α-amylase relevant to type 2 diabetes. The plant extracts had substantial concentration of total phenolics, tannins and flavonoids. In antioxidant activity assays, the acetone and methanol extracts showed the maximum reducing power and DPPH and ABTS + scavenging activities, which were highly correlated with the total phenolic contents (R2=0.9822, R2=0.8801 and R2=0.8840, respectively). In contrast, the low polar extracts such as chloroform and ethyl acetate exhibited higher levels of Fe2+ chelating ability. All the extracts were found to have a dose dependant activity in DPPH, superoxide, hydroxyl and nitric oxide scavenging, and lipid peroxidation inhibition assays. Further, the methanol and acetone extracts showed marked inhibition on the activities of acetycholinesterase and α- glucosidase whereas the ethyl acetate extract significantly inhibited the activity of α- amylase over other extracts. The results of the study will lead in favour of the use of this plant as a potential additive for the replacement of synthetic antioxidant compounds. Further, the inhibitory activity on acetylcholinesterase, α- glucosidase and α-amylase highlights its medicinal property. Isolation and characterization of the bioactive constituents from the active fractions are in progress in our laboratory.

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WHAT WOULD PCR ASSESSMENT CHANGE IN THE MANAGEMENT OF FEVERS IN A MALARIA ENDEMIC AREA? A SCHOOL-BASED STUDY IN BENIN IN CHILDREN WITH AND WITHOUT FEVER

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We recently showed in a school-based study in Benin, that applying a policy of anti-malarial prescriptions restricted to parasitologically-confirmed cases on the management of fever is safe and feasible. Additional PCR data were analyzed in order to touch patho-physiological issues, such as the triggering of a malaria attack or the usefulness of PCR in the management of malaria in an endemic area. PCR data were prospectively collected in the setting of an exposed (with fever) / non exposed (without fever) study design. All children had a negative RDT at baseline, were followed up to day 14 and did not receive drugs with anti-malarial activity. The index group was defined by children with fever at baseline and the control group by children without fever at baseline. Children at high risk for malaria in these two groups were defined by a positive PCR at baseline. PCR was positive in 66 (27%) children of the index group and in 104 (44%) children of the control group respectively. The only significant factor positively related to PCR positivity at baseline was the clinical status (control group). When definition of malaria attacks included PCR results, no difference of malaria incidence was observed between the index and control groups, neither in the whole cohort, nor in children at high risk of malaria. The rate of undiagnosed malaria at baseline was estimated to 3.7% at baseline in the index group. In conclusion, non malarial fevers do not or do not frequently trigger malaria attacks in children at high risk for malaria. Treating all children with fever and a positive PCR would have led to a significant increase of antimalarial consumption, with few benefits in terms of clinical events.

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DELAYED TREATMENT IN TYPHOID PATIENTS WITH PERFORATED BOWEL IN NIGERIA: WHAT ARE THE CAUSES AND EFFECTS?

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The early nonspecific features of typhoid often result in patients mistaking their illness for malaria or something less serious. This fact, along with a poorly regulated healthcare system and lack of patient knowledge concerning where and when to seek healthcare, may lead patients in Nigeria to take actions that delay appropriate treatment. It is unknown whether these actions and the ensuing delays, along with delays encountered post-presentation, impact mortality. The objectives of this study was to identify factors that cause treatment delay and determine their impact on mortality in typhoid patients with perforated bowel at Baptist Medical Centre in Ogbomoso, Nigeria (BMCO). We reviewed all charts of typhoid patients admitted to BMCO for surgical repair of perforated bowel from January 2004 to March 2009. There were 173 patients treated during that period; however, adequate records were obtained for 144 patients. These were analyzed for relationships between various treatments/factors and delayed presentation/mortality. Most patients (88%) received treatment before presenting to BMCO for surgical repair of perforated bowel. Patients received treatment from private clinics (67%) and traditional healers (8%) and also self administered pharmaceuticals (23%) and herbal remedies (5%). Eleven percent of patients reported having been treated for malaria. Associations between delayed presentation were found with receiving any pre-presentation treatment (p=0.005) and treatment at a private clinic (p=0.009). Treatment delays following presentation were due to difficulties paying the required surgical fee (19%) and obtaining blood for transfusion pre-operatively (11%) and post-operatively (5%). Having a delay in securing blood pre-operatively was associated with increased mortality (p=0.028). Increased mortality rates were also found for longer durations of that delay (p=0.037) and the presentation-surgery time interval (p=0.025). In conclusion, several factors delay treatment and impact mortality of typhoid patients with perforated bowel. Though financial hardship plays a prominent role in treatment delay, a multifaceted approach that includes education of patients and community healthcare providers; elimination of required surgical fees; and efforts to increase blood donation can ensure that patients with typhoid present for and receive proper treatment as quickly as possible.

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CHEMOKINES AND CYTOKINES INDUCED BY MONOCYTES EXPRESSING DENGUE VIRUS NONSTRUCTURAL PROTEINS NS4B AND NS5 STIMULATE MICROVASCULAR ENDOTHELIAL CELL ADHESION MOLECULES

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Dengue virus (DENV) continues to spread worldwide and the incidence of dengue hemorrhagic fever (DHF) is on the rise. DHF immunopathology involves elevated levels of circulating chemokines and cytokines which stimulate the expression of adhesion molecules on vascular endothelial cells during acute infection. DENV has a plus-sense RNA genome encoding for three structural and seven nonstructural proteins (NS). Previous data demonstrated that NS5 can induce interleukin-8 (IL-8) but whether NS5 or other NS induce host immunomediators involved in endothelial cell activation remains unclear. We cloned each nonstructural gene of