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The Anthropological Use of Sabmal to Treat Malaria in Nigeria

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Abstract
Malaria *is a mosquitoes borne-infectious disease that affects humans and other animals.[1]Malaria causes clinical features that typically include Fever, Malaise/Fatigue,vomitting and headaches*
The key point here is that malaria does not exist in a vacuum. Medical anthropology looks at all of the different factors that influence malaria transmission and why people do what they do. Rather than focusing just on curing an individual, we seek to understand the broader contextual and structural issues that can help or hinder health-seeking behaviour.
SAABMAL *is a phytochemical product produced at the Halamin herbal centreAbuja.It is composed of lemon leaf,sesameseed,Garlicbulb,bitterleaf,Aloeveraleaf,Love-lies bleeding leaf and Sugarcane leaf.*
The research objective is to determine the use of SABMAL in the treatment of Malaria in Nigeria.The outcome of the research showed that SABMAL was efficacious on the treatment of Malaria as compared to the placebo.
SABMAL appears to have the Anthropological properties for the treatment of Malaria in Nigeria because of its mild to Nil side effects .Many Nigerians are gradually losing faith in the western drugs in the cure for Malaria.Many have resorted to herbal remedies which appears to be efficacious .The number of Nigerians that take herbal remedies for malaria far out number those that rely on orthodox medicine,reasons includes poor proper monitoring of fake drugs imported into the Country,Corruption,highcost,traditionalbelief,etc.The herbal drugs cannot be adulterated outside its toxicity and sometimes unhygienic preparations.There is need to proceed with further Clinical trial for this herbal remedy.
Keywords*: SABMAL.MALARIA,NIGERIA*

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I. Introduction

Medical anthropology helps us gain a better understanding of the contexts within which malaria occurs and the factors that contribute to its persistence. For example, if you think about malaria from a clinician's perspective, you tend to focus on the disease and the specific preventive or treatment actions an individual needs to take.

From the perspective of a medical anthropologist, malaria is just of one of the many things people have to think about and cope with in their daily life. A person may know when they need to seek malaria treatment, but there are many factors that determine whether or not the person will actually be able to get treatment. The road to the clinic might be flooded. Or maybe the person doesn't have money to go to the clinic, or they can't leave because their crops need to be brought in. Or they might know that the clinic might be out of drugs or diagnostic tests.In Nigeria Majority of the people are farmers who live in rural settlements.

The key point here is that malaria does not exist in a vacuum. Medical anthropology looks at all of the different factors that influence malaria transmission and why people do what they do. Rather than focusing just on curing an individual, we seek to understand the broader contextual and structural issues that can help or hinder health-seeking behaviour.

An estimated 65% of Nigeria's population lives in poverty and poverty is a major factor in malaria prevention and treatment. Vector control is highly dependent on a single class of insecticides, the pyrethroids. Resistance to pyrethroids has been reported in 27 countries in sub-Saharan Africa.

Malaria is a mosquitoes borne-infectious disease that affects humans and other animals.[1]Malaria causes clinical features that typically include Fever, Malaise/Fatigue,vomitting and headaches. In severe cases, it can cause yellow skin, seizures, coma, or death.Symptoms usually begin ten to fifteen days after being bitten by an infected mosquito.If not properly treated, people may have recurrences of the disease months later. In those who have recently survived an infection, reinfection usually causes milder symptoms.This partial resistance disappears over months to years if the person has no continuing exposure to malaria.

The disease is widespread in the tropical and subtropical regions that exist in a broad band around the equator This includes much of sub-saharan Africa, Asia, and Latin America. In 2018 there were 228 million cases of malaria worldwide resulting in an estimated 405,000 deaths.[] Approximately 93% of the cases and 94% of deaths occurred in Africa. Rates of disease have decreased from 2010 to 2014 but increased from 2015 to 2017, during which there were 231 million cases. Malaria is commonly associated with poverty and has a significant negative effect the financial growth. In Africa, it is estimated to result in losses of US$12 billion a year due to increased healthcare costs, lost ability to work, and adverse effects on tourism.

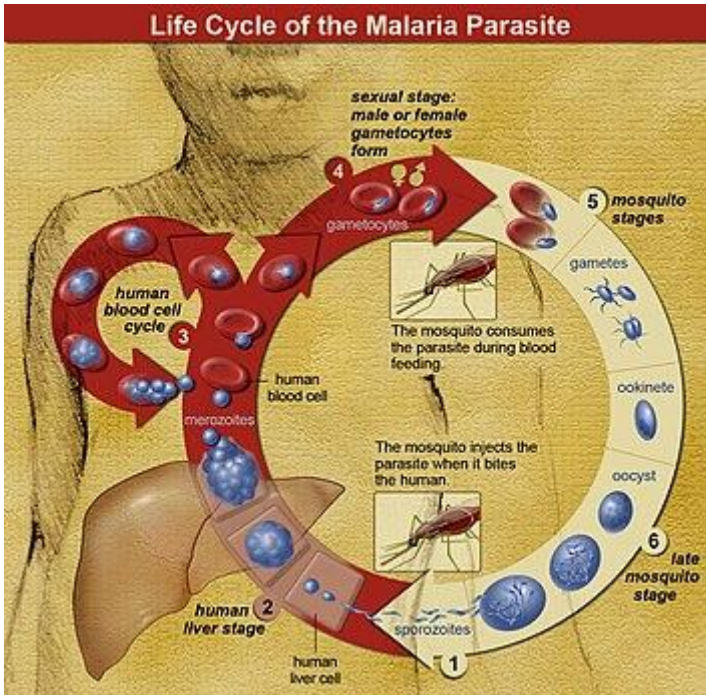
II. Research Objective

To determine the use of SABMAL in the treatment of Malaria in Nigeria.

STATEMENT OF THE PROBLEM

Malaria is commonly associated with poverty and has a significant negative effect on the economy and lives of Nigerians.

The Life Cycle of Malaria



The life cycle of malaria parasites. A mosquito causes an infection by a bite. First, sporozoites enter the bloodstream, and migrate to the liver. They infect liver cells, where they multiply into merozoites, rupture the liver cells, and return to the bloodstream. The merozoites infect red blood cells, where they develop into ring forms, trophozoites and schizonts that in turn produce further merozoites. Sexual forms are also produced, which, if taken up by a mosquito, infect the insect and continue the life cycle.

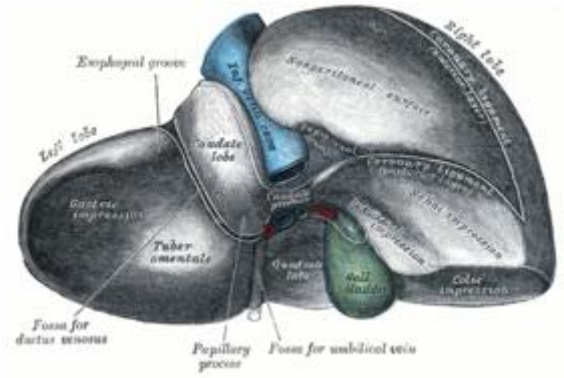
ANATOMY OF THE LIVER

The liver is grossly divided into two parts when viewed from above – a right and a left lobe - and four parts when viewed from below (left, right, caudate, and quadrate lobes).

The falciform ligament makes a superficial division of the liver into a left and right lobe. From below, the two additional lobes are located between the right and left lobes, one in front of the other. A line can be imagined running from the left of the vena cava and all the way forward to divide the liver and gallbladder into two halves. This line is called Cantlie's line

In the diaphragmatic surface, apart from a triangular bare area where it connects to the diaphragm, the liver is covered by a thin, double-layered membrane, the peritoneum, that helps to reduce friction against other organs.This surface covers the convex shape of the two lobes where it accommodates the shape of the diaphragm. The peritoneum folds back on itself to form the falciform Ligament and the right and left triangular ligament

The visceral surface or inferior surface is uneven and concave. It is covered in peritoneum apart from where it attaches the gallbladder and the portahepatis. The fossa of gall bladder lies to the right of the quadrate lobe, occupied by the gallbladder with its cystic duct close to the right end of portahepatis.



HISTOLOGY OF THE LIVER

Histology of the Liver,the study of microscopic anatomy, shows two major types of liver cell: parenchymal and nonparenchymal cells. About 70–85% of the liver volume is occupied by parenchymal hepatocytes. Nonparenchymal cells constitute 40% of the total number of liver cells but only 6.5% of its volume.The liver sinusoidsare lined with two types of cell, sinusoidal endothelial cells, and phagocytic Kuffers cells, Hepatic stellate cells, are nonparenchymal cells found in the perisinusoidal space, between a sinusoid and a hepatocyte.Additionally, intrahepatic lymphocytes are often present in the sinusoidal lumen

Literature Review of SAABMAL is a phytochemical product produced at the Halamin herbal centreAbuja.It is composed of lemon leaf,sesameseed,Garlicbulb,bitterleaf,Aloeveraleaf,Love-lies bleeding leaf and Sugarcane leaf.

Love-lies bleeding(AmaranthusCaudatus)- Uncooked amaranth grain is 12% water, 65% carbohydrates (including 7% dietary fiber), 14% protein, and 7% fat. A 100 grams (3.5 oz) reference amount of uncooked amaranth grain provides 371 calories, and is a rich source (20% or more of the Daily Value, DV) of protein, dietary fiber, pantothenic acid, vitamin B6, folate, and several dietary minerals. Uncooked amaranth is particularly rich in manganese (159% DV), phosphorus (80% DV), magnesium (70% DV), iron (59% DV), and selenium (34% DV).

Sesame seeds: They are an excellent source of copper, a very good source of manganese, and a good source of calcium, phosphorus, magnesium, iron, zinc, molybdenum, vitamin B1, selenium and dietary fiber.

The sesame plant likely originated in East Africa, and ancient Egyptians are known to have used the ground seed as grain flour

(*Sesamumindicum*), also called **benne**, erect annual plant of the family Pedaliaceae, grown since antiquity for its seeds, which are used as food and flavouring and from which a prized oil is extracted. Widely cultivated, the sesame plant is found in most of the tropical, subtropical, and southern temperate areas of

the world. The aroma and taste of sesame seed are mild and nutlike. The chief constituent of the seed is its fixed oil, which usually amounts to about 44 to 60

percent. Noted for its stability, the oil resists oxidative rancidity. The seeds are also high in protein and are rich in thiamin and vitamin B_6.

THE SESAME PLANT

Aloe vera-*Aloe barbadensis* Miller (蘆薈lúhuì), commonly referred to as *Aloe vera*, is one of more than 400 species of *Aloe* belonging to family Liliaceae that originated in South Africa, but have been indigenous to dry subtropical and tropical climates, including the southern USA.[1] Recently, only a few species of *Aloe* have been considered for commercial importance, of which *A. vera* is considered the most potent and, thereby, the most popular plant in the research field.[2] *A. vera* has been used in folk medicine for over 2000 years, and has remained an important component in the traditional medicine of many contemporary cultures, such as China, India, the West Indies, and Japan.[3]

The species of *Aloe* selected for commercial exploitation or selected by the traditional healer, would be based on its local availability and distribution. In South Africa, the most widely distributed *Aloe* species are *Aloe greatheadii* var. *davyana* (Asphodelaceae) and *Aloe ferox* Mill. (Asphodelaceae). *A. greatheadii* grows wild in the northern parts of South Africa, whereas *A. ferox* grows wild primarily in the Eastern and Western Cape provinces. Many beneficial effects of this plant have been attributed to the polysaccharides present in the pulp. The clear pulp which is also known as gel is widely used in various medical, cosmetic, and neutraceutical applications.[4]

A. vera contains substantial amounts of antioxidants including α-tocopherol (vitamin E), carotenoids, ascorbic acid (vitamin C), flavonoids, and tannins and it has been suggested that antioxidant action may be an important property of plant medicines used in treatment of various diseases. Topical *A. saponaria* treatment has shown antinociceptive and anti-inflammatory effects in ultraviolet B-induced sunburn model via its antioxidant components present in gel. *Aloe* gel is able to scavenge the free radicals 2,2-diphenyl-1-picrylhydrazyl (DPPH), 2,2′-azinobis-(3-ethylbenzothiazoline-6-sulfonic acid) $(ABTS)^{+\bullet}$, and nitric oxide in a concentration-dependent manner, as seen in an *in vitro* study of the radioprotective efficacy of *A. vera* gel.

A. vera is a succulent plant. Succulents are xerophytes, which are adapted to living in areas of low water availability and are characterized by possessing a large water storage tissue. The main feature of the *A. vera* plant is its high water content, ranging from 99–99.5%.

Aloe vera contains 75 potentially active constituents: vitamins, enzymes, minerals, sugars, lignin, saponins, salicylic acids and amino acids.

ANTHROPOLOGYY OF MALARIA AND SABMAL USE

The strength of a country's health systems and the level of political will to provide access to high quality preventive and treatment services is key. If health facilities are closed due to staff shortages, or patients are left untreated or undiagnosed due to stock-outs of drugs and rapid diagnostic tests, then health education programmes or new malaria treatments are unlikely to impact on treatment seeking ofmalaria.This impacts negatively on the use of new products like SABMAL.The government needs to have a strong political will to address this health challenge before the impacts of new products like SABMAL can have the desired effect despite its efficacy.

III. Materials & Method

Research Methodology

RESEARCH MATERIALS

-Informed Consent Form

-Structured Questionaires was used to select the subjects for the research

-Patients diagnosed of Parkinson Disease with satisfactory and clinical and EEG result

-SABMAL(500mg capsule)

-Placebo(500mg Capsule Each)

-Laptop computers for analysis and recording of data

-Pen/pencil

-paper(A4)

-Sphygnomanometer

-Thermometres(6)

-Stethoscopes(6)

METHOD

Sample Size -The Sample size for the survey was 10 patients .Alldiagnosed of Malaria with slightly variable clinical features.

Cross sectional simple random sampling technique using the lottery method was adopted in selecting the patients and the control for the research. Five patients labeled X were given the SABMAL while the 2nd group labeled Y were placed on a placebo all were 500mg capsule each at a single dose twice daily for 15 days. The research started on the 13th of November,2019and ended on the 15th of November,2019.This was a double-blind research carried out at the African Alternative Medicine Clinic, Apo,Abuja,Nigeria.Patients were placed on two appoints a dayapart.We were focusing on the following malaria symptoms- 1.Fever, 2.Malaise/Fatigue, 3.Headache, and 4.Loss of Appetite and also on the Laboratory result.

IV. Results

Ist Appointment-13th November, 2019

Group X-

-Fever^{++}
-Malaise/Fatigue^{+++},
-Headache^{++}
-Loss of Appetite^{+++}
-Laboratory Result for Malaria^{+++}

GroupY

-Fever^{++}
-Malaise/Fatigue^{+++},
-Headache^{++}
-Loss of Appetite^{+++}
-Laboratory Result for Malaria^{+++}

2nd Appointment-15th November, 2019

Group X-

-Fever^{---}
-Malaise/Fatigue^{-}--,
-Headache^{--}
-Loss of Appetite^{--}
-Laboratory Result for Malaria^{+}

GroupY

-Fever^{+++}
-Malaise/Fatigue^{+++},
-Headache^{++}
-Loss of Appetite^{+++}
-Laboratory Result for Malaria^{+++}

Key- +1=Mild
+2=Moderate
+3=severe
-1=Normal
-2=Very normal
-3=Excellently Normal

V. Discussion Of Results

Malaria is a major public health problem in Nigeria where it accounts for more cases and deaths than any other country in the world. Malaria is a risk for 97% of Nigeria's population. The remaining 3% of the population live in the malaria free highlands.

In Sub-Saharan Africa account for 90% of global malaria deaths. Nigeria, Democratic Republic of Congo (DRC), Ethiopia, and Uganda account for nearly 50% of the global malaria deaths. Malaria is the 2nd leading cause of death from infectious diseases in Africa, after HIV/AIDS

Malaria affects 3.3 billion people, or half of the world's population, in106 countries and territories. WHO estimates 216 million cases of malaria occurred in 2010, 81% in the African region. WHO estimates there were 655,000 malaria deaths in 2010, 91% in the African Region, and 86% were children under 5 years of age. Malaria is the 3rd leading cause of death for children under five years worldwide, after pneumonia and diarrheal disease.

SABMAL is an African Polyherbal remedy produced in Nigeria.It isa phytochemical product produced at the Halamin herbal centreAbuja.It is composed of lemon leaf,sesameseed,Garlicbulb,bitterleaf,Aloeveraleaf,Love-lies bleeding leaf and Sugarcane leaf.This herbal product had been observe to to clear Malaria symptoms within 2 days as shown above.The group X patient showed remarkable improvement in their clinical features as compared to those in group Y who were placed on Placebo.

SABMAL appears to be the wonder drug for malaria as it appears considering it constituents.The researchers shall proceed to Phase 1 Clinical trial for this Polyherbal remedy .We invite collaboration in this as it appears to be very promising .This is a combination of both alternative and orthodox Medicine.

VI. Conclusion

SABMAL appears to have the Anthropological properties for the treatment of Malaria in Nigeria because of its mild to Nil side effects .Many Nigerians are gradually losing faith in the western drugs in the cure for Malaria.Many have resorted to herbal remedies which appears to be efficacious .The number of Nigerians that take herbal remedies for malaria far out number those that rely on orthodox medicine,reasons includes poor proper monitoring of fake drugs imported into the Country,Corruption,highcost,traditionalbelief,etc.The herbal drugs cannot be adulterated outside its toxicity and sometimes unhygienic preparations.There is need to proceed with further Clinical trial for this herbal remedy.

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