

KRINTAFEL™ AND THE NIGERIAN NIGER-DELTA REGION: THE UNHEARD STORY OF THE PURPORTED WONDER DRUG.

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ABSTRACT

BACKGROUND: The July 2018 declaration of discovery of Krintafel™, the first single-dose anti-malarial agent to prevent *P. Vivax* relapse, was clearly a significant step in pharmaceutical efforts geared towards malaria eradication. How much of the medical dialogue contained in that declaration trickled down to the medical community in the tropical setting of Abraka and its immediate environs, forms the principal focus of the aim and objective of this community-based study.

METHODOLOGY: The study evaluated a sample population of 570 adult medical personnel and students by using the methodology of survey questionnaires to assess their respective levels of awareness as regards the declaration and thus, existence of tafenoquine, the pharmacological name applied to Krintafel™.

RESULTS: Obtained results of this cross-sectional survey showed an absolute zero-level of awareness of Krintafel™ existence and clinical indications. This rather shocking complete lack of knowledge of declaration and existence of the reference anti-malarial preparation is clearly a dire call to pharmaceutical outlets to completely overhaul their public awareness campaign system and strategy in such a way as would reflect and meet the unique communication demographic characteristics and needs of medical recipients practicing and studying in the Nigerian Niger-Delta region, and indeed, all of sub-Saharan Africa.

KEYWORDS: Krintafel™, Awareness, Abraka, Medical, Personnel, Students.

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INTRODUCTION

“Today's approval of krintafel™, the first new treatment for *Plasmodium vivax* malaria in over 60 years, is a significant milestone for people living with this type of relapsing malaria. Together with our partner, Medicines for Malaria Venture, we believe Krintafel™ will be an important medicine for patients with malaria and contribute to the ongoing effort to eradicate this disease”. Dr. H. Barron (20th July, 2018)

With these exact words, Dr. Hal Barron, Chief Scientific Officer and President of Research and Development, GSK, announced to the world at large, the development of the therapeutic formulation, Krintafel™, indicated in the management of relapsing malaria: the

announcement was aired electronically through British Broadcasting Service (BBC). How much of that world included professional audience in the medical community of malaria-endemic sub-Saharan Africa in general, and the Nigerian Niger-Delta region, in particular, forms the principal focus of the aim of this study. This study underscores the effectiveness of the GSK/BBC/local newspapers mode of communicating such prized pharmacological information, vis-a-vis the suffering humongous mass of relapsing malaria patients in the rural and sub-urban Nigerian setting of Abraka and its environs.

The answers to this question are especially significant when viewed against the background setting that most of the malaria burden in the world is borne by rural dwellers of coastal and tropical Africa. Worldwide, about 214 million cases of malaria occur yearly, with 3.2 billion persons at risk of infection. Malaria alone accounted for approximately 438,000 deaths in

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2015, with sub-Saharan Africa presenting an estimated 90 % of all malaria deaths.¹¹ Salwa et al., (2016) described Nigeria as the world's greatest sufferer of the malaria burden, with an estimated 51 million cases and 207,000 deaths reported annually. Approximately 30 % of the total malaria burden in Africa is borne by Nigerian patients. A hugely significant percentage of the Nigerian populace – 97 % of the total population, amounting to approximately 173 million Nigerians – are at risk of malaria infection (WHO technical document¹², Korenromp, *et al.*, 2013; Murray *et al.*, 2013; WHO malaria report, 2014)^{2,3,12}. Moreover, malaria accounts for 60 % of outpatient visits to hospitals and led to approximately 11 % maternal mortality and 30 % child mortality, especially among children less than 5 years (Nigerian Federal Ministry of Health, National Malaria Control Programme, 2009).

If medical information and knowledge of such a humongous critical relevance to malaria management is to be communicated across the globe, logical reasoning simply dictates that the receiving audience must primarily, fundamentally and essentially include those to benefit most from such information in therapeutics. Without the slightest iota of doubt, the sub-Saharan African populace forms the major bulk of this malaria-suffering holoendemic audience.

The current investigation was therefore conducted against this background of the critical need for very effective passage of medical information, with the primary objective of determining the extent, if any, to which knowledge of information regarding proclamation of discovery of Krintafel™ has trickled down to the intended audience of medical practitioners, students and even patients operating in the Nigerian Niger Delta geographical enclave of Abraka and its immediate environment.

PARTICIPANTS AND METHODS

Study Design:

This university-based research investigation was designed as a cross-sectional descriptive study, and carried out between November and December, 2018 among the active members of the medical community in Abraka town and its environs in Delta State, Nigeria.

Study Area:

Abraka, the only university town in Ethiopia East local Government Area, is one of twenty-five clans that make up the Urhobo kingdom of Delta state, Nigeria. The Urhobo people dwell within the Niger-Delta region in a land mass bounded by latitudes 6° and 5°, 15° North and Longitudes 5°, 40° and 6°, 25° East in the Delta and Bayelsa States of Nigeria. The ecology of Urhobo territory consists of evergreen tropical rain forests with mangrove swamps, sparse arable savannah belts and a network of streams and rivers whose volume and flow are directly affected by the seasons. The wet season is traditionally from April to October, and dry season ranges from November to March (Otite, 1973; Okaka, 1976)^{1,7,9}. The seasonality, intensity, and duration of malaria transmission vary according to seasonal influences being higher in the wet season.

Study Population:

To carry out this cross-sectional study, a sample population of five hundred and seventy (570) medical practitioners and medical students were randomly selected for research evaluation. In this sample frame were fifty (50) practicing medical doctors with post-graduate qualifications, ten (10) registered pharmacists and ten (10) certified pharmacologists, all within the adult age bracket (18 years and above). Medical students, including anatomy (120), physiology (140), undergraduate doctors (120) and pharmacology (120) students formed 87.7% of the sample size, amounting to 500 subjects.

All study subjects were engaged in medical practice and training in the tropical setting of Abraka, Nigeria, where an institution of higher learning is currently located. Nigeria is the world's 32nd-largest country (after Tanzania) and, is located in western Africa on the Gulf of Guinea with a total landmass area of 923,768 km² (356,669m²). Nigeria lies between latitudes 4° and 14°N, and longitudes 2° and 15°E.

Questionnaire Survey of Krintafel™ Awareness

Level: A qualitative survey questionnaire was administered to all participants so as to collect data relating to their demographic status, occupation and level of awareness of the existence of Krintafel™. Contained in the survey questionnaire were simple questions a sample of which is presented as follows:

1. Biodata
 - a. Input your age:years
 - b. Tick your gender: male/female.
 - c. State your occupation.....
2. Krintafel™-related variables
 - a. Have you ever heard of Krintafel™? Yes/No
 - b. If yes, kindly indicate the method by which you gained knowledge of Krintafel™...
.....

Ethical Clearance:

The research protocol was presented to the Research and Ethics Committee, College of Health Sciences, Delta State University, which granted ethical clearance. All participants received detailed explanation regarding the aim, objectives and overall nature of the study as well as the nature and extent of their individual involvement. Only participants who voluntarily agreed to partake freely in the study were recruited into the study population from which a sample size of five hundred and seventy (570) subjects was selected. Written and signed informed consents were thereafter obtained from study subjects following by the administration of survey questionnaires for completion by individual participants.

RESULTS

Analysis of responses from completed survey questionnaires revealed the following research results:

- i. An absolute zero level of awareness among participants, of the knowledge of existence of Krintafel™. No study participant ticked an affirmative response to the research question assessing their knowledge of the existence of Krintafel™ (question 2a).
- ii. No study participant had even read independently about Krintafel™.

DISCUSSION

If the discovery of Krintafel™ by GSK was a novel medical milestone, the declaration of its discovery by Dr. Baron, was at best, merely a standard communication protocol that failed woefully, as the reference study results show herein, to generate even the slightest level of meaningful public awareness among the studied medical community. So deficient and hugely limited was the GSK public campaign strategy that not a single participant in a study population comprising practicing medical doctors, certified pharmacist, trained pharmacologist and medical students was

aware of the existence of Krintafel™, a whopping 6 months after the formula presentation to the general public was embarked upon electronically in “far away” British Broadcasting Service. Should a global pharmaceutical giant of the caliber of GSK associate itself with the restricted scope and disadvantages of “mere standard approach” in the dissemination of such colossally critical medical information as the discovery of formula expected to wipe out P. Vivax malaria holoendemicity, is a research question that requires very thorough scientific investigation. The clear answer provided by this pioneering review of medical communication skills is a resounding no: very unfortunately so.

Research findings herein has clearly shown the discovery of Krintafel™ to be a medicinal feat existing only in the confines of the archives of GSK and the annals of a recipient medical community that barely treats nor manages malaria endemicity. On measuring the extent of effective spread of pharmacological information regarding Krintafel™, the zero-level of awareness shown by research results herein, is proof beyond scientific doubts, that the GSK communication management strategy is grossly inefficient and, the dire need for its urgent review is both critical and imperative.

The most important principle guiding the practice of effective and purposeful is feedback from the recipient. Being a two-way traffic, feedback confirmation from recipient audience as presented by this investigation, is imperative if the communicator, GSK, has any significant interest in the commitment by practitioners of tropical medicine towards lowering malaria-associated morbidity and mortality. The obtained zero-awareness associated with the drug Krintafel™, is deeply worrisome and necessitates urgent changes in GSKs' mass communication techniques, especially when the recipient audience essentially comprises medical practitioners in sub-Saharan Africa.

The technique of seminar presentation in various tertiary institutions of learning is hereby suggested as a more effective way of conveying information of this relevance, to target medical audiences across the geographical limits of tropical Africa. Seminar presentations have the unique advantage of promoting learning in one

instance as many key-note speakers present their wealth of knowledge directly to their target recipients in a two-way question and answer learning atmosphere. That itself promotes a sense and spirit of camaraderie between GSK, medical practitioners and patients with the added advantage of sharing information, interest and concerns regarding Krintafel™, directly between manufacturer and end-users.

By the conduct of the current awareness study, it is hoped that Nigerian authorities saddled with such responsibilities as drug patenting, mass production and distribution, would expedite necessary actions aimed at promoting drug availability to end-users, particularly via public enlightenment campaigns. Following its publication in the health column of the Vanguard™ newspapers of July 23rd 2018,⁶ health policy-makers and managers should, where necessary, should present the medication to the Nigerian medical community, while seeking to expedite its clearance for sale by the National Agency for Food and Drug Administration and Control (NAFDAC), and sister agencies (Nwafor, 2018).⁶

If the ultimate goal of the discovery of Krintafel™ is promoting actions and behaviors that will protect and further propagate the state of physical and mental well-being of tropical health, then the need is urgent for GSK and indeed, all pharmaceutical companies, to rethink and reorder their communication strategy with the objective of creating significant levels of awareness among the medical community in sub-Saharan Africa.

CONCLUSION

Given the vast enormity of the health cost of plasmodium malaria in tropical Africa, the zero-awareness level obtained in this research 6 months post-proclamation of Krintafel™ discovery, is a clarion call for the adoption of a far more credible communication management system, effective

for, and specific to the intended recipient, when conveying critical medical information.

REFERENCES

1. Ekeh, Peter (2005). *Studies in Urhobo culture*. Buffalo: Urhobo Historical Society. p. 2.
2. Korenromp EL, Hosseini M, Newman RD, Cibulskis RE. Progress towards malaria control targets in relation to national malaria programme funding. *Malar J.* 2013;12:18. doi: 10.1186/1475-2875-12-18.
3. Murray CJ, Ortblad KF, Guinovart C, Lim SS, Wolock TM, Roberts DA, et al. Global, regional, and national incidence and mortality for HIV, tuberculosis, and malaria during 1990–2013: a systematic analysis for the Global Burden of Disease Study 2013. *Lancet.* 2014;384:1005–1070. doi:10.1016/S0140-6736(14)60844-8.
4. National Malaria Control Programme (NMCP) Nigeria MIS final report. Abuja: Federal Republic of Nigeria; 2010.
5. Nigeria Federal Ministry of Health. National Malaria Control Programme . Strategic plan 2009–2013: “a road map for malaria control in Nigeria”, abridged version. Abuja: Yaliam Press Ltd, Federal Ministry of Health; 2009.
6. Nwafor Polcarp (2018). FDA approves new single dose malaria drug: Vanguard Newspapers, July 23, 2018. <https://www.vanguardngr.com/2018/07/fda-approves-new-single-dose-malaria-drug/>
7. Okaka JG (1976). *Field notes: Urhobo Social History, the Udu report*.
8. Okwa OO, Akinmolayan FI, Carter V, Hurd H. Transmission dynamics of malaria in four selected ecological zones of Nigeria in the rainy season. *Ann Afr Med.* 2009;8:1–9. doi: 10.4103/1596-3519.55756.
9. Otite O (1973): *A Study of The Urhobo of Mid-Western State Of Nigeria*
10. WHO. *World malaria report 2014*. Geneva: World Health Organization; 2014.
11. WHO. *World malaria report 2015*. Geneva: World Health Organization; 2015.
12. WHO. 58th World health assembly. Technical document. Geneva: World Health Organization; 2005. http://www.who.int/nutrition/topics/WHA58.24_idd_en.pdf.