

VOLUME 38, NUMBER 3  
MARCH 2021

ISSN 0189 - 160X

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# WAJMJ

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**WEST AFRICAN JOURNAL OF MEDICINE**

ORIGINALITY AND EXCELLENCE IN MEDICINE AND SURGERY



OFFICIAL PUBLICATION OF  
THE WEST AFRICAN COLLEGE OF PHYSICIANS *AND*  
WEST AFRICAN COLLEGE OF SURGEONS



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ISSN 0189 – 160X

Volume 38

Number 3

March, 2021

## ORIGINAL ARTICLES

### **An Audit of Orthodontic Retention Protocol in a Tertiary Health Institution: A 3-Year Retrospective Study**

O. D. Umeh, I. L. Utomi, A. L. Ben-Okoye, A. S. Eniola

### **Comparing Antenatal and Delivery Care Services in Public and Private Health Facilities: Evidence from 2018 Nigeria Demographic and Health Survey**

M. S. Ibrahim, Z. Babandi, I. Joshua, S. Asuke

### **Determinants of Antimicrobial Use for Covid-19 Related Symptoms among Nigerians**

E.E. Chukwu, A.Z. Musa, C. Enwuru, A. Ohihion, T. Bamidele, A. Olukosi, I. Idigbe, K.A. Osuolale, C. Gab-Okafor, A. Salako, O. David, N. Otuonye, A. David, R. Toyosi, O. Aina, B. Adewale, N. N. Odunukwe, O. Ezechi, R.A. Audu, B.L. Salako

### **Evaluation of Foetal Haemoglobin Status among Nigerian Patients with Sickle Cell Anaemia Using High Performance Liquid Chromatography**

N. I. Ugwu, N. E. Okechukwu, C. N. Ugwu, O. E. Ogah, C. Okike, R. C. Ikeagwulonu, N. U. Uzodinma, A. J. Madu, H. C. Okoye, I. C. Uzoma, C. Alo, G. C. Ugwu, V. N. Ekpeagu, U. I. Okeke

### **Hospital-Based Cross-Sectional Study of the Impact of Cutaneous Lichen Planus on the Quality of Life of Patients at a Tertiary Center in Lagos, Nigeria**

E. L. Anaba, R. I. Oaku

### **Hypertension and its Clinical Correlates in a Rural Community in South Western Nigeria**

O. O. Oni, P. O. Akinwusi, A. O. Odeyemi, G. M. Israel, O. Ala, J. O. Akande, E.O. Oke, A. Durodola, A. Idowu, O. K. Israel, A. O. Aremu

### **Relevance of Rheumatic Valvular Heart Disease in the Aetiology of Heart Failure in Contemporary Times**

E. J. Ogbemudia, E. M. Umuerrri

### **Menstrual Characteristics of sub-Sahara Black African Women with and without Endometriosis**

I. Jalo, E. W. Isaac, M. P. Raymond, M. Amina, R. Y. Adeniji

### **Plasma Low-Density Lipoprotein Cholesterol Estimated by Friedewald Compared to Martin-Hopkins Equation in Nigerian Population**

B. E. Orimadegun, F. Ogah, O. B. Oyedele, O. O. Daodu

### **Prevalence and Correlates of Frailty Syndrome among Older Adults Attending Chief Tony Anenih Geriatric Centre, University College Hospital, Ibadan**

S. A. Ajayi, L. A. Adebuseye, O. O. Olowookere, R. O. Akinyemi, K. O. Afolayan, J. O. Akinyemi, E. O. Labaeka

### **The Evolving Application of DNA-Based Genotyping of Red Blood Cells in Blood Grouping: A Narrative Review**

T. O. Akinyemi, F. A. Fasola, O. A. Olateru-Olagbegi

### **Predictors of Bacterial Co-Infection and Outcome in Children with Severe Malaria in Ilorin, Nigeria**

A. Ojuawo, O. Mokuolu, A. Adegboye, O. Ojuawo, M. Abdulkadir, B. Olanipekun, A. Jimoh, O. Adedoyin

## CASE REPORTS

### **Rosai-Dorfman Disease in Cervical Lymph Nodes: The Challenges of Diagnosis in a Resource Limited Setting and Use of Immunohistochemistry in the Diagnosis**

G. O. Ogun, B. L. Awosusi, A. A. Oladeji

### **Induced Membrane Technique of Masquelet; A Viable Option in Treatment of Post-Trauma Segmental Bone Loss: A Case Report**

F. S. Ejagwulu, K. E. Amaefule, Y. Z. Lawal, I. L. Dahiru, I. M. Maitama, I. Aniko, S. S. Audu, E. E. Ejagwulu

### **Impact of Impaired Kidney Function on Outcomes of Nigerians with COVID-19 Infection: Report of two Cases from the University College Hospital, Ibadan**

Y. R. Raji, S. O. Ajayi, B. I. Abiola, T. Augustine, O. Adekanmbi, A. Arije

*See full Table of Contents in English (Page 1A) and French (Page 1B)*

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THE WEST AFRICAN COLLEGE OF PHYSICIANS  
AND  
THE WEST AFRICAN COLLEGE OF SURGEONS



## EDITORIAL

### MITIGATING THE BURDEN OF HYPERTENSION IN DEVELOPING NATIONS AND THE GLOBAL IMPACT OF COVID-19 VACCINE

It gives me pleasure to present this edition of the West African Journal of Medicine. I am particularly intrigued by the diversity of articles presented in this edition, cutting across numerous fields in Medicine and Surgery and reflecting the resourcefulness of our authors in their fields. I especially welcome the editorial by Prof. Otuyemi on *A three-year audit of Orthodontic Retention Protocol in a Nigerian tertiary health institution*. Future editions will expand the editorial column to accommodate many authors from diverse fields.

Hypertension continues to be a deadly disease despite preventive measures. It remains one of the most important risk factors for ischemic heart disease, stroke, and kidney disease.<sup>1</sup> Despite advances in management of hypertension over the years, the global prevalence is rising, especially in rural populations. This has been attributed to changes in lifestyle, population growth, and an aging population.<sup>2</sup> The impact of the disease on the populace cannot be over-emphasized as complications from hypertension continue to abound. Presently, it affects over 1 billion people globally and continues to be the highest single contributor to global burden of disease and mortality.<sup>3</sup>

About 75% of people with hypertension live in low- and middle-income countries with an estimated 74.7 million in Sub-Saharan Africa.<sup>4</sup> Major issues affecting the rural populace are the gross unawareness of hypertensive status, poverty, poor drug and clinic compliance, lack of access to specialist care, religious and traditional myths that foster poor health-seeking behaviors

and the use of traditional or herbal medication.<sup>5-7</sup> More often than not, hypertension is diagnosed when patients present with complications at the hospital and this gives cause for concern. The article on *'Hypertension and its clinical correlates in a rural community'*, by Oni et al, further sheds light on this rising scourge in our rural communities, as many of the patients presented with left ventricular hypertrophy and florid cardiovascular risk factors.

The lesson that is being learnt repeatedly is that we must increase awareness and tighten the reins of blood pressure control if we must mitigate the impact of this disease. Training of healthcare professionals on current guidelines and adherence to the guidelines, ensuring patients compliance with medications, promoting regular blood pressure measurements is essential. Establishing a hypertension registry, reducing pill-burden and providing ready access to healthcare in rural communities, will also go a long way to ensure control and reduce prevalence of hypertension. The use of lifestyle modification is central to the management of hypertension and this is key in rural communities where there is lack of competent physicians and access to medications.

COVID-19 continues to be a deadly disease with multi-systemic affectations and associated with various complications and co-morbidities. Renal involvement has been found to be a predictor of disease severity, prolonged hospitalization, need for intensive care admission and mortality, with renal patients having a 2-fold risk of death.<sup>8</sup> In this edition, we had two case reports on the *Impact of impaired kidney function*

*on outcomes of Nigerians with COVID-19 infection* by Raji et al. These two cases experienced acute deterioration of an existing CKD, had associated worsening respiratory failure, gross metabolic derangement and eventually resulted in mortality. The severity experienced in patients with impaired kidney function is high, emphasizing the need for strict infection prevention and control, early detection and prompt management in this cohort of patients.

Also, in this edition, a study on *Determinants of Anti-Microbial Use for COVID-19 related symptoms among Nigerians* by Chukwu et al, found high levels of antimicrobial use among the populace. The fear of contacting the virus, has resulted in diverse preventive practices ranging from the use of traditional herbal medications to indiscriminate use of antibiotics and antimalarials.<sup>9</sup> People now seek various antiviral medications and immune boosters, neglecting the National Centre for Disease Control safety guidelines. Health agencies at both private and public levels must join hands to provide correct and up-to-date information to the populace regarding the deleterious effect of indiscriminate antimicrobial use and the need to follow the universally accepted infection prevention and control guidelines.

Sequel to the distribution of COVID-19 vaccine, countries who have vaccinated large populations have started experiencing a drop in incidence and death rates. Globally, over 335 million doses of the coronavirus vaccines have been administered, in more than 100 countries.<sup>10</sup> Some countries have gotten their shipments and vaccinated a large proportion of

their population while many more await theirs. However, a number of concerns have been raised over the side effects of some of the vaccines being given. Reports of blood clots following vaccination have resulted in eight countries suspending the Astra Zeneca vaccine over safety concerns. Many countries are treading with caution while some are delaying roll-out until these reports are fully clarified. While minimal side effects such as fatigue, headache, muscle aches, chills, joint pain, and possibly fever may be easier to handle, life threatening ones such as blood clots need to be properly investigated.

COVID-19 has opened up a vast area of research and colleagues are encouraged to do quality research in this area, as it affects their field. We encourage you to keep sending your manuscripts for review and subsequent publication in this vastly informative journal.

**Prof. G. E. Erhabor**  
Editor-In-Chief

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## A 3-Year Audit of Orthodontic Retention Protocol in a Nigerian Tertiary Health Institution

Orthodontic treatment outcome can be judged as successful when there is a long term post-treatment stability. Despite the use all treatment philosophies and appliance techniques, stability may not be guaranteed until the teeth are maintained in their orthodontically corrected positions following cessation of active treatment.<sup>1,2</sup> Retention of treatment results obtained after several months orthodontic treatment is one of the greatest challenges the orthodontist has to face apart from achieving their

treatment objectives of correction of malocclusion. Relapse of orthodontic treatment is likely to take place within the first eight months of completion of treatment which is the time it takes for the gingival and periodontal ligaments to remodel. Relapse can also occur due to soft tissue pressures whenever the teeth are positioned in an unstable location.<sup>2</sup> In order to avoid relapse, there are generally two types of retention protocol viz: Removable and fixed appliances which are usually customized for each patient.

Removable retainers can be removed by the patient and they include: Hawley's bite plate and thermoplastic retainer (Essix and Sta-Vac) while fixed retainers are passive wires bonded to the lingual surfaces of a patient's teeth. CAD/CAM technique is now being used to fabricate a custom-cut NiTi retainer wire from a plain sheet of metal.

Previous studies<sup>3,4</sup> have shown that the preferred choice of retainer was the removable, clear thermoplastic/vacuum-formed retainer. However, fixed retainers were mostly used in the Netherlands and Switzerland and vacuum-formed retainers were mostly used in the United Kingdom, Ireland and Malaysia. A combination of a fixed and removable retainers (vacuum-formed retainer) was the most used in Norway. Majority of orthodontists prescribe that removable retainers be worn full-time for 6 months but the standard retention procedure is for 1–2 years. At present, longer periods of retention is being advocated, so much that some orthodontists now advocate a life-long retention. A study showed that maintenance of post-treatment orthodontic stability 1 and 10 years post-retention was only achieved in 60 and 38 per cent of cases respectively.<sup>1</sup>

Retention protocols vary from clinician to clinician and from country to country. Studies<sup>3,4</sup> have shown a general increase in the use of fixed retainers, however there was no consensus on the use of a particular approach.

In this 3-year audit of retention practices in a Nigerian tertiary institution, removable retainers were