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EDITORIAL

Newborn Screening for Sickle Cell Disease

The West African Journal of Medicine continues to be a veritable platform for the dissemination of research and scholarly knowledge and I'm pleased to welcome you to this edition. We want to thank the various authors who have contributed the valuable articles being published in this edition across the different medical and surgical disciplines. We also appreciate all the other stakeholders, including our reviewers, all of whom have contributed immensely to making another edition of the journal a reality.

I will like to highlight a few of these articles in view of the noteworthy insight provided on issues pertaining to the healthcare system and healthcare service delivery in resource poor settings like we have in the sub-region. Sickle cell disease (SCD) is highly prevalent and a cause of significant morbidity and mortality in sub-Saharan Africa. New-born screening is essential for early diagnosis and prompt enrolment of affected children into a comprehensive care programme.^{1,2} In developed parts of the world, new-born screening for sickle cell disease is routine in view of the advantages it offers with regards to early identification, and initiation of appropriate prophylactic management for babies with the disease. It is a very important public health prevention program that has been shown to substantially reduce the morbidity and mortality related to SCD.² In their study, Nnachi and co-workers highlighted the fact that this screening is yet to be universally implemented in Nigeria, and that its acceptability among new parents is a potential factor that may influence its implementation. The authors therefore

assessed the awareness and acceptability of SCD new-born screening among post-partum mothers in a tertiary health institution in Abakaliki, South-east Nigeria. They found a low level of awareness of the screening among the respondents while the acceptability was quite high. This indicated a need for appropriate public education to promote the extent of awareness among the population in general, and women of reproductive age in particular. There is also the need for the development and implementation of a national policy on this important screening with the ultimate aim of making it available as part of the routine new-born screenings.

Kuponiyi *et al.* also worked on an important issue pertaining to new-borns. As the authors pointed out, estimating gestational age (GA) at birth is an important aspect of proper new-born care, and that the standard method for GA estimation is postnatal foot length (PFL) measurement using the Vernier digital calliper. However, the instrument is not readily available in many resource-poor settings, including the lower levels of healthcare services where many of the new-borns are delivered. Hence, they tested the hypothesis that the tape measure, which is more readily available, is a valid and reliable proxy in measuring PFL for the purpose of estimating GA at birth.

The results showed a high degree of correlation and significant agreement between the measurements obtained using the Vernier digital calliper and a tape measure. The study also led to the generation of a regression equation for the conversion of PFL measures on the tape to their equivalence on the standard Vernier calliper. This is a very important alternative for use in many rural setups

where access to medical expertise, resources and technologies are limited.

In another study, Efuntoye *et al.* and colleagues assessed the abnormalities of renal function associated with Malaria infection. The prospective observational study found a significantly higher prevalence of serum electrolyte derangement among those with acute malaria infection compared with those without malaria. There was also high frequency of albuminuria, and urine microscopic abnormalities. Malaria infection continues to be endemic in most part of the continent and remains a leading cause of morbidity and mortality despite several efforts aimed at its mitigation and eradication over the years. The need for renewed commitment and sustained efforts towards effective control and eradication of malaria infection cannot thus be over-emphasised.³

Once again, we thank all the various contributors and stakeholders while also renewing the call for the continuous submission of articles to the journal for prompt publication. In the upcoming editions, we hope to publish a series of reviews and original articles in the area of application of state-of-the-art technologies and procedures, such as precision medicine, to the prevention, diagnosis and management of health conditions. We therefore invite relevant contributions on this theme for speedy consideration.

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World Hearing Day – Impaired Hearing and Noise Culture

The World Hearing Day (WHD) is a declaration of the World Health Organization (WHO) performed annually on 3rd March (3/3). This day (3–3) was set aside because of its symbolism, the figures “3” and “3” represents the shape of the ear (pinna) for left and right. A mirror image of “3” represents the opposite ear. This symbolic date was adopted by the WHO from a Chinese event which recognised this date as a day for the ear creation. The event was formally launched by the WHO in 2007 in a bid to raise awareness about deafness.¹ It was then called International Ear Day which later transformed to World Hearing Day in 2016 in Geneva following the declaration of the World Hearing Forum, where the league of nations were charged with the establishment of policy on Ear and Hearing Care. Since then, World Hearing Day has become the largest global event for awareness campaign on ear and hearing care that calls for urgent action to address the ear and hearing problems. WHD is the ideal opportunity to spread the word and raise the profile of ear and hearing care in people’s mind, in the world’s media and on the global health agenda by featuring enlightenment and education, free hearing screening, rehabilitation etc. Apart from promoting public health actions for ear and hearing care, WHD is an opportunity to raise awareness on hearing loss and its care at a national and community levels across the world and to encourage behavioral change towards healthy ear and hearing care practices. Every age group is meant to benefit from all the events commemorating the day annually. An appropriate theme is proclaimed every year based on the reality of time

and events in the society. This year’s theme is “**Ear and Hearing, Care for All. Let’s make it a reality!**”²

Globally, over 1.5 billion people live with hearing loss of which nearly 430 million people live with disabling hearing loss. Hearing loss affects people of all ages, with 34 million children being affected, and nearly 65% of adults aged above 60 years having hearing loss of varying severity.¹ By 2050, nearly 2.5 billion people are projected to have some degree of hearing loss and at least 700 million will require hearing rehabilitation.² About 1 billion adolescents stand the risk of hearing loss resulting from noise and unsafe listening devices.²

In Africa, 136 million people live with hearing loss and by 2050, 337 million people are projected to have problems with their hearing. About 80% of these people live in low-income and middle-income countries where they do not have access to required health services and interventions. A report found that most countries in the African sub region had less than one Ear, Nose and Throat (ENT) Specialist or one Audiologist available per 1 million people.^{3,4}

The ear is an organ for hearing and balance through its Cochlear and vestibular system. It also sub serves proprioceptive and cognitive functions especially in the newborn and therefore is described as “pathway for the activation of essential functions in humans”. A child with functional hearing is the one that could acquire speech and develop good tactile and visual coordination. Furthermore, the first year of life is golden in the acquisition of speech and good cognitive functions catalyzed by good hearing otherwise the child is threatened with neural plasticity

which make it very difficult to rehabilitate fully speech and cognition.⁵ The perception of sounds in early life activates the auditory pathway and functions, and triggers the acquisition of speech since it is what is heard and programmed that could be reproduced. This is why it is mandatory to screen every newborn for hearing before discharge from hospital in order to detect such congenital or developmental hearing losses early and commence remedial rehabilitation. The minimal acceptable programme is to screen all the ‘at risks children’ such as the premature delivery, those with neonatal jaundice, obvious deformities or born from sick mothers, family history of genetic hearing losses, history of ototoxicity (consumption of drugs with potential harms to the ears) or eventful deliveries (like birth asphyxia).

There is also evidence suggestive that the nascent hearing apparatus of newborns especially the premature babies are very susceptible to injuries from high pitched sounds from the incubator machines and monitors in the Neonatal Intensive Care Unit or newborn wards.⁶ It is suggested that these class of children should be protected with ear muffles and sound proofs.

In all cases of hearing loss, early identification is the key to effective rehabilitation. Therefore, to ensure that hearing loss is picked up at the earliest time, everyone should check their hearing from time to time, especially those who are at a higher risk of having hearing impairment. These include but not limited to those listening to music with ear piece at all times, working in noisy places, experiencing ear problems and adults above 60 years. The