alosetron) and 5-HT4 agonists (e.g Tegaserod) have been found to be hugely beneficial in the treatment of Diarrhoea-predominant (D-IBS) and Constipation-predominant (C-IBS) IBS respectively (5). Alosetron has been found to relieve abdominal pain, improve consistency and frequency of bowel movements, global symptoms and quality of life (18, 19, 20). However, it has been found to cause severe constipation and ischaemic colitis (5, 19) which necessitated its withdrawal from the market in the year 2000 (5). It is now FDA-restricted to use in females with severe and refractory D-IBS but contraindicated in constipation (5). Cilansetron is another 5-HT 3 antagonist which has been found to be effective for IBS treatment (20).

Conversely, Tegaserod (a 5-HT4 agonist) has been shown to be effective in treating C-IBS (5, 20). 5-HT 4 receptor activation results in accelerated intestinal transit time (5). It improves global symptoms and constipation in C-IBS (20). However, its link with cerebrovascular and cardiovascular events has been disputed limiting its availability for clinical use to select emergencies only (21).

Although serious adverse effects have limited their widespread approval for routine IBS treatment, there is no doubt that their proven effect holds significant promise for the future of IBS treatment. High level molecular pharmacologic alteration of these agents followed by meticulous translational and observational research may prove invaluable in reducing adverse effects and improving options for future IBS treatment. The search must also continue for safer agents with milder side effects.

Immune modulation

Cells of the immune system (innate lymphoid cells and mononuclear phagocyte system) have been found to play a significant role in a bidirectional brain-gut and gut-brain interaction (6, 22). It has been hypothesised that inflammatory cells and gut microbiota equilibrium

play a role in IBS pathophysiology (5, 22). Indeed, certain studies have shown some benefits of probiotics especially Bifidobacteria and Lactobacilli in this regard (4, 5). Gianetti et al (23) in a multicentre, randomised, double-blind, placebo-controlled, crossover trial reported an improvement in abdominal pain and quality of life following administration of a mixture of Bifidobacterium infantis to children with IBS (23). Cha et al (24) reported adequate relief in global symptoms and improvement in stool consistency in D-IBS patients following administration of a probiotic mixture of Bifidobacteria, Lactobacilli and Streptococcus thermophillus (24). It is currently believed that alteration in intestinal microbiota results in activation of mucosal innate immune mechanisms which increase epithelial permeability, lowers nociceptive threshold and promotes enteric dysregulation (4). Although there are several randomized controlled trials of probiotics in IBS, they are typically poorly designed and have not consistently demonstrated efficacy (4). Well-designed RCTs still need to be conducted to establish this evidence. The same applies to prebiotics. Certain antibiotics (e.g Rifaximin) have been shown to improve IBS symptoms significantly by gut microflora ecosystem alterations (5). Studies have also shown symptom improvement after faecal microbiota transplantation (24). It provides an opportunity for extra options for IBS treatment, although technicalities involving safety, longterm complications and acceptability must be addressed (24).

Antidepressants and other central agents

Central sensitization, cognitive and emotional aspects of pain and disequilibrium in excitatory and inhibitory nociceptive pathways have been suggested as possible mechanisms of visceral hypersensitivity in IBS (25). There has long been a strong correlation between psychological factor and IBS (5, 26). Indeed, antidepressants have become a widespread treatment for patients with moderate to severe IBS, owing to their effects on pain perception, mood, and motility (7, 26). Tricyclic antidepressans (TCAs) and selective serotonin re-uptake inhibitors (SSRIs) are currently employed in the treatment of visceral hypersensitivity in IBS (4). The former are effective in treatment of neuropathic pain while SSRIs are thought to improve the effectiveness of endorphins. TCAs may be most appropriate in treating D-IBS due to their inherent anticholinergic property which can cause constipation. SSRIs on the other hand may be of greater benefit in C-IBS due to their prokinetic property 4, 27). SSRIs have been used for the treatment of concurrent anxiety and IBS with some success (4). Current evidence shows significant benefit in Global IBS symptom improvement (4) although there are conflicting opinions regarding the quality of the evidence base for these agents (4, 28, 29).

Studies of pregabalin and K-opioid receptor agonists (e.g Asimadoline) hold promising results for future therapy for visceral IBS hypersensitivity (5). Pregabalin is a second generation antiseizure medication also approved for the treatment of neuropathic pain associated with diabetic peripheral neuropathy, postherpetic neuralgia and fibromyalgia (5, 25). Although structurally similar to Gabapentin, it is 2-10 times more potent (25). Pregabalin binds to the $\alpha 2\delta 1$ subunit of voltage-gated calcium channels and this is thought to be its receptor especially in the central nervous system (25, 30). This reduces axonal calcium influx necessary for excitatory neurotransmitter release from the terminal boutons. Its potential role in IBS is based upon a recent study demonstrating normalization of rectal distension sensory thresholds in IBS patients with rectal hypersensitivity (30).

Asimadoline is a new peripheral K-opioid receptor agonist which holds some promise for pain control in IBS (31). Its poor CNS distribution suggests that its mode of action is mainly on peripheral nerve endings. It however may not be very useful in treating C-IBS or D-IBS as it has no effect on gut motility (5, 31). One double-blind randomized placebo-controlled trial has reported significant improvements in relief of the pain/ discomfort of IBS, relief of global IBS symptoms, improvement in the urgency and frequency of stools, and reduced pain scores in D-IBS (31).

Ancillary and Future therapies

The role of additional therapies like hypnotherapy, acupuncture, dietary modification etc. have all been proposed but there is a paucity of substantial evidence to support their role in alleviating IBS symptoms (4, 5). Endorphin system agonists, cholecystokinin receptor, neurokinin receptor and protease-activated receptor antagonists are among numerous potential candidates currently at various levels of study for the relief of IBS (5). Tables 1 and 2 below summarize the ancillary treatment and future prospects in IBS management respectively. The plurality of promising candidates portends hope for better quality of life for IBS patients, improved healthy work force and a ripple effect of substantial impact on global economy and livelihood.

CONCLUSION

There is currently no single most effective treatment for IBS and management has to be individualised to match clinical presentation with efficacy, potency, bio-configuration and cost-effectiveness borne in mind.

Drug combination and pharmacologic-non-pharmacologic treatment synergy may be considered to provide better effect. An area that appears to require more exploration is the relationship between neuro-humoral mechanisms and genetics in IBS pathophysiology. The discovery of susceptibility genes may open up the space for genetic modification both for prevention and gene therapy. Hence, IBS pharmacogenomics has to be explored to ensure improvement in individualised therapy.

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MAJOR DEPRESSIVE EPISODE WITH PERIPARTUM ONSET (PERINATAL DEPRESSION): A REVIEW

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Peripartum, depression, psychosis, perinatal

ABSTRACT

Several definitions and illustrations have been given to the entity previously called postpartum depression (PPD) but now termed as perinatal depression according to Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM–V). Perinatal depression is an important mental health problem that affects about one in seven women, all over the world, around the peripartum period. Although a number of risk factors have been identified, the actual cause of perinatal depression is yet to be well-understood. Major risk factors include past history of depression, stressful life events, poor marital relationship and lack of social support. Currently, there are several public health efforts which are geared towards early detection and diagnosis of perinatal depression. Standard treatments such as interpersonal psychotherapy and more tailored bio-psychosocial treatments have been found effective although outright preventive efforts have been less successful. This review is aimed to emphasize the significance of major depressive episode with peripartum onset, the importance of its early detection and prompt interventions as well as preventive mechanisms that could ameliorate its potential negative impact on the mother, the baby and the family.

INTRODUCTION

The perinatal period is considered a time of heightened vulnerability to onset of psychiatric disorders[1,2]. Several definitions and illustrations were previously accorded the clinical condition called postpartum depression (PPD) but now appropriately termed as perinatal depression according to the Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM–V). By the present definition, perinatal depression is first noticed during pregnancy or up to four weeks postpartum although some authorities have documented that onset of perinatal depression can be up to one year after delivery[1–3]. Perinatal depression can be described as a form of severe depression which occurs in pregnancy or immediately after delivery and which interferes with routine daily functioning such that an intervention or treatment is inevitable[4]. It can occur a few days, weeks, or even months after child birth and carry significant negative implications for a new mother's health and well-being as well as for the health and development of her infant [5].

Types of perinatal depression run on a spectrum of severity, ranging from mild baby blues through postpartum major depression to postpartum psychosis [5]. Baby blues are short-term, milder type of perinatal depression seen in 30-80% of all new mothers[4]. Symptoms often begin within three to ten days of delivery and resolve by two to three weeks postpartum [5].Postpartum major depression, unlike the baby blues is experienced in about 10% of women[4]. It develops three or more weeks after delivery, with stronger mood symptoms as severe as suicidal thoughts and usually last longer than baby blues[4]. Postpartum psychosis sometimes called puerperal psychosis or postpartum psychotic depression occurs in one or two in 1,000 women. It involves symptoms like delusions, hallucinations and inappropriate response to or disinterest in one's child [5]. Perinatal depression may interfere with maternal role development and mother-infant bonding and may increase physical risk in mother and in the child alike [6]. This is especially pertinent, as the mother may be suicidal, and in this context, may also commit infanticide [1,2].

History of perinatal depression dates back to about 700BC when Hippocrates discussed depressive symptoms following birth. However, it was not until 1850 that it became recognized as a medical disorder [3]. During the 19th century when women experienced depression, many did not divulge their symptoms and those who did were often misdiagnosed as being "neurotic." Women who sought help for their symptoms were often subjected to a variety of unusual treatments. Symptoms may include sadness, low energy, changes in sleeping and eating patterns, and reduced desire for sex, crying episodes, anxiety, and irritability[4].

Currently, there are several public health efforts which are geared towards early detection and diagnoses of perinatal depression. Standard treatments such as interpersonal psychotherapy and more tailored bio-

psychosocial approach to treatments have been found effective although outright preventive efforts have been less successful [2,5,7–10]. Perinatal depression has been considered as the most important perinatal psychiatric disorder because of its high prevalence rate and with the attendant negative impact it has on the mother, child and family at large [2].

Definitions: Some important definitions are worthy of note.

- **Postnatal/Postpartum period**: The period beginning immediately after delivery and extending to the next six weeks[1]. It is the period during which the woman is expected to achieve maximum coping mechanism for the new-born and also for physiological return of her reproductive organs to the pre-pregnancy state.
- **Peripartum period:** The period that spans through the last few weeks of pregnancy, the time of labour and delivery and also extends to few days thereafter[2]. There is currently no strict time interval specified for peripartum period as many people believe it should strictly refer to the period between onset of labour and up to 24 hours after delivery.
- **Bio-psychosocial therapy:** A combination of biological, psychological and social approach to care. It is aimed to ensure a wholesome care for the patient[9].
- **Psychotherapy:** This is the therapeutic process of facilitating healing using non-pharmacological means – usually through a systematic form of talk therapy[9]. It is an established component of the Bio-Psycho-Social approach to holistic treatment.
- **Edinburgh Postnatal Depression Scale (EPDS):** An assessment tool (questionnaire) developed by the University of Edinburgh and useful in assisting primary care professionals to detect the presence, or otherwise, postnatal depression[26, 40].

EPIDEMIOLOGY

The prevalence of perinatal depression varies widely because of the non-uniformity of the methodological parameters used in research works such as differences in the study population, methods of diagnosis and time frame considered [1,2]. However, the prevalence of perinatal depression ranges from approximately 10% to 15%, but can be as high as 30% depending on the criteria used for diagnosis [5]. Systematic reviews had shown that about 10% of pregnant women and 13% of those who had ever given birth experience depression and anxiety at one time or the other [11,12]. Therefore, it has been described as the most common non-psychotic complication of childbearing affecting approximately one out of every seven to eight of women and as such represents a considerable peripartum mental health problem affecting women and their families [5]. In a meta-analysis of 59 studies that assessed symptoms after at least two weeks postpartum (to avoid confounding effects of *postpartum blues*) and which used a validated or standardized measure to assess depression, O'Hara and Swain reported an overall prevalence of 13% for perinatal depression[13]. This is a little lower than the prevalence rates obtained in various studies conducted in different parts of Nigeria [14–19].

Symptoms and signs of perinatal depression are generally similar to those associated with major depression episodes occurring at other times. These include depressed mood, anhedonia (inability to feel or experience pleasure), having little or no energy, abnormalities of sleeping pattern, difficulties bonding with baby, withdrawing from people around, suicidal ideation and infanticide tendencies.

Several studies, trials, reviews and meta-analyses have been done to determine the effect sizes of a number of putative risk factors for perinatal depression with baseline set at different levels although most commonly set as the antenatal period [2,11,13,20–30]. Overall, associated risk factors with large effect sizes include; past history suggestive of psychopathology, history of psychological disturbance during pregnancy, poor marital relationship with lack of, or inadequate measure of social support. Other identified factors included family history of depressive episodes, presence of recurrent life stressors as well as indications of low socio-economic status such as a significant financial loss in the preceding year and/or current severe financial difficulties [2,11,13,20–30].

DIAGNOSIS

Perinatal depression shares the DSM–V criteria for diagnosing major depressive disorders. Although the DSM–V specifies onset within 4weeks of birth clinicians and researchers generally agree that onset time can occur within the first year after birth [1–3].

Criteria for diagnosis of Major Depressive episode of peripartum onset

It is pertinent to note that a diagnosis is established with:

A. The presence of a minimum of five (5) of the following symptoms: depressed mood, markedly diminished interest or pleasure in activities, appetite disturbance, sleep disturbance, physical agitation or psychomotor retardation, fatigue, decreased energy, feelings of worthlessness or inappropriate

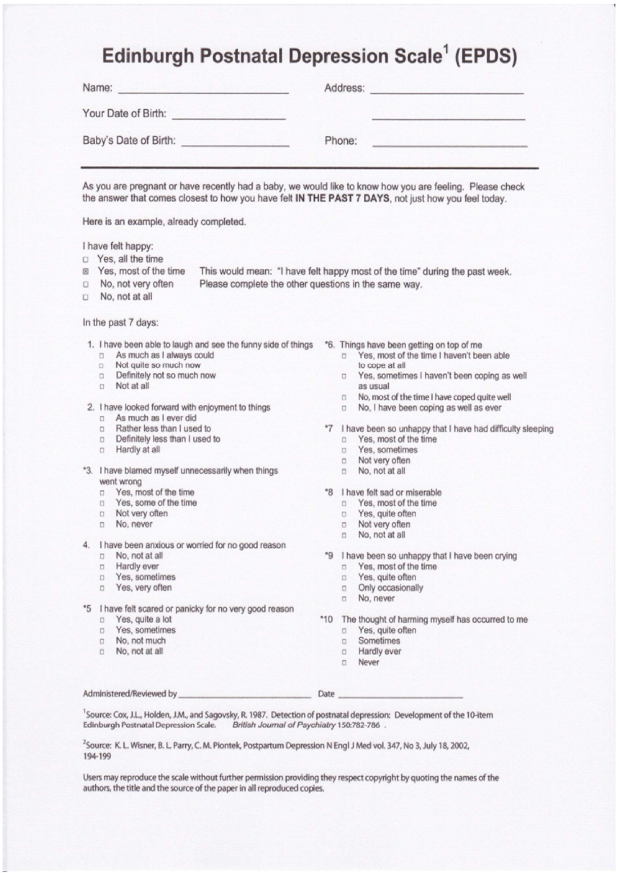
guilt, decreased concentration or inability to make decisions and recurrent thoughts of death or suicidal ideation among other things. Symptoms must be present most of the day, nearly every day, for upward of 2 weeks, must represent a change from previous functioning and must be causing significant distress or impairment [2,5,8–10,24,29]

B. The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.
C. The episode is not due to the effects of a substance or to a medical condition].
D. The occurrence is not better explained by schizoaffective disorder, schizophrenia, schizophreniform disorder, delusional disorder, or other specified and unspecified schizophrenia spectrum and other psychotic disorders.
E. There has never been a manic episode or a hypomanic episode.

SCREENING

Screening for postnatal mood disturbance can be difficult given the number of somatic symptoms typically associated with having a new baby and which are also symptoms of major depression such as sleep and appetite disturbance, diminished libido, and low energy [2,8–10,24,26,38,39]. While very severe perinatal depressions are easily detected, less severe presentations of depressive illnesses can be easily dismissed as normal or natural consequences of childbirth [26,40]. Unfortunately, many health care professionals rely on their clinical impression alone to determine whether a woman appears depressed, but several studies show that up to 50% of mothers with major depressions are missed by primary care physician when instruments are not used [2,9]. Depressed mood during pregnancy has been associated with poor attendance to antenatal clinic, substance misuse, low birth weight infants, and preterm delivery [29,31]. The hospital post-delivery assessment is often too early to make a diagnosis of perinatal depressions but often provide an opportunity to screen for its risk factors. However, the 6-week postnatal follow-up visit provides an optimal opportunity for screening, diagnosis and intervention either in treatment or prevention.

Several screening tools have been employed in the past but a very common example is the Edinburgh Postnatal Depression Scale, EPDS (Figure 1) [2,26,28]. At the clinic, the assessment tool, from which the woman identifies a significant number of symptoms, is given to her on arrival. Most screening tools can be quickly scored by nurses, medical assistants, or non-medical staff but the results should be reviewed with the patient by her medical provider. The scores are combined and used



Edinburgh Postnatal Depression Scale[1] (EPDS)

Name: _____ Address: _____

Your Date of Birth: _____ _____

Baby's Date of Birth: _____ Phone: _____

As you are pregnant or have recently had a baby, we would like to know how you are feeling. Please check the answer that comes closest to how you have felt **IN THE PAST 7 DAYS**, not just how you feel today.

Here is an example, already completed.

I have felt happy:
- ☐ Yes, all the time
- ☒ Yes, most of the time — This would mean: "I have felt happy most of the time" during the past week.
- ☐ No, not very often — Please complete the other questions in the same way.
- ☐ No, not at all

In the past 7 days:

1. I have been able to laugh and see the funny side of things
   - ☐ As much as I always could
   - ☐ Not quite so much now
   - ☐ Definitely not so much now
   - ☐ Not at all
2. I have looked forward with enjoyment to things
   - ☐ As much as I ever did
   - ☐ Rather less than I used to
   - ☐ Definitely less than I used to
   - ☐ Hardly at all

*3. I have blamed myself unnecessarily when things went wrong
   - ☐ Yes, most of the time
   - ☐ Yes, some of the time
   - ☐ Not very often
   - ☐ No, never
4. I have been anxious or worried for no good reason
   - ☐ No, not at all
   - ☐ Hardly ever
   - ☐ Yes, sometimes
   - ☐ Yes, very often

*5 I have felt scared or panicky for no very good reason
   - ☐ Yes, quite a lot
   - ☐ Yes, sometimes
   - ☐ No, not much
   - ☐ No, not at all

*6. Things have been getting on top of me
   - ☐ Yes, most of the time I haven't been able to cope at all
   - ☐ Yes, sometimes I haven't been coping as well as usual
   - ☐ No, most of the time I have coped quite well
   - ☐ No, I have been coping as well as ever

*7 I have been so unhappy that I have had difficulty sleeping
   - ☐ Yes, most of the time
   - ☐ Yes, sometimes
   - ☐ Not very often
   - ☐ No, not at all

*8 I have felt sad or miserable
   - ☐ Yes, most of the time
   - ☐ Yes, quite often
   - ☐ Not very often
   - ☐ No, not at all

*9 I have been so unhappy that I have been crying
   - ☐ Yes, most of the time
   - ☐ Yes, quite often
   - ☐ Only occasionally
   - ☐ No, never

*10 The thought of harming myself has occurred to me
   - ☐ Yes, quite often
   - ☐ Sometimes
   - ☐ Hardly ever
   - ☐ Never

Administered/Reviewed by _____ Date _____

[1]Source: Cox, J.L., Holden, J.M., and Sagovsky, R. 1987. Detection of postnatal depression: Development of the 10-item Edinburgh Postnatal Depression Scale. *British Journal of Psychiatry* 150:782-786 .

[2]Source: K. L. Wisner, B. L. Parry, C. M. Piontek, Postpartum Depression N Engl J Med vol. 347, No 3, July 18, 2002, 194-199

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Figure 1: The Edinburgh Postnatal depression scale

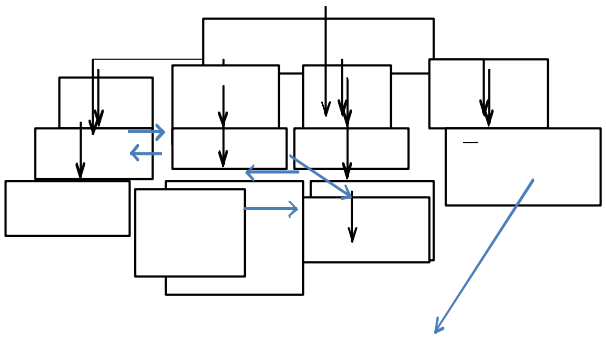

Figure 2: Algorithm for treating Postpartum Depression

in analysing the patient. An algorithm for treatment is presented in Figure 2.

TREATMENT MODALITIES

Treatment modality for perinatal depression is multidisciplinary in nature and involves nurses (public health and psychiatric nurses), medical social workers, clinical psychologist, psychiatrist and obstetricians. The potential relationship between perinatal depression,

maternal–infant interaction and child outcome is illustrated in figure 3. Perinatal depression impacts mother–infant interaction which in turn may contribute to a disturbed neurobiological development of the child. Improving both, maternal depressive symptoms and

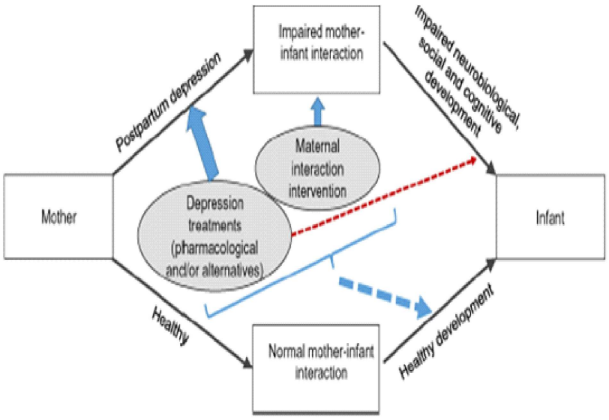

Figure 3: Potential relationship between Postratum Depression, Maternal-Infant Interaction and Child Outcome (5)

mother–infant interaction (**blue arrows**) may be important to enable a healthy development of the child (**blue dotted arrow**). However, some pharmacological treatment of the maternal depression may contribute to an adverse child development and outcome (**red dotted arrow**) [5]. Perinatal depression is best treated using the bio-psychosocial model of care and the prognosis of perinatal depression following early detection and prompt treatment is excellent.

Biological Method involves the use of pharmacotherapy. Medication therapy for perinatal depression is majorly focused on the utilization of antidepressants. The major types of antidepressant medication for perinatal depression include the selective serotonin reuptake inhibitors (SSRIs), serotonin/ norepinephrine/dopamine reuptake inhibitors (NSRIs), tricyclic antidepressants (TCAs) and monoamine oxidase inhibitors (MAOIs). About two-thirds of people will improve significantly on antidepressant although it may take between one to six weeks before noticing mood improvement.

Psychological Aspect of Managing Perinatal Depression involves the use of psychotherapy. In general, this therapy involves working with a trained therapist who engages the patient in an attempt to determine methods of solving the problems and coping with all forms of depression. Most often, the therapies take between weeks and months to complete. In addition, more intense counselling may be needed and also for a longer period when treating very severe forms of depression or other psychiatric symptoms[9,41].

Interpersonal Therapy (IPT): This helps to alleviate depressive symptoms and helps the person with perinatal depression develop more effective skills for coping with social and interpersonal relationships.

Cognitive Behavioural Therapy (CBT): This helps to alleviate depression and reduce the chances of its recurrence by helping the patient change his or her way of thinking.

Social Component of Treatment: This involves educational programs and support groups. Patients with perinatal depression have been found to benefit immensely from being educated about the abnormalities of their symptoms, its relationship to mental disorders and importance of treatment. Significant support from people who had had similar experience in the past is of additional great value for care.

CHALLENGES OF TREATMENT: Several challenges have been identified in the management of perinatal depression. The most common being the misconception attached to management of patients with mental health disorders especially in the immediate postpartum as well as the overall stigma attached to mental illnesses generally. Other challenges include late presentation to appropriate health care facility for specialist care which worsenes prognosis, inability to cope with side effects of antidepressants as well as the effect of the drugs on the babies. It is important to include discussion on the risks of antidepressant use during lactation in spite of the benefits of exclusive breastfeeding. Another important challenge of treatment has to do with the financial implication of care as people of low socioeconomic class may not be able to afford the complete dose required for treatment.

PREVENTION

In consonance with many pregnancy- related clinical conditions, prevention cuts through the different stages of the woman's childbirth experience. In other words, specific and/or peculiar steps for prevention of major depression episode of peripartum onset are taken before pregnancy, while pregnant, in labour and immediately after delivery.

- **Preconception:** Patients with background history of depression or premenstrual mood swings are sorted out and appropriately managed before getting pregnant.
- **During pregnancy:** Antenatal depression have been reported severally and associated factors

identified [20,21,27,30,31]. These factors should be screened for such that potential cases are identified early and intervention processes are instituted. Mild depression can be managed with support groups, counselling or other therapies. In other cases, antidepressants may be recommended - even during pregnancy.

- **Intrapartum:** Due intra-partum care in form of support in labour as well as adequate analgesia will contribute to significant reduction in the exposure of parturient to potential risk of labour-induced depressive episodes. Perinatal complications have been noted to increase the risk of perinatal depression[1,42].
- **Postpartum:** an early postpartum check-up to screen for symptoms and signs of depression could be preventive as it enables an early intervention. If there is a background history of depression, antidepressant or psychotherapy may be recommended prophylactically.

DISCUSSION

- Perinatal depressionusually begins within the first six days of delivery although several antepartum cases have been reported [2,27,29–31]. Maternal depression is a serious mental illness that not only concerns the affected mother, but also impacts the foetus and child [5]. One of the greatest risk factors for developing perinatal depression is ante-natal depression and/or depression prior to pregnancy [13,21]. The trajectory of depressive symptoms can continue or even worsen throughout the course of the pregnancy and postpartum period. Unfortunately, the new Diagnostic and Statistical Manual of Mental Disorders (DSM–V) does not consider that depressive symptoms can develop beyond 4 weeks postpartum [43]. Furthermore, it does not distinguish between a prenatal or postnatal onset of depression and collectively refers to the episodes as 'peripartum episodes' [43].
- Untreated or poorly treated perinatal depression can have adverse long-term effects on both the mother and child as diverse sequelae of such cases have been documented [6, 32–34]. For the mother, it can be the precursor of chronic recurrent depression while for the children; a mother's on-going depression can contribute to emotional, behavioural, cognitive and interpersonal problems in later life [33, 34]. Male children of mothers with perinatal depression may have a greater risk of antisocial disorders and impaired cognitive and motor development than their female counterparts [5].
- It is important to note that the fact that the mother is depressed alone hardly alters how well she cares for her baby [35–37]. Some mothers are able to respond positively, sensitively and consistently to their infants, despite their depressive symptoms [37]. Nonetheless, women experiencing perinatal depression have been found to display an impaired ability to care for their infant, often exhibiting behaviour such as being sad, withdrawn or intrusive [3,4,17,29].

CONCLUSION

Major depressive episode with peripartum onset, previously described as postpartum depression, is a significant mental health problem with a prevalence rate of between 10% and 20%. It affects the functioning of women, their infants and families. Attention should be directed to identify, refer, and help these women access an appropriate mental health evaluation and treatment. Standardized screening for perinatal depression is the best-practice procedure and should be incorporated into the routine clinical protocol of medical workers during pregnancy and all through the first year of childbirth. A bio-psycho-social model approach to treatment is the acceptable gold standard as psychotherapy and pharmacotherapy either singly or in combination have equally shown some degree of effectiveness. A detailed evaluation of risk-benefit implication of approach to care as it relates to both mother and child should be duly incorporated into the model of care.

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REMEMBERING HIPPOCRATES: THE FATHER OF MEDICINE

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ABSTRACT
Hippocrates is referred to as the "Father of Modern Medicine", he made numerous fundamental contributions to medicine, literarily setting the foundation for some enduring legacies in medicine, and such stand tall among other early legends of medicine like Galen.
One of his major contributions is the introduction of logic & scientific reasoning into the art of medical practice, with a clear departure of orthodox practice from superstitious and religious beliefs about health and diseases.
The history of medicine can never be written without Hippocrates. It is therefore, important that medical practitioners continue to remember his role and contributions even with the current advancements in medicine. This article is a brief overview and highlight of Hippocrates, x-raying his virtues as enshrined in the practice of modern day medicine, and how he contributed his quota in making modern medicine take a critical trajectory.

INTRODUCTION

Who was Hippocrates?
According to Claudius Galen, Hippocrates is an ideal medical professional, greatest philosopher and ethical model of the first 200 AD. (1-3) Hippocrates no doubt played an early prominent role in the evolving history of the art and science of medicine thus making him to be regarded as the father of orthodox medicine.

Hippocrates stands tall among other legends of medicine from the antiquity such as Claudius Galen- himself an ardent follower of Hippocrates, who is regarded as the "Founding father of experimental renal physiology".(3-5) Galen an outstanding physician, surgeon and philosopher, introduced experimental physiology and anatomy, and served as personal physician to the Roman emperors: Marcus Aurelius, Commodus, and Septus Severus as well as the official doctor for the gladiators.(6-9) Aristotle, Father of Western Philosophy, described Hippocrates as a "Great Physician" and Plato also made reference to him in his writings. (10)

Hippocrates was born in Astypalaia the ancient capital of the island of Kos or Cos, in archipelago of Dodecanese (Eastern limit of Cretes) in Ancient Greece in or around 460 BC.((1, 4, 11)(See Figure 1) He was born to a physician father-Heraclites and Praxithea; a Hercules-descendant mother. (12) Hippocrates was reported to shared the same bloodline with Aeculapius (the ancient Greco-Roman god of medicine) which the rod of Aesculapius; a symbol of medicine is traceable to. (11, 13-15) The era of his birth was described during classical period of Greece history as the Age of Pericles, an age associated with remarkable achievements in great literature, philosophy, drama, and art in history of Greece. (1, 16)

He had an exposure to the art of Medicine of that era which was shrouded in ignorance, superstition and mythology. (1, 17) His earliest education was at Kos and Asclepion (Sanctuaries of Healing) of Knidos (also Cnidus), Dorian Hexapolis in ancient Greece but currently in southwest part of modern Turkey. (18)

He may have received some early educational instructions from his father. (1, 19, 20) He was also taught Mathematics by Pythagoras, and Democritus - father of the atomic theory and a renowned physicist of his time as well as a scientific pillar of modern physics. (21, 22) His wealthy background gave him a good educational start. (12)

To have been an Aesclapian apprentice where he acquired his medical education, he must have been born as one, Hippocrates grandfather and father were member of Aesclapian set. The alternative way he could have been was through marriage. (23) His medical education was also from his father as an apprentice, so also Herodicus. (12) Herodicus, a native of Selymbria, also refer to as father of sport medicine was reputed to have been the first to use therapeutic exercise for the treatment of disease and maintenance of health. (24) Hippocrates was believed to have traveled extensively in search of knowledge to Greek mainland and possibly to Egypt and Libya. (12)

Around 436BC, based on a dream he had, Hippocrates began to travel in an area later called Thessaly, an island of Thasos, in Thrace, and in Asia Minor (corresponding to present day Turkey) treating people and documenting his observations. (1, 4) He also traveled widely in this pursuit and taught pupils for fees. (10)

Between 430-420BC, he created the famous medical school Hippocrates or Coan School based on objective observations and critical deductive reasoning rather than superstition and philosophic speculations (1, 25, 26). Furthermore, the teaching in the school interestingly did not focus on diagnosis rather on general patient care and prognosis. (19) Emphasis was on ensuring patient ingest appropriate diets and observe proper hygiene. (26)

A lot of ancient medical literatures were attributed to him during his 40 years of medical practice. (1) About 60 writings were attributed to him. (4) He was acknowledged to be a well admired physician and teacher during his time. (10) His reputation and myth around him soared a hundred years after his death, the Hellenistic age, following the Age of Pericles.

Hippocrates died on the road to Larissa in current Thessaly region and was buried in that town according to Soranus of Ephesus in 356 BC, at the age of 104. (21, 27) Ancient historical reference and biography about him were also written by Meno and Soranus. (10)

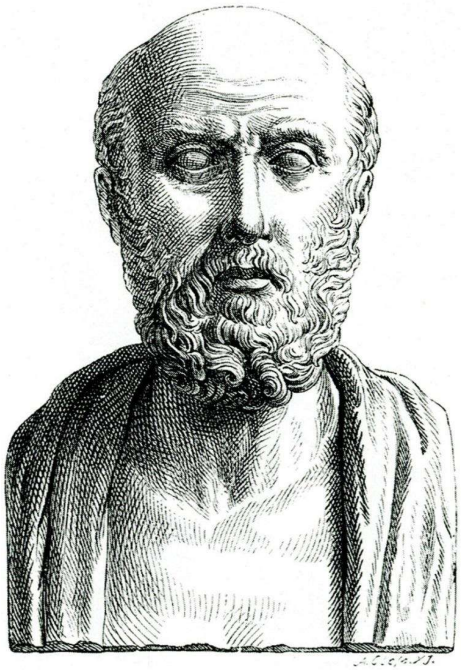

Figure 1: a Bust image of Hippocrates.
Source: Wiki Commons

General legacies

Hippocrates is noted to have advanced the course of medicine to one with a scientific basis as enunciated in one of his principle that "*medicine should stand on detailed observation, reason, and experience in order to establish diagnosis, prognosis, and treatment".*(1, 21) He refuted the prevailing superstitious healing teaching of his time. He pointed out that the cause of epilepsy is natural and traceable to problem in the brain, rather than a "miasma cast upon the soul of the afflicted by the goddess Hecte".(1, 25)

He further made reference to the physical examination of the patient as a rationale tool in the objective diagnosis of a problem, and this still plays an important role in managing patients in modern time. He encouraged empirical study with critical deductive reasoning in examining ill patients (21).

Some people have described his works as *"finest clinical description recorded in antiquity",* (28) because he charted the course of orthodox medicine from that filled with superstition, magic, religious views and opinions led by "priest-physician" to that of "scientific-physician". This is probably his most enduring legacy (21, 29). That is the landmark turn from practice filled with shaman filled philosophies and practice and attribution of diseases instead to malevolent nature to one filled with and guided by rational scientific thinking. (27) He believed a physician had to examine a patient, observe symptoms carefully, make diagnosis and finally treat the patient (27).

He and his followers were believed initially to be associated with the popular quote-"*Let not thy food be confused with thy medicine* "but have been found not to be so (30) However, he believed in the natural process of rest, good diet, fresh air and cleanliness. Hippocrates held the belief that the body must be treated as a whole and not just in series of parts. The Cnidian School of thought he met believed that the body is isolated body of parts and only treatment of an affected part affected by any disease is necessary (31). The school also depends on subjective assessment rather than the objective assessment (31).

His philosophies were most likely influenced by Pythagorean philosopher's theory- Empedocles that nature was influenced by elements such as fire, water, wind and earth which he believed was analogous to the humor in the body; yellow bile, black bile, phlegm

& blood and four elemental conditions; dry, cold, hot, & moist (27). These humors and conditions must be balance so as to be in good health, while imbalance causes disease. It is also believed the Hippocratic Oath may have been influenced by the Pythagorean philosophy of respect for teachers, justice, secrecy and solidarity with peers.

Specific legacies

The impacts of Hippocrates are felt in many specialties such as medicine, dentistry and medical ethics. A quote attributed to him, *"Sudden death is more common in those who are naturally fat than in the lean,"* speaks volumes on his understanding of the linkage between fatality and human body anthropometry (32, 33). Even though the problem of obesity is now pervasive and most likely less in his time, he acknowledged the linkage between increased adiposity and fatal outcome.

In gastroenterology and cardiology, Hippocrates described the techniques of abdominal and thoracic paracentesis, while he also made a good attempt at describing heart failure, rheumatic heart disease and Adam's Stoke syndrome which was far ahead of the expected level of understanding of his time (28)

He described epilepsy not as a sacred disease contrary to popular opinion in his time but that of hereditary causation, while in the neurosurgical field he introduced burr-hole for brain concussion (21)

Rare diseases such as Behcet was characterized enough as "*aphthous ulcerations*" "*defluxions about the genital parts*" "*watery ophthalmies of a chronic character* ". . . no much was added to the characterization of this disease till 1932 when Professor Hulusi Behcet of Istanbul described it in modern times. (34-36)

In dermatology, he was acclaimed to have first described cutaneous ulcers under the heading of herpes esthiomenos((37). He described infectious diseases like tetanus, brucellosis extensively and to an extent accurately((25). He made contributions to other infectious diseases like malaria, helminthiasis, and poliomyelitis. Furthermore, he noted the occurrence of epidemics, the effect of alcohol on immunity and relationship between food and diarrheal disease.

In the field of Dentistry, Hippocrates in conjunction with Aristotle wrote about the pattern of tooth eruption, some oral diseases like "tooth decay", gum disease and treatments such as tooth extraction with extraction forceps and the use of wires to immobilize mobile teeth and or fractured jaws. (38)

Generally, some of his disease descriptions were astonishingly clear.

The Oath

"It seems to me, Socrates that they swear the oath to pledge themselves to virtuous behavior..."

In conversation between Socrates and Critos (39), Hippocratic Oath as it was previously called featured predominantly in the history of orthodox medicine and many people would easily associate him with the Hippocratic oath (11, 40). The oath is now called Physician Oath; it is an enduring legacy of Hippocrates in Medical ethics and orthodox medicine generally (11, 40).

The central theme of the oath includes protection of patient's confidentiality (41). The oath in the previously "undiluted format" forbid giving poison, performing abortion and protects the profession. It appears to bind Physicians to virtue and to protect their patients(39) . The old version also prohibited surgery, a carry-over from the days surgery was regarded lower trade than the mainstream medical practice. Other sessions removed include the swear to Apollo the Healer, by Asclepius, by Hygieia, by Panacea, and by all the gods and goddesses. It appears to bound Physicians to virtue and meant to protect their patients(22).

It must be said however, that some people are of the opinion that the original Hippocratic oath did not originate from this legend, but from the Pythagorean sect of 4th Century BC(29). In Hippocratic times it may have been widely administered among Hellenistic medical practitioners more as a rite of passage(42). The first noted administration of the oath in modern times was in German medical school in 1508 with some slight increase in usage from 1804, with striking increase in 1928 onward.(43)(See Figure 2) However, the medical atrocities of World War II with attendant ethical issues propelled the oath into wider and greater use in the medical world as ethical guideline for practitioners (42). With time, various versions of it emerged which reflected evolving values and belief. The current version of the Physicians Oath (Declaration of Geneva) though strikingly different from the initial oath, with major modifications in 1948, 1968, 1983, 1994, 2005, 2006 and 2017 by the World Medical Assembly at meetings in various cities of the world (44)

The modern oath affirmed during entry to medical school, commencement exercise or medical induction ceremony is devoid of swear to gods, goddesses and curses, however, still enshrines patient confidentiality,

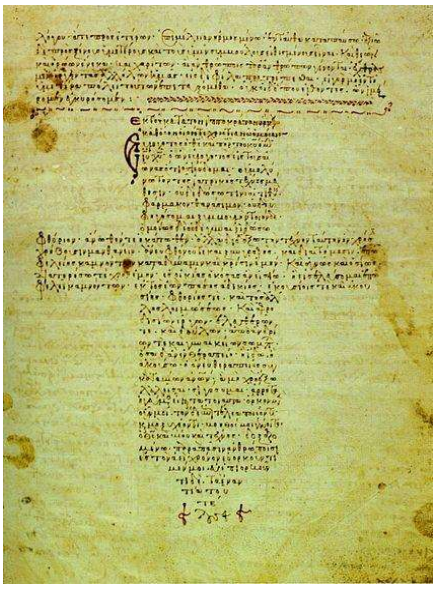

Figure 2: Twelfth-century Byzantine manuscript of the oath was written out in the form of a cross, relating it visually to Christian ideas.
Source: Wiki Commons

patient-centred care, respect for medical elders and good practices (29).

Legends around him

He is believed to enjoy writing under a big tree (*platanus orientalis Hippocraticus*), and with descendants still existing in Greece till date.(21) (See Figure 3)

He was believed to have saved Athens from a Plague which raged between 431-404 BC, on the invitation of Pericles, the then governor of the city state.(21,45) 75,000 to 100,000 people which was 25% of the Athens's population was said to have died in the plague.(45) Hippocrates advised that bodies of the afflicted be burnt and this abated the epidemic.(21)

Figure 3: *platanus orientalis Hippocraticus. platanus orientalis* is Old World Sycamore, or Oriental Plane
Source: Wiki Common

Corpus

A lot of books all in Ionic dialect which is any of the many Ancient Greek dialects, were ascribed to Hippocrates, this collection (about 60, although may be up to 70 materials) comprising of varieties of works: aphoristic digests, expositions, summaries, drafts, notes and rough amalgamations of material is called "Corpus Hippocraticum".(4, 28, 40)(See figure 4) There has since been several arguments about how many of these compilations were actually authored by him, it was however agreed that no individual could be responsible for all the works attributed to him. Even Galen attempted to differentiate between "true or false Hippocratic writings. (4, 25, 28, 37) Some however attributed them to the Hippocrates' School of Medicine on the Island of Kos.

Later medical school of thoughts attributed their inspiration to him. This include Empiricism and later Rationalism (10), so also, the later day philosopher and physician –Galen(10).

Books like "**Epidemics**" was the daily account of certain disease conditions, "**Air, water and places**" showed the importance of diet, lifestyle ,thereby linking environment and diseases and "**Nature of man**" which talks on the human constitution(6) and "**Aphorism**" which summed up his observation and deductions(26).

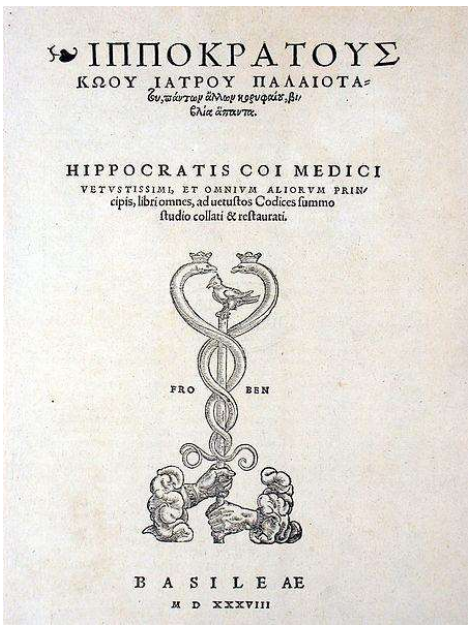

Figure 4: Title page of an edition of Hippocrates with the logo of the Froben publishing house
Source: Wiki Commons

Some of the selected books belonging to the Hippocrates corpus include: Prognostics, Regimen, Acute disease, Epidemics, Airs, Water and Places, Fractures, Wound in the hand, Disease and Internal affectation (29,46).

Procedures and processes

Hippocrates recommended a humeral bone reduction procedure(22). Other notable contribution to orthopedics include Hippocratic ladder and Hippocrates board to reduce displaced vertebrae(46). Some of the principles highlighted in the Hippocratic treatises "On Fractures" and "On Joints" are still useful presently(46). He developed trepanation for managing depressed cranial vault fractures, and even reported to have extracted salycasia (similar to aspirin) from plants (1, 2, 21). Synthetic aspirin (acetylsalicylic acid) was later created in 1899 by Felix Hoffman.

Lesson for modern practitioner

Hippocrates demonstrated that a physician should be a caregiver, a teacher, a keen observer of nature and a researcher. Even a medical practitioner who detests towing the academic line cannot run away from having to do routine clinical audit of practice which in itself is a form of research.

CONCLUSION

Hippocrates is no doubt a legend who towers above many other contributors to the art and science of medicine. In a long time to come, he would still be remembered, if for no other reason, that the practice of medicine is no more a shaman business but that which is based on sound scientific reasoning.

The summary of his achievement in three prongs are: unbundling medicine from superstitions but attributing diseases' aetiologies to environmental and lifestyle factors, organizing medicine to systematic discipline and elevating the prestige of the medical profession.

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SURGICAL SITE INFECTIONS: A REVIEW

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Woundinfections, surgical site infections, risk factors, antibiotic prophylaxis.

ABSTRACT
Surgical Site Infections (SSIs) is defined by the Centre for Disease Control and Prevention (CDC) as infections of surgical sites that occur within 30 days of an operation (within 1 year if implants are emplaced). SSIis classified into superficial incisional, deep incisional, and organ/space infections based on laboratory and clinical criteria. Attendant patient morbidity and mortality, and cost to health services are significant burdens posed by SSIs.The risk of developing SSI is related to the degree of microbial contamination of the operative site. Reported incidence of SSIs in Africa is markedly higher than in high-income countries and the reasons for this are not yet fully elucidated. Similarly, most available data from University College Hospital, Ibadan are mainly surveillance audits with the usual limitations of secondary data analysis. A systematic review of published literature on surgical site infections was conducted focusing on the epidemiology, clinical and economic burdens, pathogenesis, risk factors and preventive strategies for SSIs. It also highlights the current research gap on the topic in Ibadan. In conclusion, the article submits that in addition to preoperative, intraoperative and postoperative interventions (elimination or control of risk factors), a crucial aspect of surgical site infection prevention is surgical site infection surveillance.

INTRODUCTION

Hypertension is assuming a global epidemic dimension with majority occurring in low income and middle income countries(1). It is the commonest cardiovascular disease in Africans and there is a significant likelihood of old people developing hypertension as blood pressure rises with age(2). High blood pressure is therefore a serious threat to survival and well-being of this population and the burden is expected to rise as the life expectancy of the general population improve in addition to the associated complications such as stroke, heart failure, coronary heart disease, renal failure, Left ventricular hypertrophy (LVH), dementia, aortic dissection and retinal vasculopathy(1).

ISOLATED SYSTOLIC HYPERTENSION IN ELDERLY

Isolated systolic hypertension in elderly (ISHE) is systolic blood pressure of >160 mm Hg and a diastolic blood pressure of <90 mm Hg in people aged 60years and above(3). It must be noted there is no universal definition of elderly with lower limit varying with study protocols, national policies and other settings. The age cut-off, however, varies between 55 and 65 years.

ISHE is the commonest form of hypertension among this age group(4). Generally it is expected that 55% of adult population would be hypertensive by age of 60 years and 65% by age of 70years(5). Another report suggests that about 66% of population above 60-years have hypertension(6).

The prevalence of ISHE tends to be generally higher in blacks and women than whites and men(7). The tendency of elderly to develop systolic hypertension usually around 50- 60years and above is also associated with elevated pulse pressure, in addition to increased total peripheral resistance(8). They also have increased arterial wall thickness, increased left ventricular mass and left ventricular wall thickness while in the reverse they have decreased cardiac output, heart rate and diastolic blood pressure.

Data on ISHE in developed countries is well documented and it constitutes a significant proportion of such population. National data on such are lacking in many low and middle income countries (LMIC)(1),(9).

A Portuguese national study reported a prevalence of 20.3% from primary care setting and 35% from the community and also confirmed higher prevalence in elderly women(10).

Until recently, there was no clear consensus on whether to treat or not to treat ISHE. It was seen as a benign accompaniment of aging(11).

AETIOPATHOGENESIS AND PATHOPHYSIOLOGY

Aging related vessel changes is the most important aetiologic factor of ISHE while Paget's disease of the bone, anaemia, thyrotoxicosis and aortic regurgitation play lesser role(5).

Increasing age is associated with structural changes in vessel wall, which include increase in collagen to elastin ratio and functional changes with decrease in arterial wall compliance and central arterial stiffness(11-13).These lead to increase in large vessel rigidity, decrease in elasticity of large capacitance vessels, decrease in lumen-to wall ratio and overall cross-sectional area and decrease in arterial compliance ("windkessel function" of the large arteries)(5),(14). This appears to be the major mechanism of development of ISHE.

The development of ISHE that comes with stiffening of the large vessel especially the aorta leads to isolated and high systolic blood pressure but normal or lower diastolic pressure(8). There is also lipid and calcium accumulation in the vessel wall(12,14).

Pulse Pressure (PP) and pulse wave velocity (PWV) (an independent risk factor for cardiovascular events) are also increased(13). The elevated blood pressure can further impair endothelium-dependent vasodilation thereby further worsening the blood pressure(6).

The aging related declines in kidney function also play a role in the development of the hypertension. Other factors that have been identified in the pathophysiological process include obesity, decreased physical activity, anaemia and decreased baroreceptor function(5),(6).

The end result is increased risk of cardiovascular events since systolic blood pressure and associated wide pulse pressure is a significant predictor of cardiovascular events. (4, 15).

Pulse pressure increase in elderly aside from the structural changes in vessels is also due to the endothelial dysfunction which is associated with increase in the production of vasoconstrictors such as angiotensin II, endothelin and thromboxane while there is decreased release of vasodilators such as NO and bradykinin(13). In terms of gender differences, elderly hypertensive women usually have stiffer large arteries, greater central wave reflection, and higher pulse pressure (both carotid and brachial) than elderly men(16).

IMPLICATIONS

The Rotterdam elderly study examined the relationship between isolated systolic hypertension and carotid intima media thickness and found that carotid end-diastolic mean lumen diameter was significantly larger in this group of patients(3). Furthermore atherosclerotic plaques were more frequently seen among those with ISH compared to the control participants. These findings have significant implication on the risk of ischaemic stroke.

A meta-analysis involving 15, 693 elderly persons with ISH shows that antihypertensive therapy prevents cardiovascular events especially for those aged 70 years and above(17).

In a follow up study of renal function in treated and untreated older patients with isolated systolic hypertension calcium channel blocker use was associated with reduction of overt proteinuria(18).
Findings from the hypertension in the very elderly trial cognitive function assessment (HYVET-COG) study suggests that blood pressure treatment did not reduce the incidence of dementia(19).

GUIDELINES/RECOMMENDATIONS ON TREATMENT OF ISHE

Guidelines are available to guide physicians in managing of hypertension including ISHE and these include the hypertension guidelines of the National Institute for Health and Clinical Excellence(NICE), Eighth Joint National Committee (JNC 8), European Society of Hypertension/European Society of Cardiology (ESH-ESC), Canadian Hypertension Education Program (CHEP) and American Society of Hypertension/ International Society of Hypertension(ASH/ISH), International Society for the study of hypertension in Blacks (ISHIB), the African guideline, Nigerian Hypertension Society guideline and the South African guideline(20).

The guidelines highlighted the importance of SBP as an important cardiovascular risk factor compared to diastolic blood pressure. All the guidelines suggest that the treatment of ISHE prevents cardiovascular events(21). JNC 8 published in 2014 recommends the initiation of drug therapy in order to lower a systolic BP (SBP) of e"150 mmHg for those aged 60 years or older(22). **(See Table 1)**

In a minority view on JNC-8 objected to increasing the target SBP from 140 to 150 mm Hg in persons aged 60 years or older without diabetes mellitus (DM) or chronic kidney disease (CKD) as in the previous guideline(23). (See Table 1)

There is a unanimous agreement to treat to a target of systolic blood pressure (SBP) of 140mmHg. It is also necessary to consider and address co-morbidities such as diabetes mellitus, lipid abnormalities, obesity and

other lifestyle issues such as smoking that commonly or can occur in hypertension including ISH patients. The general knowledge of hypertension in blacks such as the requirement of more than one antihypertensive drugs to control blood pressure, variable response to such drugs and poor response to angiotensin-converting enzyme inhibitors, angiotensin receptor blockers, and beta-blockers should be acknowledged and applied(8). However, there is need for more studies of therapy among African black ISH elderly.

In individuals aged >=80years, American Society of Hypertension and the International Society of Hypertension (2014) recommends starting treatment at BP levels e"150/90 mmHg and treatment target should be <140/90 mm Hg except those with chronic kidney disease or diabetes(8).

European Society of Hypertension/European Society of Cardiology (ESH/ESC) recommends that the physically and mentally fit over 80year or very elderly with initial SBP of e"160mmHg to have target SBP reduction of 140-150mmHg. The systolic blood pressure of 140mmHg for the physically and mentally fit elderly(24). The decision for the frail ones are left to the managing physician. Elderly hypertensive (less than 80years) with SBP of e"160mmHg are strongly recommended to be reduced to 140-150mmHg while the mentally and physically fit may be considered reduced to less than 140mmHg if they tolerate.

National Institute for Health and Clinical Excellence (NICE) recommends target of less than 150/90mmHg in above 80-years(25). In addition, Calcium channel blockers are preferred first drugs for patients over 55 years and those of Afro-Caribbean origin although angiotensin converting enzyme inhibitors (ACEIs) may be offered and if not tolerated angiotensin II receptor blockers (ARB).

All the guidelines generally recommended treating ISHE **(See Table 1**). The target SBP, however, should be attained slowly. Lifestyle modification is also necessary and choice of medication depends on co-morbidities and overall cardiovascular risk(5). The addition of anti-lipid agents such as statins is beneficial(26).

The downside is the difficulty in controlling of ISHE particularly due to persistent focus on the DBP as a carryover from era when DBP is considered worse than SBP as a cardiovascular risk(27). Such treatments are not free from adverse effects which may include

Table 1: Summary of major guidelines on ISHE

Guidelines	Year of Publication	General recommendation on ISHE	Treatment Threshold	Goal of treatment	Recommended Drugs	Comments
Eighth Joint National Committee (JNC 8)	2014	Treat	=150mmHg (=60years)	<150mmHg	Calcium Channel Blockers, Diuretics or both	Extensively addressed ISHE
European Society of Hypertension-European Society of Cardiology (ESH-ESC)	2013	Treat	=160mmHg (=80years)	140-150mmHg, less than 140mmHg(Fit)	Calcium Channel Blockers, Diuretics	Less extensive on ISHE
National Institute for Health and Clinical Excellence (NICE) on hypertension	2011	Treat			Calcium Channel Blockers	Cut off age of elderly is 55years

dizziness, headache, rash, renal dysfunction and arrhythmias that can arise from antihypertensive therapy.(28)

The grey area

There is possibility of increased mortality with excessive lowering of diastolic pressure which comes with attempt to control ISH. Therefore, there is need to tow line of caution and ensure a balance in the lowering of systolic and diastolic blood pressure(4),(6). This adverse outcome has to do with decrease myocardial perfusion especially in those with coronary artery disease leading to myocardial infarction and death especially when the DBP is lowered to less than 70mmHg(11). Therefore, lowering DBP to less than 70mmHg is discouraged.

CONCLUSION

ISHE is a common clinical problem in this age group. Practice guidelines generally recommend treatment with antihypertensive depending on co-morbidities and overall cardiovascular risk. Lifestyle modification is necessary too in the management plan.

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Themed
"A Society for All Ages: Addressing the Needs and Improving the Wellbeing of the Elderly Population in Nigeria"

3rd lecture, Professor Olusegun Baiyewu's Lecture

Some of the things I would be saying are challenging. The previous speakers have spoken a lot about personal issues. I will be looking at these from a public health aspect. Let's see how we can change the society. Let's compare our society with other societies and we see where we are lacking. In October 2016, I was asked by the IPA to give a plenary session in San Francisco. I was really challenged by issues related to this and they are aware that we are lagging behind in Africa. They wanted me to put things together and see what are the problems. I have borrowed from that in treating this topic to see where are we, where should we be, where are others. I think this is my message this afternoon. I once asked a commissioner for health in one of the south-western state to see the possibility of healthcare for the elderly and his reply was that although, he agreed to the good idea, he was more concerned about maternal and child health. He was not an obstetrician like Prof. Omigbodun. This is part of the Ageism phenomenon.

The question is "Do we need to pay attention to the health of the elderly?"
I got this particular slide from WHO website about Nigeria and this was in 2013. It showed the proportion of the total death of all ages of both sexes in 2013. Careful examination will show that there were only about 24% of the deaths were from non-infective natural causes. I can understand why a health commissioner or minister of health would want to take care of 76% of death and pay attention to non-communicable illnesses. I think it's time we start paying attention to the 24%

A look at the demographic indices in Nigeria provides some explanation for that slide. Though unjustifiable, one can understand the position of the health commissioner. It's expected that he would pay more attention to maternal and child health. What's the true situation? I am going to show a picture where you will see that where there is impairment and disability, elderly people are as vulnerable as children suffering from measles, meningitis, malnutrition. In saner climes, what is done is to care for both groups. Why is that not being done in Nigeria? As a matter of fact, I will show that Nigeria cares very little about her children not to talk of the elderly. I got this headline from Punch in 2012 which ran "Finally! Succour comes to 2 octogenarian sisters abandoned by their children" Mr. Ajomale talked about abandonment and negligence. They were left in an old people's home somewhere in Isolo.

There is a myth in Africa that the elderly are revered therefore there is no need to have long term care for them since the family will take care of them. This is not quite correct. This influences the attitude of the government and policy-makers. This has influenced the non-availability of long term care facilities for the elderly in many African countries. While people become frail, disability manifests. Frailty is not often thought of as a component in management of the elderly even in the tertiary hospitals in Africa. It's left to be handled by the family. Many require public assistance through social welfare. Many elders that are disabled have their quality of life affected by lack of infrastructures e.g. elders who are disabled with chronic arthritis and are on wheelchair have no access to public buildings. They can't go to banks even churches occasionally. I had to challenge people in my church that people on wheelchair need easy access.

This is a slide about the phenomenon about the priorities of care from Ireland. There are important things we need to look into: ageism, giving information, technology and proper analysis. We need to talk about security and participation in the society.

This is somebody on a motorized wheelchair. This is one of the things we expect the elderly to use in old age. There must provision for such things for them to use it. This is the standard in some of these European countries. Why are we where we are? Let's look at the per capita income of a few countries. South Africa, the most civilized country in Africa, has the per capita income of 11,000 dollars; Nigeria was 2,900 a few years ago. I think it has even dropped

now since we have the negative growth of the economy. Per capita expenditure on health in 2013 in Nigeria was 104.97 dollars; per capita health expenditure per GDP was 6.7 dollars. In most western countries, health expenditure per GDP is between 10 and 12.5%

Why is this necessary? In 1989 or thereabout when we had the first CT scan, Professor Osuntokun spent about millions of naira on that. It was equal to about 1 million dollars then. I think, a few years later, during the time of Professor Ajayi or someone else, we needed to buy a second one. They spent a hundred million. The exchange rate then was a dollar to one hundred naira. They were using a million dollar to buy this thing meanwhile the naira equivalent has shot up. Sir, if you are going to buy one now, I am sure it will cost about 300 million if not even more. What is the value of the money we get in health? The value is dropping down every day. We need to buy things from the western world at their own price and we don't have enough money.

Illnesses like cancer, cardiovascular and cerebrovascular diseases, diabetes mellitus, arthritis, glaucoma are common in the elderly. Dementia, depression and anxiety disorders are also common. When out-of-pocket payments are required from the elderly, they faced continued risk of being financially handicapped. What are we saying here? When you pay out of pocket, you are on your own because you don't have enough money for what are necessary investigations. I have had cases of patient opting for discharge because they can't afford to pay for MRI or CT scan.

In Nigeria, out-of-pocket payment is the commonest method of payment. We all know that we have issues with payment. Pensions are not paid regularly. Even salaries of workers are not paid! In the United states, a good component of healthcare expenditure is towards the care of the elderly. In a study in US, instrumental activity of daily life and age-related limitations were used to classify patients above 70 years into good and poor status. Those in good status lived 14.3 years thereafter and spent 133,000 dollars per person till death. Those with poor lived for 11.6 years and spent 145,000 dollars per person for that period. Now, can we translate this into naira and kobo? We have people with impairments and at life expectancy at 70 years; can we translate this into naira and kobo? These are the things we need to look at carefully. I don't know how we are going to send this message to our legislators. The minster for health had his budget cut a few years ago for no reason. I don't know why.

Let's look at some issues…clinical issues. In the western world, there is a study, national health and examination study in the United States, they found out that about 47% of subjects had their blood pressure well controlled. Even in the United states, only 47% had their blood pressure well controlled! China and India showed lower figures. Between 1990 and 2008, age associated incidence of stroke showed 12.2% in the high-income countries but doubled in low-income countries. I am not surprised by the increase in number of people coming for the hypertension clinic. It doubled! Again, what are we doing right? Please note that even in the United states, controlling blood pressure is not easy, only 47% had well-controlled blood pressure but for those of us in the developing world, it's terrible.

In a review of population based studies, there is a relationship between gross domestic product, per capita income and the incidence of stroke. Are we talking of economy or health? I think both are interwoven. In poor countries, there is consistent increase in blood pressure at all levels. Apart from Ghana, stroke facilities increased while it was decreasing in western countries. I don't figures in Nigeria but I am it won't be too different. In a review over six years of untreated hypertension or inadequately treated hypertension in Ibadan here [Idikan study 2011], it was found that hypertension was related to the development of dementia. It is not rocket science to measure blood pressure and treat those who require treatment appropriately. Our leaders are not interested in this! They are not interested in having the Idikan people checked.

Let's look at the healthcare professionals! I brought this slide to show what is happening. WHO took a survey of the number of healthcare professionals in mental healthcare- psychiatrists, psychologists. You can see where the low-income and high-income countries are. We are always low in everything. That's another problem we need to handle. In the elderly , the most important issues are depression and dementia. Depression is incident in many clinical conditions. It can start early in life and can occur with old age. Dementia is age-related, restrictable but not curable. Total cost of dementia will reach a million dollars this year [2018]. That's the WHO estimate. If dementia were to be a nation, it will be the 18th largest economy in the world. Nigeria's GDP is about 500billion. Four million people with dementia live in Africa. About 46 million live all over the world which means Africa has about 10% of this condition. Inadequate care, inadequate access to health and social care contribute to this. I am using dementia as text case here. This is true for

virtually all conditions. That's global picture for dementia. In 2050, we expect to have 131.5 million people globally. Increase in developing countries is expected to be higher than that in the developed ones. 116% in developed countries but 264% increase in developing countries. After a lot of efforts, the G7 countries, the EU and the WHO documents are now with the federal government agencies for them to examine dementia as an illness that require public health attention. People in government still believe it is part of ageing. It is clear that many factors drive the inadequacies in the healthcare of adults in Nigeria and many other countries in Sub-Saharan Africa. These include economic issues, lack of awareness, lack of human capital, infrastructure, ageism and poor access to health. These have been mentioned by previous speakers.

The funding of mental healthcare depends on the funding of general health. We, psychiatrists, agree to this. In countries where there is good funding for general health, there is also good funding for mental health. In Africa, officials have better access to healthcare either locally or abroad. Countries, they go to, spend more money on health. Access to better health abroad is disincentive for these officials to improve healthcare system in our country. I can say this anywhere! I don't want to mention names. We have past presidents! Our present president spent how many days in Britain? The immediate past first lady of Nigeria spent how many days in Germany? A past president was chronically ill and was abroad for many days. Mandela never left South Africa till he died. Ronald Reagan never left United States of America till he died. Former British prime minister, Margaret Thatcher never left Britain until she died. Why do we see things differently? Why can't we have healthcare system that is good enough to take care of our presidents and their families? I think we need to change this attitude. The challenge is for all of us. We need to ask for change. Education, health and human development are related. Countries with good health programs depend less on commodity based economy and more on intellect based economy. That's why the economy is coming on. In Nigeria, we depend on oil from revenue is even small. There was an estimate by "Economy" magazine many years ago that when oil is sold for $100, Nigeria gets $15. We can't separate health from4 economic and human development. I think the earlier doctors see that and fighting this course, the better for all of us. I think it's proper to classify our leaders as neo-colonial masters for the reasons above. They are not interested in our health or even education because their children study abroad. A certain man, I won't mention his name, told us of his children, first class graduates of University of Cambridge and Harvard Massachusetts, who don't want to come home. Why would they come home? There is no first class society they can come to. It's true I know many of us including me have children abroad doing masters and PHD. People go and don't want to come back. How are we going to develop our country? This is affecting us all over including our health system. Our leaders, irrespective of their religious or political affiliation, have few interest in our health. We need to demand better healthcare especially if you are older than forty years. In Japan, there is system of insurance for disability in old age. You can pay towards that insurance. Our insurance system is archaic and not working well. We are not even trying to make them work well. I am suggesting this afternoon is that we should ask our government for a change. We need to change ourselves and ask government for a change. We need to demand for better healthcare.

To achieve this objective, citizens must be ready to pay tax and not depend on oil money. That is not a popular statement. I will Lagos state as an example. The state has the best healthcare delivery system in this country. Citizens of Lagos state pay tax. Their federal allocation accrued to the state is small to what they generate internally. Let's know that if we want facilities that can take care of presidents here in Nigeria, we will pay for it socially not individually. We need to start thinking of how to pay tax to make healthcare system good for everyone.

Our population has become a burden. Statistics has shown that we give birth to 14,000 children every day. I wonder if Prof. Omigbodun will agree with that figure. We are in trouble if we are that productive because we need to cater for them. We need to feed them! It will be helpful to control our population. Some people use population as a weapon of politics. They believe in more children more votes and easier access to power. I believe it's a fallacy! Financial support to families of people with chronic illnesses should be advised. In western countries, families of people with diseases, like Parkinson's disease, dementia, stroke, cancer and mental health conditions, are paid for taking care of these people. I agree that the best care is family care. People who have dementia may stop working so you need to pay them for what they are losing. It's possible to pay them in this country but everyone feels it is government business.

We shall benefit from training and research collaborations with centres in developed world. However, we must stop depending on our developed countries for healthcare delivery. Wit's a national embarrassment that our leaders travel

to these countries for healthcare. Charles Gaulle once said people should stop expecting other people to do for them what they can do for themselves. Nigerians should only expect others to do for them what they can't do for themselves. On Monday 11 march 2018, a television channel reported the visit of some health experts to the House of Representatives. The group included the WHO country representative. They informed the legislators that the country needs 36 billion dollars to buy vaccines in the next two years. Development partners are getting fatigued. Maybe we can channel #3million naira each senator gets as running cost monthly into that! If they would allow it! Must we always depend on Bill Gates, European Union to provide vaccination for our children. A good move is that to license May and Baker to produce vaccines in Nigeria. I think it is a good one and should be supported.

It's important that our people demand for the type of healthcare our leaders get abroad. There is no reason why the president, the minister of education should be flown abroad regularly for medical treatment. I am not preaching an impossible task. We need what I would call a "medical business". People come to my clinic to say they have gotten generic Indian drugs, I usually ask what's wrong with Nigerian manufacturers. They usually express their preference for foreign products. They say they are trying to avoid complications. Why is that necessary? I prefer made-in-Nigeria antibiotics to made-in-India. The reason is clear. If there is any problem, I can easily trace it to the Nigerian industries.

We have recorded success in controlling Ebola. We need to remember what Dr. Adadevoh did. It is possible for us to change things. I am happy we have a case in the medical world. We have the resources to make this change. I call on Nigerian medical association and the medical elders to take the lead and lead us right.
Life never stops teaching. Be sure you never stop learning. Thank you very much.

Journal Review by Dr. Femi Olowookere
Thank you very much! I would love to stand on the existing protocol because I know a lot of people are tired and our time is far spent. It's worth it.

This edition has looked at ageing and geriatric medicine which is a right step in the right direction. Looking and reading through the articles, I will summarize for the sake of brevity.

The geriatric giants, most of the things we have talked about in this symposium, have been looked into in this edition. One of note is that on "Ageing and Infectious disease". I must say that it's important that we look critically at the way we manage some of these conditions and the way they present to us. Most of these have been critically analysed and highlighted. Infectious disease remain a major morbidity and mortality. We can tell you that even from practice, these are the issues. The elderly are particularly vulnerable and at risk of acquiring it. This article has actually highlighted most of the risk factors and what makes them to be predisposed to it and also the impact. I must say that clinicians' approach to older persons with infectious disease must be with high index of suspicion. Reason being that there is atypical presentation. Most people tend to miss them and laboratory findings may not follow the expected patterns. We may not see marked leukocytosis if a patient is having infection as seen in middle aged or younger people. We take many things into consideration in their management. The article has hif=ghlighted that the care for elderly people is inter-disciplinary

Dr. Lawrence Adekunle Adebusoye's lecture: Health Needs and Challenges of the Elderly
Good morning everyone! Let me start by appreciating the chairman, **DOKITA** Editorial Board, Prof. Omigbodun, the CMD UCH and deputy board chairman of **DOKITA**, Prof. Alonge. I also want to thank our erudite professors, Prof. Olusegun Baiyewu and Prof. Kale. I want to thank all heads of department here , especially my beloved department of Family Medicine, Dr. Olusola Mosuro and all the consultants present.

I am here to present a topic titled "Health needs and challenges of the elderly people". By way of introduction, who are the elderly people? We have a problem in actually defining them- is it by biological ageing i.e. what has gone on in their system? Or by the number of years they have lived i.e. chronological but all over the world, we use the number of years a person has lived on earth. The first society to define who the elderly are was the friendly society in Britain. They said 50 years in an act in 1975 but because that time the life expectancy was very low, As medicine evolved and

people live longer, the cut-off age has to be reviewed and the WHO defined older people as people of 65 years and above whereas the United Nations defined those of us in sub-Saharan Africa and other less developed countries and said 60 years. The term "Elderly" is actually for people of 65 years and above while older person is used for people of 60 years and above.

Ageing is a process that steadily reduce physiological reserve resulting in diminished ability to compensate for toll of illness. As we age, our reserve diminishes, what we call constriction of homeostasis. Our ability to stand insults reduces with age but the reason why we do age, no one has been able to say. We have many theories; people have propounded a lot of theories but nobody has able to say truly this is the reason we age.

Old age is not a disease. You can see our elders' forum looking well but old age is associated with disease. That one is old does not invariably that you will have a disease or not. People have lived for so long without having a disease. Certain disease are associated with old age. The Editor-in-chief of **DOKITA** mentioned some geriatric giants. Impaired cognition, continence, iatrogenesis [very important because most often we intervene wrongly because of inadequate knowledge! Hence this kind of symposium is germane], instability and falls, immobility are some of the problems older people face.

By the way of demography, the 2006 census showed that 7 million are over above 60 years but we know we have 10 million older people in Nigeria. By 2050, the projection is that Nigeria will be the third most populous country in the world but you can do the mathematics with proportion of older people being around 10% multiplied by over 200 million. You can see that we are having an increasing number of older people in the population. The question is "are we prepared for them?"

It will get to a stage like those people in developed countries that we will not be treating communicable diseases as much, we would be treating non-communicable diseases because we will have a large number of older people in our communities. This is curve of functional capacity and age. At the age of 30, we have maximum functional capacity. In the animal kingdom, death is usually by predation but in human, we live long and start declining. After age 30, our physiological reserve start going down i.e. the organs-heart, brain, kidney start shutting down gradually and that's the reason we are supposed to target people around the age of 30 so that they can live well. We can stem the decline by instituting certain health programmes.

You can see at age 60, we can still do something about the decline. Instead of it nosediving into disability, we geriatricians come in to give health programmes so that the decline doesn't go down to disability threshold. The aim of care of the elderly, geriatrics is actually to improve functional ability. We want you to live till 100 and still do those you used to do when you were younger. When you see an older people, you are going to see three types- those who have aged successfully i.e. they have virtually no health problem and are living well. The second type is normative ageing because we know that certain disease are associated with ageing i.e. hypertension, diabetes, back or knee pain which are well controlled and living normally while the third one is frailty which is what we don't want to see. They are the older people that medical condition have become worse and have complications of medical conditions. Some of them cannot walk properly or control themselves or even recognize themselves!

Our job is to prevent those who have successfully aged from crossing to normative ageing, those with normative ageing from becoming frail. That's our aim. This is Gerio-olympics in which there is an Olympic competition for old people. Last month, a 90-year-old man broke world swimming record. One can live healthy. Gerio-olympics is very common in Canada. They even do pole-vaulting. This is the way we want you to be when you become very old
WHO defines health as state of physical, social, mental and, in 1995, added spiritual well-being and not merely absence of disease. For an older person, the health needs are physical, social, mental and spiritual. I have put medical, cognitive, affective, environmental, spiritual, economic and social support. I also put functional status. The aim of our care for them is to maintain and improve their functionality. These are the needs.

I will talk on the medical aspect. What are the goals? Maintenance of health in old age by high level of engagement and avoidance of disease. Early detection and appropriate treatment of disease are important because diseases are associated with old age. We have to detect these diseases early before hypertension would be so high enough to cause stroke or heart failure. The third one is maintenance of maximum independence consistent with irreversible diseases

and disability. We have to make sure that those with disabilities can still function. That a person has gotten doesn't mean that the person has become an invalid. We can still make that person function.The last but not the least is sympathetic care and support during terminal disease. We know that life will end one day so during end of life, which is a trying period, we have to give sympathetic care. We have to be sympathetic and at the same time give support to that individual and the family. I thank the CMD for also strengthening the palliative care. They have been doing wonderfully well. Professors Soyannwo and Amanor-Boadu have been doing wonderfully. Preventive care is the main aim. Even WHO is talking about preventive medicine i.e. before a disease occur, do something and don't allow its occurrence. The other one is therapeutic i.e. treatment of disease. The third one is rehabilitative i.e. the disease has caused a problem, how do we make the person functional after the disease. We all know that prevention is better than cure. That's what I am going to dwell on in this lecture.

What are the preventive measures? Immunoprophylaxis! It's unfortunate that when we talk of immunization schedule in Nigeria, what comes to mind is national programme on immunization. Who is the program for? For the children! There are immunization programme for the elderly people. They need to be immunized. The other one is chemoprophylaxis- there are certain drugs you need to be taking from time to time to keep you going. There are adjustments. I showed you a slide that even when there is a decline in functionality at 60, that decline will still not go down it's going down. Judicious use of medications, screening and avoidance of infection, vaccination are important. We can't say we don't know about the immunization for the elderly.

Recently they introduced pneumococcal vaccine; the commonest cause of death in the elderly is usually respiratory tract infection pneumonia. Ronald Reagan, Nelson Mandela, and Mohammed Ali all died of respiratory tract infections. That's the reason they don't play with it in developing countries. They give them pneumococcal vaccine. In Nigeria, we have pneumococcal vaccine. I was in a conference in Cape town, the manufacturers said they are supplying the vaccine for the children. I asked for the price, they said 7500. They said they give Nigerian government at the rate of 1500 but none for the elderly. The elderly are part of the responsibilities of the government. It's only one shot; they have one shot of the vaccine and that's all.

The other one is herpes zoster, tetanus toxoid every ten years. How much is tetanus toxoid? Less than #100 every 10 years. We must immunization schedule for the elderly people in Nigeria as we have for people in developed countries. Hepatitis B! A lot of our older people don't even know their hepatitis B status. Annual influenza vaccine, Flujab, is given to people in the developed countries but it's not majorly our problem in this part of the world.

Chemoprophylaxis! You will notice that we give some of our older people Aspirin. Some of you are taking Vasoprin. Am I right? 75mg daily! It's part of the things you need to take but this dosage varies. Some countries use 81mg; South Africa uses 150mg. It lightens the blood and allows the blood to flow, it prevents clots. Studies have shown that if you take Aspirin as an elderly person daily, of all causes of death you have 5% reduction in the risk of dying, 10% reduction in the risk of stroke and 15% reduction in the risk of having heart attack. It's very important. We have other medications like Clopidogrel for those who can't take Aspirin because of certain medical conditions. Although it has its own side effects, the benefits outweigh the risks. Calcium supplements should be given daily because as we grow old, the bones become brittle. My job is to allow my CMD not to work because I should make sure you don't fracture your bone so that he doesn't have any bone to mend. I have to make sure that your bones remain strong. The other ones are vitamin supplements but I will advise good food. I don't lay emphasis on vitamin supplement. You can get most of your vitamins and minerals from good nutrition.

Lifestyle modification! You need to exercise! Walking is the best exercise. It's the cheapest and the easiest. Good dietary habit; you need to eat good food, balanced diet. Weight control; at this point in an older person's life, the energy output is less than what it used to be when you are younger. If you keep on eating more than what you are expending, you are going to gain weight and there would be pain from osteoarthritis. For every 1kg increase in your weight, you are transmitting X6 of that force to your knees. Alcohol moderation and finally, smoking cessation. There is no study today that has shown any benefit for tobacco. There is no study that anybody has published that says tobacco is beneficial. Even people younger than 60, you should stop smoking immediately. 20% of passive smokers have lung problems. Excuse yourself if you are in a place where people are smoking. If you are passive smoker, you have some risks of having some diseases. Medication use; we recently concluded a study at the geriatric centre; we found out that medication misuse is very common among the elderly. Medications must be used. Some people forget to take medications probably out of dementia necessitating the need for care givers.

Screening; I have just listed some screening. We are seeing stroke coming into geriatric centre. It's becoming like an epidemic. Uncontrolled hypertension is a cause. We can prevent stroke from happening. What do we need? Constant checking of blood pressure! We have seen some older people presenting with stroke for the first time without even knowing they had hypertension. Please check your blood pressure every six months. Check your plasma glucose, lipids and other things. We are creating a package at the geriatric centre, "Medical check package". You will come to CTAGC for checkup. I will implore the management to help reduce the cost of this. Prevalence of hypertension is increasing, especially in the south western communities. At CTAGC, we got 45.6% of elderly people with hypertension. Screening for cancers require certain tests e.g. colonoscopy for cancer of lower intestine must be done at least once for anybody above the age of 50. I was discussing with the HOD of Radiology department and I was told they have machines that can detect it even without endoscopic probes. Mammography and pap smear for elderly women; PSA for men. PSA is equivocal. It's not necessary after 75 years except there are symptoms pointing to it. We do it routinely, especially for those with symptoms pointing to that.

Depression, dementia and delirium are mental health problems. The CMD wants us to work with the surgeons as postoperative delirium approaches 50% in elderly people. Commonest form is hypoactive; a normal person will just become hypoactive all of a sudden.

The social wellbeing, loneliness! Loneliness is very common. Elder abuse, which Mr. Ajomale is a champion of, he is going to talk to us about that. Spiritual wellbeing is also very important. WHO added spirituality in 1995. We did a study at the family medicine department on spirituality in medicine and we found something very interesting! I am not talking of religiosity. In Nigeria, 99.5% of us are religious but we are not spirituality. There is a difference between the two. Spirituality is connection with your God and religiosity is the way in which you do it through an institution. We found out that spiritual well-being improves the immunity It gives a feeling of well-being.

At this point of your life, you need to be closer to God. Look back and thank Him for what he has done for you. The 1999 constitution dwells on the fundamental rights. The section 14(XX), paragraph B provides that security and welfare of the people shall be the primary purpose of the government. Section 16(II), paragraph B stipulated suitable and adequate shelter, reasonable minimum living wage, old age care and pensions, and unemployment and sick benefits are provided for. Don't beg government for your pension. It's your right; it is in the constitution. That's why we are working on robust national policy on ageing and government is foot-dragging it. It's your right. It's is in the constitution that you must be cared for and paid your pension.

It's for you to know how to go about your right. Availability, affordability, accessibility and policies are the identified main challenges. Article 7.3 of minimum standards for the primary healthcare in Nigeria by the national healthcare development unit said that there must be a geriatric unit in every primary healthcare. That's a policy in the ministry of health. They need the equipment and infrastructure. The department of family medicine in Nigeria recently took the bull by the horn and trained two sections. We started three years ago, we have trained 44 doctors in the basic care for the elderly. They have gone to establish geriatric units in different family medicine centres. We have over 15 of them all over Nigeria. That's the contribution from UCH. We are taking it to Abuja. CTAGC is the only geriatric centre in Africa and in Nigeria.

Affordability! Most elderly people pay out of pocket. There is poverty which approaches 70% of the population. Retirees are exempted from NHIS which shouldn't be. CTAGC, through the benevolence of the CMD, introduced a social insurance welfare scheme for the elderly. They pay #18,000 and enjoy benefits up to #5,000.They can't even afford it.

The Chairman, Prof. T.O. Alonge's Address

With the kind permission of the chairman of the Board, my former provost, Prof. Omigbodun, I have been asked to stand on this side of the divide. I also want to welcome my teacher and one of my mentors, Prof.O. Baiyewu. I congratulate and welcome the director of the first geriatric centre in Africa, Dr. Lawrence Adebusoye and also the very strong advocate against elder abuse in Nigeria, Mr. Yinka Ajomale. I welcome the representative of the college of medicine, University of Ibadan and also my brother and friend, faculty adviser, Dr. Muda. Salami who I expected would have walked in here today with a huge cake following him but since he has refused to let everybody know, I

think the Editorial Board know that his birthday was just a few hours back. Therefore, we make a demand that he will come and celebrate with the **DOKITA** Editorial Board.

I welcome very warmly, Professor Falade, the director of IMRAT. I also welcome Dr. Femi Olowookere, Consultant Geriatrician at the centre. I welcome Dr. Mrs. Temitope Ilori and all my colleagues. Most importantly, I welcome the elders of the geriatric centre for their doggedness and finding time to come. I am grateful to God for the priviledge of being here. I am also grateful to God for my association with **DOKITA**. As a medical student, I didn't have the priviledge of joining any big club because I didn't have the financial resources to be a member of the Sigma club [you have to have suits, I didn't have any. You have to come from some class of family and I didn't belong to any of those]. The only board I belonged to by virtue of commitment was **DOKITA** because it was purely academic and also very educative.

I am glad to let you know that the first 2 publications in my entire life actually was in **DOKITA**. This began when I was a youth corper in Ogbonna. I reported a case of primary infertility secondary to endometritis- the woman had black menstrum and I gave her the appropriate antibiotics. The next time there was no bleeding, she became pregnant and 9 months after, the baby was born before I left NYSC.

The second publication was about a family with congenital talipe equinovarus- the grandma, mother and daughter and that was the first time as a 25-year-old that I am going to see such a case. For me, **DOKITA** has been the bedrock of what I would call sound foundational building for anybody, medical students who want to get involved in translational research.

The truth must be told! However, that while the whole world was concerned about the aging population, Nigeria was asleep until 2012 when by God's grace, I decided that I needed to have a geriatric centre and the reasons were clear. As deputy CMAC under the previous administration, I saw an increase in the number of elderly people in the clinics and I made it clear to the management then it would be nice for us to also take a cue while looking after the young ones, we should also look after the elderly but I didn't have the mandate of powers that be to put it into function. When I became the chief executive, it was one of the four projects embarked by the administration. Coincidentally, it was the first project of this administration that was functional courtesy of the contribution of Chief Tony Anenih.

Today, the CTAGC being the first in the whole of Africa, has attracted a lot of visitors and I am humbled the day I brought in a professor of geriatric medicine from Newcastle university, a white man and when he got to the centre, he looked around and didn't know when he voiced out his thoughts and said "we don't have this in England". If I had said it to people, they would have thought I was bluffing. He said "we don't have any of such set-ups in the United Kingdom"

The trainers of Dr. Adebusoye & Dr. Olowookere in South Africa who trained in geriatric medicine came over to Nigeria went through the centre and said "we don't have this South Africa". They only have the department not the full-fledged Centre. I am very proud of you, Dr. Adebusoye and your team. I am very proud of the elders' forum. I bring you greetings from Chief Tony Anenih. Chief Tony Anenih said to let you know he would like to be here before the end of the year to come and lay the foundation for a new building that will accommodate our visiting lecturers. We just bought two transport ambulances to the tune of 20 million naira and the ambulances are now available and I think sometime next week[Thursday], this time next week , they will be on their way with the transport ambulances and another vehicle for excursion tours to Olumo rock. For me, in 2030, the elderly population will go between 10-20% and if you imagine a country of 20 million people, you can then imagine how many of those people we are going to have around us. Yesterday, we went to see an elderly person in Lagos & the husband and wife and I spent the whole day trying to look after the m but what was shocking to me was when we were coming back, I was asking my driver "have you started preparing for your old age?" He said," do you have to prepare?" I was taken aback and the lesson is to let us know that when you are young, it is the time to prepare for your old age because with aging, there are so many challenges. I was just discussing with Prof. Omigbodun about our children. A lot of your children are now in America, Canada, Australia, Dubai, they will send you money but cannot show the affection required. That's why we need a place where you can meet with your mates, read newspaper together, play Opon Ayo together, play table tennis and just feel good again whether the children are home or not. Gone are the days when we are dependent on our children, they themselves are looking for more means of livelihood and it will be unfortunate for us to be making them care for

us until we go to the grave. They will do that to the best they can but we want to make sure that we provide for you those things that will make you happy. The policies of government are changing, a new law has been passed in the house of assembly courtesy of Dr. Emem Omokaro and her team and that's very good on the social aspect. I, also looking at the medical aspect. I hope that overtime; we might be able to convince the Nigerian population that you are not expected to live in a storey building with multiple steps when you are an old woman or man. It doesn't profit you. If you go to other climes in Europe and US, you have what you call retirement homes and have what you call a normal home. When you are 18, 19, 20 in England and you are very agile and active, you live in terrace houses and the terrace houses can be 4 floors. You can open your door and run upstairs. When you are about 35 or thereabout, you move from terrace to duplexes- maybe 2 of them by the time- by the time you are a rich man and you are comfortable enough, you move from all of those riches and you come to a very good bungalow that is very comfortable. It is to limit and minimize the risk of falls because in 1992, 1993, it was found out in England that when elderly people fall, 80% of them die within a year of the fall. We have attributed all of these to many factors- some to cardiac issues when they are on bed, they lose interest. In fact, they don't want to live anymore. A lot of things just add on to their lives and so on account of that, we don't want you to fall.

There are many things we want to use to predict the risk of falls and to try and attend to them. One of Dr. Adebusoye's team, Dr. Mrs. Temitope Farombi, is actually working on falls in the elderly. In the next couple of weeks, we are going to take all of you through the routine to find and predict those of you who have a risk of falling and then we can tell you what things to do. We also want to find out any parameter inside your body that is responsible, that can make you fall because once you fall and you have fractures then there is always a decline in your life expectancy. My friend's mother had a severe osteoporosis and I pleaded with her [my friend] that mummy don't fall. "Move all the curtains and equipment from the house" but she didn't listen and the children didn't understand and then she fell and of course, 2-3 weeks after surgery, she was gone.

When I came back from England, I walked straight to my mother-in-law's bedroom, open her bathroom, brought in a bricklayer and a plumber, removed her bathtub, threw it outside and made an ordinary flat. Today, she is 89 and I am glad that she hasn't had any major falls. Otherwise, I would have to be paying for burial rites. We want to keep you for as long as you want to, as long as you are strong and healthy, we are happy because the wisdom of the elderly is not comparable to what the young ones of today have.

I want to congratulate DOKITA Editorial Board members, of which by permission of the chairman of the board, I am also the deputy board chairman, for talking on what the whole world is actually talking about. You've done very well and I am very proud of you. The University College Hospital will be supporting you very strongly apart from the initial one in making sure that the copies of this journal are available on every ward in the hospital and also available in the libraries of all the schools so that people will begin to be conscious of what it is like to look after the elderly. I congratulate you today and wish us all the very best. Thank you and God bless you.

THE CHRONICLES OF A MEDICAL STUDENT

Daniel

We strive for more knowledge,
But we end up getting more puzzled.
Our peers say we have the edge,
But we know how long we have struggled.

Our nights are now as long as the giraffe's neck,
Because sleep is no longer our friend.
We hope the torpor doesnot give us a backward jerk,
Into the bottomless end.

We donot read when we dose,
But we dose when we read.
Because we feel it is a waste of time to use the water hose,
On most days, we are as clean as a dusty seed.

Our admirers tell us we would do well non-stop,
But these days, our grades do not agree.
And like a raindrop,
Our weights are on a falling spree.

And so, we live sleepless lives,
To advise patients to live lives full of rest and sleep.
At the apex of our frustration, amidst negative vibes,
We wish it was an easier life we picked.
Amidst the stress and hardships,
Our passion to save lives will eventually thrive.

We hope that our health continues to be at its prime,
Until that major day in our lives,
The day the coffin of our bedridden social lives will be finally laid to rest,
The day we sign the Hippocratic oath.
And then, our new test,
Would be to prescribe the appropriate antidote.

If your abode was our brain's thought centres,
You'd discover,
That right in our reading corners,
Many of us do not relish the power to spin webs or spit fire,
But the power, to be time benders.

BURIED IN THE SLUM

Gift Uzor (Prof Gee)

Holding unto 'hole-full' hope
Singing the song of the unsung
Weeping with widows who were never wedded
Who littered the streets
With bolstering bands of bastards
That give the street its colour
And mad mix of magic and mystery

Sitting on broken fences
Smoking sweet weed of the street
With those that weave the street's fabric
That give it its 'streetly serenity'
The vendors of your hope
And warning posts for your children

Sitting and whistling a song of solitude
As the crème de la crème
Pass pitiful glances at my friends
Who they deem doomed to die pitiably
They spit at their failure
Looters, all of them

They say the future is bright
But in truth it is full of blight
Tomorrow holds greater promise
But it never seems to surface
Whatever future we have
Is buried deeply in the slum

THINGS FALL APART

Gift Uzor (Prof Gee)

Things fall apart
The centre does not hold
A blooming gloom looms
Our buckets of values
Become baskets of waste
Nothing good thrives

Our society falls apart
Our people become beasts
The helpless become prey
Our leaders esteem sycophancy
Sending truth packing
As deceit reigns supreme

Our values fall apart
Taboos become norms
Doing good becomes odd
Decency descends down the dunghill
As our mothers murder modesty

Our nation falls apart
Our togetherness torn to pieces
A cluster of cleavages and cohesions
Detrimental to the dreams and desires
Of our own utopian making
Is all we can boast of.

Our tomorrow, our future; our youths
Are sunken deep in the valley of corruption
If the future we dream of is but bleakness
Then truly, things have fallen apart
What then can save us now?

ECHOES

BolanleAdeniran(Bee Ade)

A cloud doth weigh my mind
It fills the length and breadth of my innermost depth
Surrounds my thoughts and impedes on my emotions
It toys with all my intuitions
A dark cloud
It fills my heart, constitutes my mortal part.
It cuts me deep.
This pain feels more than that of a knife penetrating through my skin.

The world seems so cruel.
There's this emptiness in my soul.
I'm trying to be brave but the night keeps me from sleeping.
I do not know what I long for, but maybe I'm dreaming.
Just maybe I can escape from this nightmare.
I know there's something out there.
I know there's a remedy.

But what if there isn't?
What if I am not dreaming?
What if I am not sleeping?
What if this madness is real?
The thought of no remedy haunts me,
The walls are listening but not answering.
I hear voices mocking me.

I try to find comfort within.
I try to picture a future with the sun,
The sweet smell of happiness,
The dancing leaves and singing birds.
The laughter of the waves and giggling of the trees.
No dark clouds, just the cheerful sun.

I want to be as happy as the sun

Can someone hear me?
Hello?
They think I'm crazy, talking to myself.
But they put me to it, they brought me here.
They brought me to this place.
I don't remember how I got here.
But they brought me to this place.
*screaming *

BOUND BY STRANGE DESIRES

Gift Uzor (Prof Gee)

Her waist was encircled
In your arms
She laughed, mouth agape
As your fingers danced with delight
Atop her belly button
Your intrigue held her bound
Like a spell
But it was you who was under a spell.

You watched her undo her covering
And your eyes were fed full
Yet something in you
Stronger than you, wanted more!
So you plunged forward with desire
You felt her tenderness
And you couldn't stop the thoughts
Nor the actions that followed

The experience was ecstatic
Yet you felt empty afterwards
Adigun's description of the feeling
Of the imaginable experience
All turned out to be an oversell!
You pick up your clothes
Make for the door
But you're drawn back by her allure

Like a serpent, you glide your way
Next to her unsheathed body
You'd rather feel empty
One more time
Or two more
Or many more times.

GO AWAY

Gift Uzor (Prof Gee)

All I see is you
You linger and loiter
In the streets of my retention
What seek you still?
Whatever it is, take it and leave!
What?
You left me dry and empty
In the boulevard of misery
When you accepted his Rolex
In exchange for what we had
Or what I thought we had

Why can't I lock away
Every thought of you?
Why linger in my head?
What seek you still?
Go away, just leave!

This undying love that haunts me
Is like a hot chili on a naked tongue
Like a man tormented by dwarf demons,
I cry out in pain
Please! Get off my head!

TRAGIC MOMENTS

Morohunmubo Ibiyo

What a big stage!
What great excitement!
What unmatched dogged resolutions
But then, only some may last
As was from the beginning
Others may just die off
As soon as they kick off
Those dead from the beginning
May be revived even to the end
The Start of Preclinicals
Yet we see the end!

Scribbled in January 2013 when the 2011 intakes of medical, Dental and Physiotherapy students had their orientation into the Preclinical School of the College of Medicine at the Department of Anatomy Lecture Theatre, University of Ibadan, Ibadan.

THE SCOREBOARD

Morohunmubo Ibiyo

The sculptor's work?
The crafter's design?
Is this the amateur's best yet?
That very Scoreboard!

Notice! Notice!! Notice!!!
A look upon the dread a foretime
A desire for better
An aspiration for a difference
To define the self
And gain a resounding applause
Even if, the loudest

Notice! Notice!! Notice!!!
A look for all hope, not lost
A desire for just some more
An aspiration for some appraisal
To distinguish the self
And gain some applause
If not, totally laudable

Notice! Notice!! Notice!!!
A look and a downcast one
An emptiness ensues within
And disenchantment for futility's sake
The tale of battery and of pride robbed
Sitting out 'the limelight, yet hoping some might shine
However bleakly, upon the inexperienced artiste

Some motivated ones just keep moving
Some pull along but ultimately sit still
A few refuse help, for is there any use?
Oh! The tales of the Scoreboard

Notice! Notice!! Notice!!!
Alas! Though a seeker of attention – the Scoreboard
Is neither a sculptor nor a craftsman
But an awful amateur!
So shall I artfully get my act together
Until this art births a beauty to behold –
A medical maven

Scribbled after the release of Surgery II continuous assessment test on October 12, 2015 at Room D36, Alexander Brown Hall, University College Hospital, Ibadan.

PURSUIT OR PURSUE?

Morohunmubo Ibiyo

Running a race to the finish
Running towards the reward
Running away from failure
Running away with determination
Pursuit or pursue?

Study hard for the best of grades
Steady work for the blue ribbon
Running in a maze but away from failure (*laughs*)
With a desire to be beyond a nonentity!
Pursuit or pursue?

The games for the accolades
The training for consistency
Seeking to be far from being outworn
Doing just beyond complacency
Pursuit or pursue?

Digits are bruised for the coins
Joints wear and tear for the banks
Away from lack
To opulence?
Pursuit or pursue?

In pursuit or being pursued
To what end is this race?
I wonder

A.T.K.H.A.

Morohunmubo Ibiyo

One soul is parched
Two astray
Three cannot agree
Every fragment of the puzzle is similar
Yet different!

The jigsaw do not fit together
If only the last piece would fit
Then it would be a perfect board

One piece does not save the board
But one piece is part of the board
Examine within, express without

Create an atmosphere
With or without the last piece
We still have a game

Ability To Keep Hope Alive
Is the way of the game –
The game of life

WE CANNOT DESPAIR

Morohunmubo Ibiyo

A dreadful debate
On an unwelcomed event
Waiting tiredlessly but to happen

The disgusted suspension
And an unwavering anger
The loosing of self

Then a teardrop
And a cascade of emotions
A soul desiring to quit
Can we not despair?

For the dream cannot be dreaded
Because life seem not a happenstance
Flipped daily at ease

The resin of expectations
A hopeful hankering
Putting self in one piece

The gush of nature
In a cauldron of ecstasy
A soul leaping alive
Because we cannot despair

BEAUTY

Sola Adeyoose

Beauty is an endless maze
It comes in different depths
It comes in different layers
Like a mathematical matrix.

There is the beauty of the sea
Oceans of sandy shore
Waves of deep blue water.

There is the beauty of music
The lure of sweet sounds
That rekindle the soul.

Art is beautiful
Wondrous expression of nature
Succint depictions of life.

There is the beauty of a smile
It engenders affection
It uplifts the spirit.

Poetry is beautiful
Webs of lyrical metaphors
Weaved in rich innuendos.

There is the beauty of youth
A heart full of passion
A body filled with vigour
Like a soaring eagle.

Childhood is beautiful
No worries, No duties
Freedom like a roving bird.

There is the beauty of nobility
Royal blue blood
With exemplary mannerisms.

Love is beautiful
A legend of sacrifices
The most powerful human emotion.

There is the beauty of a full moon
When lovers gather to cuddle
In shadows of a starry sky.

There is the beauty of a maiden
Skin as smooth as velvet
Back as a luscious wine pitcher.
Beauty is fleeting
It wanes, it fades
In the boundless sea of time.

Beauty is an enigma
It enchants
It enslaves; it liberates.
Beauty is a beautiful riddle.

IF YOU ASK ME OF LOVE

Sola Adeyoose

Adunni,
Love is the melody of my song
Each time we meet at our tryst
Love,
Is the flow
The juice
From mother's breasts.

SEIZE THE DAY

Sola Adeyoose

How often we think
As young people
To start living
After achievements

We put life away
Until our dream job
We only start living
After that certificate

Under such dreams
Lies a faulty premise
Tomorrow's promise
And infinite time

Life will never be
A finished business
Stop the goose chase
Live while you can

Life is the journey
Not the reward
Tomorrow my friend
Is promised no one

ROAD OF THE FALLEN

Sola Adeyoose

Have you seen that land
Where honest toil
Yields rivulets of blood

Have you seen that night
Where blurry stars
Cover the skies

Have you seen that orchard
Where only sour grapes
Are watered to grow

Have you seen that path
Where dreams die
As soon as they grow

On that lonely road
There are no smiles
But fleeting glances.

IBADAN

Sola Adeyoose

I came to you with open fontanelles
Mother's lochia dribbling down my head
But you spared me none of your antics

*Ibadan mesiOgo
You rob me of my innocence

I no longer dance naked to your beats
Beats so twisted as to their essence
Be it joy; be it sorrow

**Ibadan omoajoro sun
You rob me of my innocence

Ibadan, you rain even in October
Yet a thousand duvets
find no thickness in you

+Ibadan omo a je igbinyoo
You rob me of my innocence

You've shown me the weight of ambition
You taught me to be afraid of love
To trust but with plenty caution

#Ibadan omo a mu ikunmeko
You rob me of my innocence

I have seen your two faces
How you manage a smile
But pull the cloak when I look away

##Ibadan omoagesinkole
You rob me of innocence

Notes:
** Ibadan the one who always knows the appropriate response but is sly enough not to say so*
*** Ibadan the one who eats oro fruit as a night cap in readiness for bed*
+ Ibadan the one who feasts on snails
 # Ibadan the one who takes pap with phlegm
Ibadan the one who rides horses to harvest the bounty of his theft

IF
Sola Adeyoose

You can cover the earth
And make its fullness your own
You have the time to plant
Whatever seed you will
Your destiny is to create yourself
Never excuse opportunity away
There is only so much chance we get
The true expression of strength
Lies in the graceful embrace of emotions
It matters in the end
If you were true to yourself
Fear is the only limit to man
Comfort, the darkest shield to his glory
Had I known, is not a line to live by

PROSES

MUSIC IS THE SCIENCE OF THE SOUL

Sola Adeyoose

The class was JSS 1. The school was Stella Maris College. It was Introduction to Music and our beautiful teacher had given us a number of definitions. Of the list of definitions, one was striking. It was simple, yet, with an unusual depth. It was - music is the science of the soul.

That definition, no doubt, could only have been born of a serene moment of serendipity exclusive to the author. Perhaps while enjoying the mesmerizing juice of music. It epitomizes superior thought. It tickles introspection. Yet, it has only 7 words. 7 the number of perfection?

There is a certain allure to music, that neither the sweetness of a new day's wine, nor the warmth of the succulent flesh of a maiden, can match. I do not remember the definition of Physics, I do not remember the definition of Biology, but you need not ask me, before I tell you music is the language of the soul.

It brings inspiration. It engenders reflection. It uplifts the spirit. It tickles the soul. It brings calm, it brings joy, it brings hope. In its tranquillity, thoughts are made whole, visions are formed, the pen assumes unimaginable power, and artists catch a glimpse of the future. In its rhythm, words change to poems like water turns to tea. Music is the chorus of a lover's affection. Music is the grease that makes the human body flexible.

Such is the power of music that it finds use in every endeavour. It is the elemental force of battle. It converts a poorly motivated, dispirited army; into a fierce, ferocious lion of war. It gives courage, it gives strength, it gives might. Music is the enduring nerve of valour.

If you say it but they will have none of it, if you write it but their glances will just not come to it, lace it with melody and watch as they hum to it. Music is the loud voice of the neglected. Music is the comforting succour of the troubled.Music is the flora, fauna, and firmament of the glorious dawn.

Music is the only magic powerful enough to break through the great granite barrier of time. Music is the crucible of experience without its pain. Music is the human companion through a solitary night. Music is the vehicle of remembrance; the collage of the forgotten. I do not remember the name of my teacher, but I remember her definition of music. May God, in his infinite mercy,continually bless those who have contributed
to the making of the man.

IF YOU ARE OR WERE A UNIVERSITY STUDENT, YOU MUST HAVE MET THESE SETS OF PEOPLE

Gift Uzor

Apart from being a place of study, the university is a place where you can network with and meet people from different cultures, creed and orientation. The variety of individuals is so rich, you would think you're experiencing a country. That's not entirely wrong as the university is a microcosm of the larger society. So here is a list of people you must have (or would) meet in a Nigerian university.

(1) The Debater

There is never peace or the tiniest form of tranquility in the company of the debater. I donot know how they do it, but they have a way of starting an argument from the most ridiculous of subjects. They would argue with anyone about anything until they feel they have won a point or their opposition concedes, either out of boredom or to succumb to their

undying argumentative energy! The debater is the guy who specializes in questioning your every proposition. This is the type that starts e-fights online.

(2) The Guy You Just Love To Hate
You cannot really point to a cogent reason as to why you do not like him. You just know you do not like him. Sometimes, you try to make yourself like him but despite all your efforts, you seem to be repulsed by an unseen force. If you know anyone like this, please refer him to the closest MFM branch; there must be a spiritual mask covering his face!

(3) The Clown
You will always laugh in the company of a clown. They have a way of making your day. Most times, you don't know if you're laughing because of their jokes or at their stupidity. Often than not, you get amused by their mere appearance! If you are howeverunfortunate, you might meet the one who combines the role of a clown with that of a retard. This one will annoy more than amaze you. These ones are known to ask useless questions and you always have a hard time explaining things to them.

(4) The Professional Chef
Sometimes, you'll think they might be studying culinary arts until you realize culinary arts is not available in the first and best University. They rarely use the Cafeteria. You will find them in the Kitchenettes almost all the time. And they donot just cook, they actually cook like they run a restaurant! Separate stew, separate vegetable sauce and even Amala or *Poundo*! And donot forget to add sizeable chunks of meat! The good thing about the chef is that you won't 'want' if you're close to him because he will be your… (lol)

(5) The Game Freaks
These ones can game for a living! You'll find them gaming till-day-break (T.D.B) while the jackos are studying from morning to night (M.T.N). Most times you find them in a group discussing the new features in the update of Assassins Creed. At other times you will find them at your faculty lounge busy with Make-up Artist or Candy Crush!

(6) The Jacko and the Efiwe
You must have called someone an *efiwe* of *Jacko.* This type of person is the one you see whenever you go to the reading room or when you visit Kenneth Dike Library. Whenever they have a nightmare, it is either a book is chasing them or their grandmother is tormenting them for *under-reading*! I had a roommate who always slept with a heavy textbook on his face – sometimes I wonder how he breathes; other times, I simply remove the book. I once said good morning to him and his reply was the definition of electrolysis. The manner with which they study would make you think they're aiming at 8 points. If you know anybody like that, please tell them they would not score more than a 7 point!

(7) The Special Case
The special case is the voice you hear at midnight in your hall of residence, shouting, *"Ye! Yeeee! Egba mi o, Yeeeee!"* (Distress call for help in Yoruba)They are the cocks crowing at 11:59pm and the dogs barking uncontrollably! The special case is that guy who asks you, "How was your night?" at 5pm! She is the clingy girl in your department that gives everybody the feeling you are dating! At first you might be tempted to think they're plagued or something of the sort, but with time, you will understand that they are just 'special'. You will find some at the block D of Zik Hall or at the C block of Indy.

(8) The Eternal Borrower
This one will ask for your toothpaste and even your toothbrush! When you see them wearing different shades of eye-shadow every day, do not think they have so many, they only borrow from different people! They would constantly borrow almost everything, from salt to *knorr chicken*; from wristwatch to necklace and even perfume! I was fortunate to meet one in my 100 level days. He smelt different every day. I admired his 'nature of variety' until I found out he had a perfume-borrowing-roaster!

(9) The Holier Than Thou
These ones would condemn you for pouring water but would readily use the restroom without flushing! They specialize in analyzing every of your actions, pointing out your 'sins' to you. Sometimes, *you will be like*, "*sheyna because of me them create you?"* Other times, you will just feel like hitting him hard and damning the consequences whatsoever!

(10) That Person You Just Love To Like

There is always that one person you like. You donot know if it is the looks that attract you or whether it is their great sense of humour. You just know you love them! He/she is that person you anticipate chatting with. The close friend of yours that always reserves a seat for you. The *humble* guy that walks you to your hall of residence almost every day. These ones are nice to a fault! He/she is anyone you dread losing!

HYPERTENSION: A TICKING BOMB WAITING TO EXPLODE

Omoya Yinka Simult

2nd Year preclinical student

About four months ago, my friend travelled home for semester break only to meet what was going to change her life forever. Her agile father, who had driven her to the bus stop where she picked a bus to Ibadan earlier this year, was not there to receive her- to hug and drive her home as usual. My friend knew something was amiss, but she could never have envisaged that she would find her father in a wheelchair, with a slurred speech and his face fallen to a side and unable to move his arm anymore. "Stroke" was what the doctors called it, but to her, the word sounded more like shattered hope.

When I think of this friend of mine and her beloved father, I am moved by the countless Nigerian families who share the same sad story. Hypertension is fast becoming the major non-communicable disease bedeviling adults in the country. Also known as "high blood pressure", it is a silent killer because it never announces its presence until it suddenly strikes. The implication of hypertension, of course, is not immediate death. It is a long-term condition that deteriorates over the years, and may manifest as stroke, chronic kidney disease, vision loss, coronary artery disease, heart failure, among others. Professor Isaac Adewole, Nigeria's Minister of Health, has affirmed that hypertension is the leading cause of cardiovascular disease in the country, stating that an average of 1 out of every 5 Nigerians is hypertensive and at risk of premature death. Thus, hypertension is a disease of public health concern.

For a proper understanding of hypertension, one should know what blood pressure means. Blood pressure is the force exerted by the blood against the walls of vessels, and the magnitude of this force depends on the cardiac output and the peripheral resistance of the blood vessels. Thus, a person is said to be hypertensive when their blood pressure is higher than 140/90 (mmHg). In other words, hypertension means the systolic reading (the pressure as the heart pumps blood around the body) is over 140 mmHg and/or the diastolic reading (as the heart relaxes and refills with blood) is over 90 mmHg. According to American Heart Association, a normal blood pressure should be 120/80 mmHg or less.

Generally, the increasing prevalence of hypertension is blamed on lifestyle and dietary factors. These include physical inactivity, poorly managed stress, alcohol use, tobacco use and consumption of products particularly high in sodium, usually from processed and fatty foods. For Nigerians, as noted by the Health Minister. There is widespread low consumption of proteins, fruits and vegetables, and an increasing patronage of fast food outlets by the population. There is also large promotion of sweetened products such as carbonated drinks, pastries, candies and other refined sugars, while excessive intake of salt is promoted by food additives like monosodium glutamate, common in delicacies such as suya, kilisi, isi-ewu, ngwo-ngwo, among others". These diets predispose Nigerians to obesity and high blood pressure.

However, it should be noted that blood pressure also increases steadily with age. Other risk factors include a family history of the disease and the presence of other conditions such as endocrine disorder, kidney disease and use of birth control pills. When other conditions, stated above, lead to high blood pressure, it is referred to as secondary hypertension.

My friend had always known her father to be a healthy man, or so she had thought, until he suddenly came down with stroke. In the same manner, many adults in Nigeria are ticking bombs waiting to explode. They have alarming blood pressure but they hardly ever know because it is not in the habit to go for regular medical checkup. But how does a seemingly ordinary figure like blood pressure give information about deadly conditions such as a lurking kidney problem, stroke or heart failure? It all begins with damage to the arteries. A healthy artery is flexible, strong and elastic. It has a smooth inner lining, which enables blood to flow freely, supplying vital organs and tissues with nutrients and oxygen. When one has high blood pressure, blood pushes too hard against the artery walls, and the force of this blood can damage the delicate inner lining of the walls. If this inner lining is damaged, fat and calcium can build up in the wall, forming a plaque. Plaques make the artery stiff (atherosclerosis), thereby reducing its elasticity. It might also narrow the artery. This narrowing would reduce the amount of blood that is flowing through the artery. Over time, the constant high pressure of blood moving through a weakened artery can cause a section of its wall to enlarge and form a bulge (aneurysm). An aneurysm can potentially rupture and cause life-threatening internal bleeding.

High blood pressure forces the heart to work harder than necessary in order to pump blood to the rest of the body. Over time, the strain on the heart causes the heart muscle to weaken and work less efficiently. This is the basis of heart attack and abnormal heartbeats. As for stroke, it occurs when a part of the brain no longer gets the blood and oxygen it needs, so that it begins to die. Stroke may be due to the rupture of a blood vessel or its blockage. Also, when a blood vessel to the kidney is damaged, it causes a kidney problem which makes it difficult for the kidney to perform its function of filtering fluid and waste from the blood.

There is an urgent need to create awareness about the causes and dangers of hypertension. The government and health institutions need to orient the populace using and make the necessary facilities available to carry out tests and manage health crises that may arise from high blood pressure. Nigerians must learn to go for regular medical checkups because a stitch in time can save nine. Sedentary lifestyles should be discouraged, and proper stress management should be encouraged. An adult should do moderate exercises of 30 minutes or more at least thrice a week, and intake of salt and additives, especially those that contain monosodium glutamate, should be reduced. As much as possible, people should consume more fruits, vegetables and whole grains. Nigerians should learn to watch their weights and mean it when they say so. Excessive alcohol and tobacco use have never particularly been great friends of the human body and one is the better without them.

My friend′s father may never regain full control of his senses but if the right steps are taken, we may yet be able to salvage many Nigerians who are walking about with alarming blood pressure, oblivious to the time bomb they carry. All hands must be on deck.

DEATH: CONSISTENT YET SURPRISING!

'Someone I know knows someone who is about to die. It is fascinating; death is. I mean, for as long as it has been around it still surprises people. It's something we'll never get used to - we humans, simply because somehow, we inundate ourselves with ignorance - living in our little bubbles, acting as though there's nothing out there that really matters, until death hops in our faces and gives us grandma's slaps. Death starts. Life stops. And the world keeps moving, barely pausing to acknowledge a momentary hesitation in its pulse.' - SeunOdukoya

Over the years, as I grew up, I had thought that death could only be associated with old people. Most obituary bulletins and flyers had wizened wrinkled old faces on them (no offence). Most dead people were old grandmothers and grandfathers, aged uncles and aunts with children, grandchildren and great grandchildren, and the captions on obituaries may read 'A celebration of life' or 'Sleep well mama/papa'.

It did not take so long for me to be cured of my illusion. It started when I lost an acquaintance in Junior School. Okay. It hurt but not that bad, I only knew her for a little while. Life did go on. It was not long after she died that her place was

allocated to someone else, her shoes filled by another person. She was just a young girl though; my heart and still goes out to her family. Some three years later, I lost a friend, this time a close one. I cannot tell you how it hurt, but it did. Another young person, too young to even be allowed to feel any kind of pain was snatched away from the land of the living. We mourned her loss, me and other friends. Not too long after, just about two years later, a friend of mine who was much closer died; another painful incident, yet another young person, full of potential and promise just taken away. One day, they are some parents' bundle of joy, another day they become dust; that is just the way of humanity. From dust were we made, to dust we will return.

Sometimes I just think that we should expect death. It is not just in our generation that death began. Death has been from time immemorial. In fact for there to be a new generation, the old generations must die. So it just seems that humanity should be acquainted with and ready for death; yet, death still takes us by surprise. I donot blame us one bit. Imagine a person with whom you have laughed, cried and shared ups or downs with, and it is with this person you made plans and finalized decisions. Imagine that one day, the world wakes up and you wake up with the world, but your friend lies lifeless and cold and cannot feel the warmth of the sun again. Not just for today, but forever. Take it from me, it hurts and not just for a little while. It hurts really bad and for a long while. And there is nothing we can do about it than to take it as it comes.

We cannot do anything about death, there is however, something we can do about this life. Live life like today was the last day you'd ever have. I know we have heard this a million times as it is one of the most overused and misused clichés of all time. Living life does not mean to be reckless as many people have assumed. Living life means living with the consciousness that tomorrow may not come. Live freely yet make sure that the things holding you back are only beneficial. I would be the first to tell you that freedom in the real sense of the word does not mean lack of restraint. It only means one is able to be free with common sense leading them. Do not take anything or anybody for granted as no one knows tomorrow. Who is to say I will be alive tomorrow, mind you, I am too young to die, but that is no guarantee that tomorrow's sun will meet me on this earth, hale and hearty. That is just how life is, somake the best of today. Do things that make you genuinely happy, not things that sap you of peace when it is over. Be a person of your own while not being a snob. Be a person that the world would miss when death finally comes for you (death is inevitable, it is the way of man). Be such a person that wherever you find yourself, others will give a good testimony about.

Finally, and most importantly, believe it or not, there is somewhere beyond this earth and all what we see. There is a Person who transcends time as we know it. While many of us may not acknowledge this, we know it deep within. And to this knowledge, we owe our rightliving and being found to be in line with the rights and wrongs of the universe.

THE BIENNIAL GSK-EMERITUS PROFESSOR O.O. AKINKUGBE NATIONAL INTER-MEDICAL SCHOOL QUIZ COMPETITION OF THE DOKITA EDITORIAL BOARD

The 9th edition of the above competition held between April and November 2017. The preliminaries, quarter finals and semi-finals, held from 12th-14th April, 2017 at the University College Hospital (UCH), Ibadan, Oyo state, Nigeria. Fifteen schools participated and are listed below:

1. College of Health Sciences, Ebonyi State University, Abakaliki, Ebonyi State
2. College of Medicine, University of Lagos, Idi Araba, Lagos State
3. College of Health Sciences, Obafemi Awolowo University, Ile Ife, Osun State
4. College of Medicine, University of Ibadan, Oyo State
5. College of Medicine, University of Ilorin, Kwara State
6. College of Medicine, Ambrose Alli University, Ekpoma, Edo State
7. College of Medicine, Lagos State University, Ikeja, Lagos State
8. Olabisi Onabanjo University, Ago Iwoye, Ogun State
9. College of Health Science, Madonna University, Elele, Rivers State
10. College of Medicine, University of Nigeria, Nsukka, Enugu State
11. College of Health Sciences, Nnamdi Azikiwe University, Nnewi, Anambra State
12. College of Medicine, Afe Babalola University, Ado-Ekiti, Ekiti State
13. College of Health Sciences, Ladoke Akintola University of Technology, Ogbomoso, Oyo State
14. College of Health Sciences, Babcock university, Ilishan-Remo, Ogun State
15. College of Health Sciences,Chukwuemeka Odumegwu Ojukwu University Uli, Anambra State.

The Third place, Finals and Closing Ceremony held on Saturday, 18th November, 2017 at the University College Hospital (UCH), Ibadan. Several dignitaries were present at the event, including the medical director of GlaxoSmithKline pharmaceuticals Nigeria Plc, Dr. O. Odunuga. After keenly contested matches, the following schools emerged winners:

- *First Position:* University of Ibadan, Ibadan, Oyo state.
- *Second Position:* Obafemi Awolowo University Ile-Ife, Osun state.
- *Third Position:* University of Lagos, Akoka, Lagos state.

This year the Board secured partnership for sponsorship of the competition with the GlaxoSmithKline (GSK) pharmaceuticals Nigeria Plc, as part of her commitment to promoting medical education in Nigeria. In line with this, the competition was renamed the 'Biennial GSK-Emeritus Professor O.O. Akinkugbe National Inter-medical School quiz competition'.

Watch out for the next edition in 2019.

ANNUAL GENERAL MEETING

This held on Saturday, August 27, 2016. Executives for the 2016/2017 Board year were elected as follows:

Miss Joy Oluwaniyi	-	*Editor-in-Chief*
Miss Morohunmubo Ibiyo	-	*Board Secretary and Publicity Editor*
Mr. Chidike Ezegwui	-	*News and Quiz Editor*
Mr. Uyiose Iyoke	-	*Business Manager and Financial Controller*
Miss Vivian Magboh	-	*Productions and Distributions Manager*

ADMISSIONS

The Editor-in-Chief, on behalf of the Board hereby congratulates the following medical students who were offered provisional admission into DOKITA Editorial Board:

December, 2016

1. Mr. James Dugeri
2. Mr. Othniel Ojo
3. Mr. Fidelis Enema
4. Ms. Ugochi Okoroafor
5. Ms. Adejumoke Abiodun

October, 2017

1. Ms. Mosopeoluwa Faramade
2. Ms. Irene Uluocha
3. Mr. Olaoluwa Adeyemo
4. Mr. Folajimi Adesanya
5. Ms. Millicent Maduka
6. Ms. Idowu Adegboye
7. Ms. Sandra Anazor
8. Ms. Omoniyi Oluwafunmilayo

The following however resigned from the Board:

1. Mr. Folajimi Adesanya
2. Ms. Ugochi Okoroafor

Compiled by:
Chidike Ezegwui
News & Quiz Editor 2016/2017
DOKITA Editorial Board

UIMSA NEWS

The 50th Executive Council, Senate and Congress of the University of Ibadan Medical Students' Association (UIMSA) were sworn in a memorable event on Saturday, July 17, 2016 at the Famewo Common Room, Alexander Brown Hall, University College Hospital, Ibadan, with the motto of the Executive tenure as *moving forward.* The newly inaugurated President, Mr. BAMIDURO ADEDOTUN, made his inaugural speech laying much emphasis on the need for all UIMSITES to continue to support the Executive Council, Senate and Congress towards the progress of the Association.

The list of the Sworn-in officers is as follows:

EXECUTIVE COUNCIL

Mr.Adedotun Bamiduro	President
Mr. Kolapo Olugboyega	Vice President
Mr. Olakorode Ojo	General Secretary
Mr. Jefferson Esebame	Asst. Gen. Secretary
Miss. Chidimma Ezeilo	Financial Secretary
Miss. Damilola Akanni	Treasurer
Miss. Jomiloju Ajiboye	Pub. Relations Officer
Mr. Daniel Onobun	Sports Secretary
Mr. Kingsley Ugoagwu	Special Duties Officer (Clinicals)
Mr. Boluwatife Aderohunmu	Special Duties Officer (Pre-Clinicals)

SENATE OFFICERS

Mr. Santus Unuovoraye	Senate Chairman
Mr. Mmadunbuchi Ozioko	Dep. Senate Chairman
Mr. Abdul'fawaz Oyebamiji	Senate Registrar
Miss. Oluwaseun Bello	Dep. Senate Registrar
Mr. Michael Akande	Senate Chief Whip

CONGRESS OFFICERS

Miss. MofeOluwa Lagunju	Congress Chancellor
Mr. Oghenelukome Jerry-Ogeme	Dep. Congress Chancellor
Miss. Morohunmubo Ibiyo	Congress Scribe

ACTIVITIES OF THE EXECUTIVE COUNCIL SINCE INCEEPTION

The following news about the Association is dated from the inception of this tenure in July, 2016 and January, 2017.

COURTESY VISITS

The Executive Council paid courtesy visits to Emeritus Prof. O.O. Akinkugbe, our distinguished Patron. Dr. Kayode Obembe was also visited. We were warmly received by them. These were done in line with the traditions and ideals of the Association. It was an avenue to appreciate their various efforts which the Association enjoys at all times and also to intimate them on the plans and ideas of the new tenure. They all promised to continue to support the Association. More so, we paid courtesy visits to the Deputy Governor of Oyo State, the Speaker, House of Assembly Oyo State and the Honourable Commissioner for Health, Oyo State. They all promised to support the Association in their capacities.

The Executive Council also paid a courtesy visit to the Orangun of Oke-Ila, Oba Adedokun Abolarinwa on the 18th of September, 2016. The Executive Council also attended the 87th edition of the Annual Reunion Programme of the Government College, Ibadan being invited by one of our one of our Honourary Members, Engineer Femi Babalola on the 21st of October, 2016.

CONGRATULATORY MESSAGES

The Executive Council sent out congratulatory message to Prof. E.O. Olapade-Olaopa as he became the new Provost of the College of Medicine, University of Ibadan. He sent us a reply wherein he pledged his continued support for the Association.

The Executive Council also sent Welfare message and provided Examination Welfare package to the members of the 2012 Class for their MB;BS Part IV Final Examination in keeping with our great tradition of striving for Excellence in all that we do. The members of the Class promised to support the Association as they were about to draw the curtain as Medical Students.

More so, we provided provided Examination Welfare package to the members of 2016 Class for their MB;BS Part I and the 2013 Class for their MB;BS Part III and also to the members of the 2014 Class for their MB;BS Part II. Members of these Classes were grateful and promised their continued support for the Association.

CELEBRATION OF INTERNATIONAL DAYS

Since the inception of this tenure, the Association has marked the following International Days;

1. World Heart Day on the September 29, 2016.
2. World Sight Day on the October 13, 2016 in partnership with FAMSA Headquarters Board, the Societies of Ophthalmologists and Optometrists of Oyo State and Ophthalmic Nurses of Oyo State in partnership with Lions Club International District 404B1 and the department of Ophthalmology, College of Medicine, University of Ibadan.
3. World Breast Cancer awareness Month in 2016 in the Month of October in partnership with the FAMSA Headquarters Board and the Students' Union, University of Ibadan.

4. World AIDS Day on the December 1, 2016 in partnership with Oyo State Action Committee on HIV/ AIDS, AIDS Prevention Initiative in Nigeria.

COMMUNITY HEALTH AWARENESS PROGRAMS (CHAPs)

Since inception of the tenure, the Association has staged Community Health Awareness campaign to the following where Medical checks were done for the people;

1. Independence Hall, University of Ibadan.
2. Queen Elizabeth Hall, University of Ibadan.
3. Mellanby Hall, University of Ibadan
4. Students' Union Health Day.
5. Bello hall, University of Ibadan
6. The Federal Co-operative College, Eleyele, Ibadan.

ACTIVITIES WITH OTHER MEDICAL STUDENTS' ASSOCIATIONS

1. First inter-Medical School Sports Competition against Babcock University Medical Students' Association held in Babcock on the 3rd of October, 2016. UIMSA won the competition by 4 points to 3.
2. UIMSA had 8 Delegates to the NiMSA South-West Convention hosted by the Unilorin Medical Students' Association between August 17-22, 2016.
3. The Association was represented by two Delegates to the NiMSA 2016 General Assembly hosted by the University of Zaria Medical Students' Association between November 9-13, 2016.

WELCOME PROGRAMMES/ORIENTATION FOR MEMEBERS

1. Frehers welcome and orientation for the 100L Students was held on the 10th of September, 2016
2. Orientation for the 300L Students into Clinical School was held in the third week in September for the different groups in Medicine 1 and Surgery 1.
3. Another orientation programme was held for the 100L Students on the 9th of Dcember, 2016 after their second Semester Examinations to prepare them for 200L while enjoying their break at home.

QUIZ COMPETITIONS

The University of Ibadan Medical Students' Association Quiz Team contested at the Association of Medical Students of the University of Lagos (AMSUL) intercollegiate Quiz competition which was part of their annual Health Week. UIMSA Quiz Team came third.

UPCOMING EVENTS

1. The 17th edition of the Late Dr. V.O. Awosika Memorial Symposium and the first Late Dr. V.O. Awosika Memorial Inter-Secondary Schools Quiz Competition.
2. The first edition of UIMSA Press Conference.
3. Provost Games
4. Second Inter-Medical Schools Sports Competition against the Obafemi Awolowo University Medical Students' Association to be hosted by UIMSA.
5. Distinguished Alumni Guest Lecture.
6. Publishing of the Ibadan Medscion Magazine.
7. Health Week and the 57th Anniversary.

CONCLUSION

On behalf of all members of the Executive Council, the Senate and the Congress, we appreciate all UIMSITES for their continuing support for the progress of the Association. We look forward to more of this as we together *move* our dear Association *forward.*

Signed:
OJO, Olakorode Jacob
UIMSA General Secretary, 2015/2016 Session

BAMIDURO, Adedotun Daniel
UIMSA President, 2015/2016 Session

COLLEGE NEWS

1. APPOINTMENTS

The following appointments have been made:

a. Department of Child Oral Health

Dr. Olubunmi O. Bankole - Acting Head, with retrospective effect from 12 January, 2017 till 31 July, 2017 and thereafter for a period of two years with effect from 01 August, 2017 till 31 July, 2019.

b. Alexander Brown Hall

Dr. Adesola C. Odole - Assistant Warden, for a period of two years with effect from 23 February, 2017.

Dr. T.A.O. Oluwasola - Assistant Warden, for a period of two years with effect from 23 February, 2017.

c. Department of Human Nutrition

Dr. O.T. Adepoju - Acting Head, for a period of one year with effect from 01 August, 2017.

d. Department of Haematology

Dr. J. A. Olaniyi - Head, with effect from 01 August, 2017 for a period of one year

e. Department of Medical Microbiology and Parasitology Dr. A. O. Kehinde - Acting Head, till 31 July, 2018.

f. Department of Pathology Dr. G. O. Ogun - Acting Head, till 31 July, 2018.

2. PROMOTION

The following promotions have been approved:

S/No	Name	Department	Grade Before Promotion	Grade Upon Promotion	Effective Date of Promotion
1	Dr Atinuke M. Agunloye	Radiology	Senior Lecturer	Reader	1 October, 2013
2	Dr B.J. Brown	Paediatrics	Senior Lecturer	Reader	1 October, 2013
	Dr Prisca O. Adejumo	Nursing	Senior Lecturer	Professor	1 October, 2014
3	Dr M.A. Gbadegesin	Biochemistry	Senior Lecturer	Reader	1 October, 2014
4	Dr V.I. Akinmoladun	Oral & Maxillo Surgery	Senior Lecturer	Reader	1 October, 2014
5	Dr. Aderonke O. Akinpelu	Physiotherapy	Reader	Professor	1October, 2011
6.	Dr. D.O. Irabor	Surgery	Senior Lecturer	Reader	1 October, 2011
7.	Dr. F.A. Okanlawon	Nursing	Senior Lecturer	Reader	1 October, 2012
8	Dr. K. O. Osungbade	Health Policy & Management	Senior Lecturer	Professor	1 October, 2014
9	Dr. A.E. Orimadegun	Inst. of Child Health	Senior Research Fellow	Reader	1 October, 2014
10	Dr. B. M. Kolude	Oral Pathology	Senior Lecturer	Reader	1 October, 2015

3. LECTURES

a. Professor S. I. Omokhodion Paediatrics Clinical Sciences "Of Auricles and Ventricles: The Squeeze, The Ease and the Hues – Surmounting the Odds" 08 June, 2017

b. Professor O. B. Shittu Surgery Clinical Sciences "Once Upon A Rupture and a Plumber: Anecdote on Reconstruction of the Urinary Tract" 19th October, 2017
c. Professor Millicent O. Obajimi Radiology Clinical Sciences "Looking through the Cross-sectional Image: The Evolving Diagnostic Window of the Future" 26th October, 2017

4. COURTESY VISIT

The Ibadan College of Medicine Alumni Association (ICOMAA) Class of '82, University of Ibadan, paid a courtesy call on the Vice-Chancellor, Prof. A.I. Olayinka, FAS, ably represented by the Dean of Students, Prof. A.T.P. Ajuwape on Friday, 27 October, 2017 at the Senate Chamber.

5. OBITUARY

This is to announce the transition to glory of the following persons;

a. Mr. Williams O. Agbebi, a Principal Technical Officer II (Multimedia Production) /Coordinator, Biomedical Communication Centre, College of Medicine, University of Ibadan. The sad event took place on Friday 03 March, 2017.
b. Professor Enitan Abisogun Bababunmi, a retired staff of the Department of Biochemistry, Faculty of Basic Medical Sciences, College of Medicine. The sad event occurred on Monday 29 May, 2017.
c. Professor Babatunde Osotimehin, OON, former Head, Department of Chemical Pathology, and former Provost of the College of Medicine. The sad event occurred on 05 June, 2017.

LIST OF GRADUANDS

MB;BS PART IV (FINAL) DEGREE EXAMINATION

OCTOBER 2017 GRADUATING SET

1. Abdulrasheed, HabeebAdedayo
2. Adamu, Danladi Philip
3. Adaramola, Oluwakemi Esther
4. Adedapo, IfeoluwanimiAyodeji
5. Adediran, HabeebAdedunmola
6. Adegeye, YewandeAbimbola
7. Adegoke, Daniel Olasunkanmi
8. Adeleye, AdelowoOluwatobiloba
9. Adeniji, Emmanuel Oluwatobi
10. Adenmosun, OmobolanleIyabode
11. Adeogun, AdeolaAyodele
12. Adeyemi, OluwafunmiOluwaseun
13. Agbafor, Blessing Ngozi
14. Aimiosior, Mary Obehioye
15. Ajidahun, Olusina Michael
16. Ajiga, Agama Sunday
17. Akande, AbassAyodeji
18. AkinladeAkinkunmiOlusola
19. Akinmade, KolawolePelumi
20. Allanana, Esla Joshua
21. Amao, AbdulazeezOyindamola
22. Anaukwu, OluchukwuMarylynda
23. Anona, Kenechukwu Priscilla
24. Anyanwu, EzinneIhuoma
25. Anyiam, IjeomaChinenye
26. Apantaku, Temiloluwa Precious
27. Arije, DoyinsolaMotunrayo
28. Arokoyo, OlorunlekeMisheal
29. Ashefor, Olivia Ilashe
30. Asinobi, OluwatoyinOlachi
31. Assenyi, Sarah Sunday
32. Ayantayo, TemitayoOluwabamise
33. Ayorinde, Abigail Damilola
34. Babarinde, Festus Oluseye
35. Bamiduro, Adedotun Daniel
36. Bamigboye, Jeremiah Oluwatodinmu
37. Buremoh, Ayotunde Isaac
38. Egboja, UdanyiAkwuma
39. Eigbe, Emmanuel Ekhomu
40. Elesho, Inioluwa Deborah
41. Etiubon, Etimbok Olive
42. Eze, Evans Onyeka
43. Ezeh, Emmanuel Chukwujiekwu
44. Ezeh, Kelechi Justine
45. Ezeokolo, Chinenye Princess
46. Fafowora, OyinkansolaOyindamola
47. Fasanmi, Ademola Samuel
48. Giwa, RokibatOlabisi
49. Ibraheem, Maryam Oluwatosin
50. Idowu, Odunayo Mary
51. Ikemefuna, Christopher Nkemdilim
52. Ikwunne, NkechiOluwaseun
53. Isah, Annat
54. Iyoke, UyioseOdebambe*
55. Jimoh, DamilolaTaofeekat
56. Jumbo, Eniweke Eunice
57. Kazeem, Oluwayemisi Esther
58. Kolawole, OluwatobilobaTemiloluwa
59. Kuti, OjuolapeModupe
60. Lagunju, MofeoluwaMoyosore

61. Lawal, OmobolanleTaiwo
62. Magboh, Vivian Onyinyechukwu*
63. Mgbachi, Vivian Chidinma
64. Motoni, Oluwatoni Michael
65. Nwahiri, Ngozi
66. Nwashili, Adaeze Goodness
67. Nwoyeocha, Alfred Chinedu
68. Odede, Cornelius Olutayo
69. Oderinde, Iyanuoluwa Tobi
70. Odufuye, ZainabOyindamola
71. Ogunwole, OluwatobiAdeola
72. Ohanwusi, EkeneAwele
73. Ojewumi, AdeolaSekinat
74. Ojie, Desire Ifelunwa Lydia
75. Okere, Obinna Leslie
76. Okongwu, ChukwunonsoIjeoma
77. Okunade, Aisha Aderiyike
78. Okunoren, Adebayo Temiloluwa
79. Oladewa, AbisolaChristianah
80. Olanlege, AishatMoyosore
81. Olaotan, TemitayoOladele
82. Olatoke, IfeoluwaAyobami
83. Olawale, RidwanOpeyemi
84. Olojakpoke,Eloho Hilda
85. Oloriade, Kehinde Emmanuel
86. Olorunnegan, OluwakemiOlajumoke
87. Olusanya, LukmanAbiola
88. Oluwaniyi, Oluwabusayomi Joy*
89. Omoniyi, AkintundeTemiloluwa
90. Onaga, ZitaUgochukwu
91. Onileimo, Babjide Emmanuel
92. Opabunmi, Taiye Emmanuel
93. Osukoya, Mariam Oluwaseyi
94. Otoki, AnjolaoluwaOlufunmilola
95. Owojuyigbe, Elias-Chika Oluwakemi
96. Owoputi, Omolola Comfort
97. Oyeleke, Grace Ifeoluwa
98. Oyewo, OlaoluwaOyewemimo
99. Sagbodje, Eguono Victoria
100. Salawu, Olanrewaju Musa
101. Sanyaolu, OluwakoredeAnuoluwapo
102. Tanimowo, AdekiiteOluwalolade
103. Uba, OlachiEbubechukwu
104. Udoh, Edidiong Blessing
105. Ugwuagbo, Blessing Chidera
106. Umeh, AmucheObianuju
107. Woods-Orugboh, James Francis

**Names of Board Members*

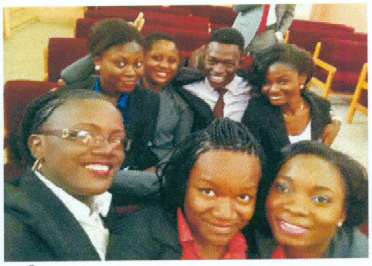
FEBRUARY 2018 GRADUATING SET

1. Adediran, Olawale Adetunji
2. Adeniji-Soji, Olutobi John
3. Adodo, Elijah Abbey
4. Ajadu, Ibechone Solomon
5. Akeredolu, Eyitayo Sunday
6. Akpa, Chidinma Pheoby
7. Akpan, Hannah Emike
8. Babalola, Toluwalase Babajide
9. Duru, Emeka Justus
10. Egwubare, Ufuoma Blessing
11. Emena, Nelson Damilola
12. Eze, Uchechukwu Regina
13. Idowu, Aanuoluwapo Racheal
14. Morhason-Bello, Jemiludeen Oluwafemi
15. Nom, Cyprian
16. Nwokolo, George Chukwuka
17. Obietoh, Samuel Chigozie
18. Odeyemi, Wale Gabriel
19. Odunola, Modupeoluwa Olamide
20. Ogunfunwa, Rachael Olabisi
21. Ojo, Tobilola Emmanuel
22. Okon, Abasiama Effiong
23. Olamitoye, Oluwaseun Afis
24. Olatigbe-Thompson, Opeoluwa
25. Olubamiwa, Tinuoluwa Tiwaoluwa
26. Olubusuyi, Victoria Toluwanimi
27. Oni, Oluwaseun Opeyemi
28. Orekoya, Adefolurin Olawale
29. Owojuyigbe, Olutayo Joy
30. Owoyemi, Olanrewaju Joseph
31. Oyetunji, Foluso Bayo
32. Popoola, Oluwaseun Adekunle
33. Rex-Ogbuku Williams Owabaya
34. Taofeek, Abiola Abdulgafarr
35. Uko, Emmanuel Edem
36. Umoh, Ini Camillus
37. Utin, Utibeima Bassey
38. Wale-Akinyemi, Babajide Imran

DOKITA EDITORIAL BOARD, PAST EVENTS

2014/2015 ANNUAL GENERAL MEETING


1.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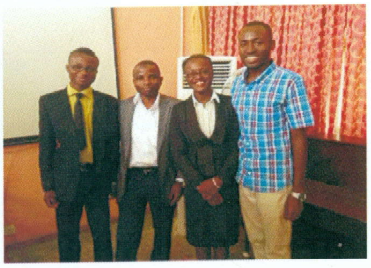
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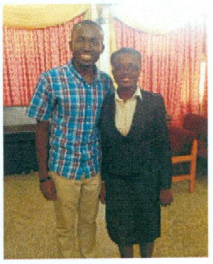
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EMERITUS PROFESSOR O.O. AKINKUGBE QUIZ COMPETITION


7.


8.


9.


10.


11.


12.


13.


14.

EDITORIAL BOARD PAST EVENTS

Annual General Meeting

1. Outgoing executives L-R (Mr. Akinlolu Olawoore, Mr. Steven Adesoko, Ms Oyindamola Ogunwole, Ms Yeka Nmadu, Ms Omosalewa Koya and Mr. Victor Mike-Akinlusi)
2. Board members in a selfie
3. Incoming Editor-in-Chief- Mr. Ibrahim Olukunle flanked to the left by the Faculty Adviser, Dr. M.A. Salami, outgoing Editor-in-Chief - Dr. Yeka Nmadu and past Editor-in-Chief - Dr. Taiwo Ojedoja
4. Handover between outgoing Editor-in-Chief (Dr. Yeka Nmadu) and the incoming Editor-in-Chief (Mr. Ibrahim Olukunle)
5. Annual General Meeting (AGM) (2014/2015 tenure). Dr. M.A. Salami, Faculty Adviser (Front row, 5th) with outgoing executives. Board members and the representative of the University of Ibadan Medical Students Association (UIMSA)
6. Past Editor-in-Chief (Dr. Taiwo Ojedoja) with the outgoing Editor-in-Chief (Dr. Yeka Nmadu).

8th Edition of Emeritus Professor O.O. Akinkugbe Inter-medical School Quiz Competition

7. Board members and past board members with Professor A.O. Omigbodun, Dr. M.A. Salami and other special guests at the competition
8. The Board Chairman, Professor A.O. Omigbodun delivering his welcome address
9. The coveted trophy!!!
10. University of Ibadan emerged winner of the 8th Biennial Emeritus Professor O.O. Akinkugbe Inter-medical School Quiz Competition
11. Winners with the President of UIMSA
12. The Faculty Adviser performing his duties as Quiz Master in the Final match
13. The Editor-in-Chief signing certificates at the Quiz Competition
14. Board members in a selfie at the event

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APPRECIATION

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This edition of **DOKITA**, being its 38th, could not have seen limelight without the wide acceptance it has received and the need to meet the need of her esteemed audience which is foremost. This volume promises to be even more gratifying and valuable for her readers.

DOKITA Editorial Board wishes to express her most sincere gratitude to the supervisor of this edition, Professor OyeGureje, for his guidance and efforts towards the successful publication of this journal.

The Board is also grateful to the following for reviewing some of the articles in the journal:

Professor O.B. Shittu
Professor O. Baiyewu
Professor A.O. George
Professor F. A. Fehintola
Professor G. Gbotosho
Venerable Professor Samuel Ike*
Professor S. O. Ogunlade
Professor A. O. Ogunniyi
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Dr A. M. Adeoye
Dr. H. Yusuph**
Dr O.O. Bello

*College of Medicine, University of Nigeria,Nsukka, Enugu State

**University of Maiduguri Teaching Hospital, Maiduguri, Borno State

The Board is also grateful to the following individuals, institutions and hospitals for their financial support towards the production of this edition of the journal: Professor C.O. Falade

Dr. N. Akannoh
Dr. T. Ojedola
Dr. Y. Nmadu
Dr. A. Olawoore
Post Graduate School, University of Ibadan
Alafia Hospital
Molly Specialist Hospital
Highland Specialist Hospital
Vine Branch Hospital
Bethel Specialist Hospital
Aggrey Hospital
Beta-Life Hospital
Jobi Memorial

The Board also wishes to appreciate and acknowledge the 1977 graduating class of the College of Medicine, University of Ibadan, Ibadan and the Management of University College Hospital, Ibadan for their immense financial contribution towards this edition of the journal.

The Board is also grateful to the following individuals for their advisory role and support towards the production of this edition of the journal: Professor G.O. Arinola, Dr O. O. Oladapo and Dr. M.M. Ladipo

Thank you all for your support.

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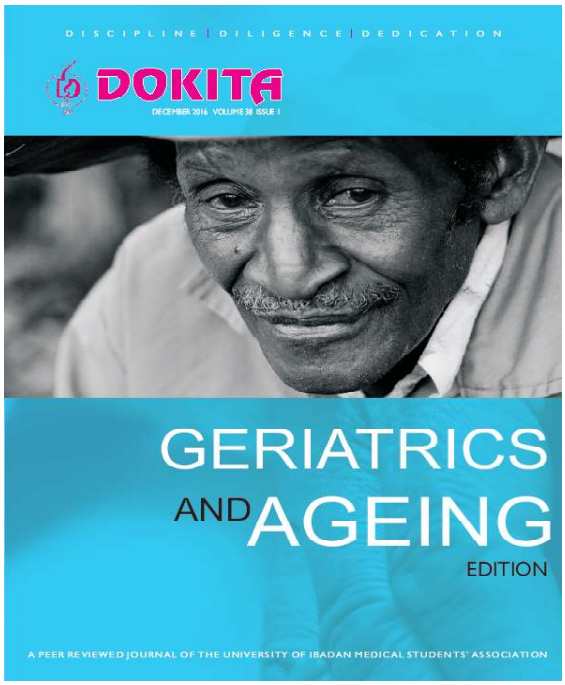

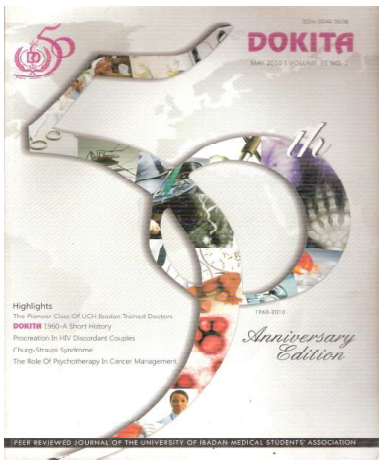

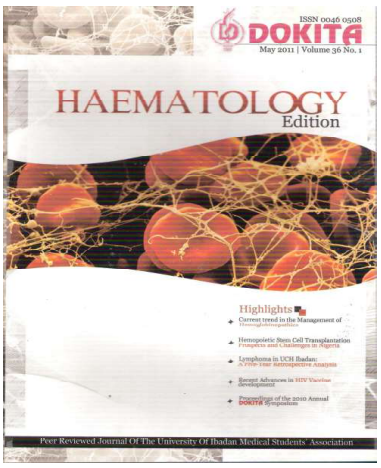

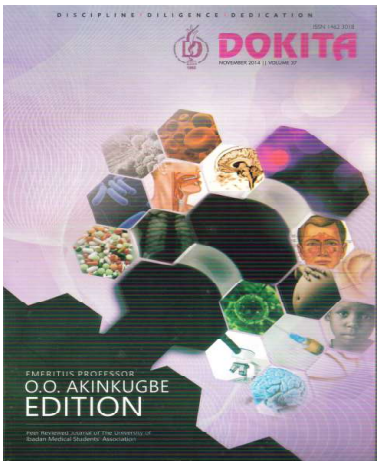

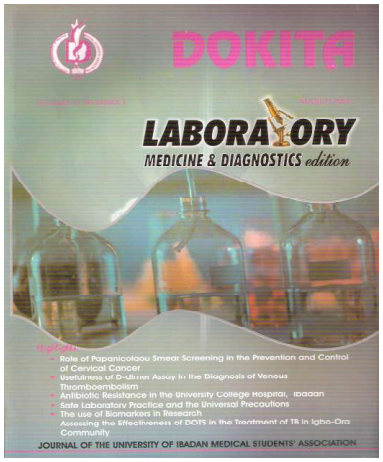

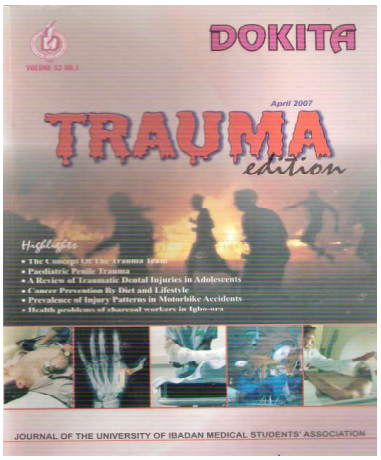

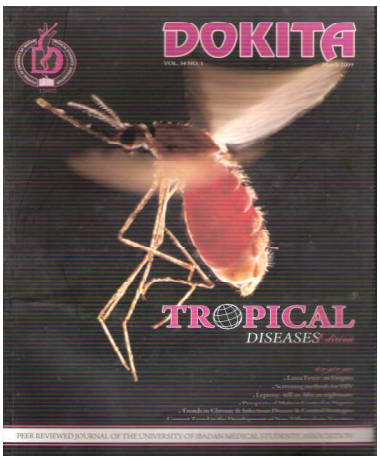

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