

Medical Science

About the Cover



Malaria is the greatest cause of childhood mortality in Sub-Saharan Africa. The commonest presentation of uncomplicated malaria is fever. However all childhood fevers are not due to malaria. To determine what proportion of children presenting with fevers have actual malaria parasitaemia. A prospective study was on 1,096 children presenting with fever to the Rapha Specialist Children & General Clinic, Effurun, Nigeria. All these children are from birth – 18 years had their blood film (thin and thick film) done for malaria parasite identification and parasite density. The result shows that the males had 470 (76.9%) positive for malaria parasite. Conclusion: The high malaria parasitaemia clearly indicates that malaria is obviously the leading cause of childhood fever in this part of the world. It is recommended that in every rural hospitals which may not be equipped with competent laboratory facilities and personnel the empirical use of antimalarial in children presenting with fever is justified if a cause is not obvious (Ref: Blessing O Okperi, Okiroro Ighosewe. Malaria parasitaemia in children presenting with fever in Effurun, Nigeria. Medical Science, 2016, 20(78), 53-55).

Ayurvedic Naturoceuticals: Evidence Based Data and Clinical Implications. Part IV

Neil K Agarwal, Shashi K Agarwal

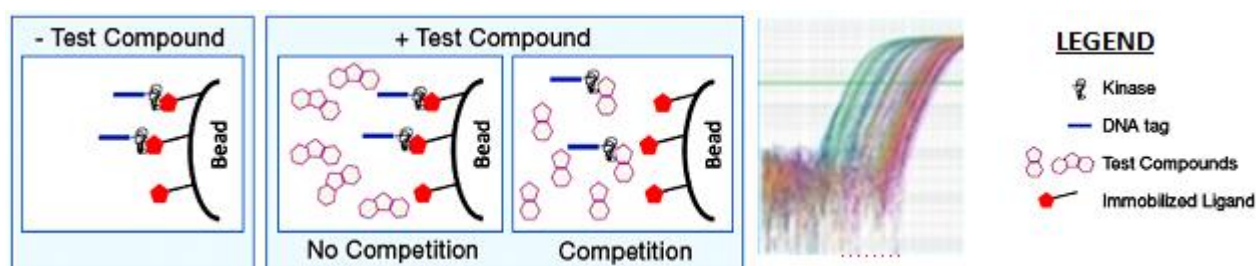
Ayurveda is a several millennia old Indian medical system. Data from experimental, epidemiological and clinical studies provide compelling evidence that several ayurvedic naturoceuticals not only provide prophylactic and therapeutic activity against several diseases, but may actually improve general health and promote longevity. These include herbs, oils, spices, plants, minerals and trace amounts of heavy metals. Although widely used in India, firm scientific evidence for their effectiveness has been lacking due to the small and often improperly done clinical trials. However more expansive and rigorous research is now being done, providing evidence based data on the effectiveness and safety of these natural products. In the United States, Ayurvedic medications are regulated as dietary supplements. The final part of this four part series reviews the last seven popular ayurvedic supplements.

Medical Science, 2016, 20(78), 28-33

ANALYSIS

Novel Dicinnamate Analogue Inhibits Casein Kinase 2: A Potential Cancer Therapeutic

Lowe HIC, Bahado-Singh PS, Toyang NJ, Watson CT, Riley CK, Bryant JL

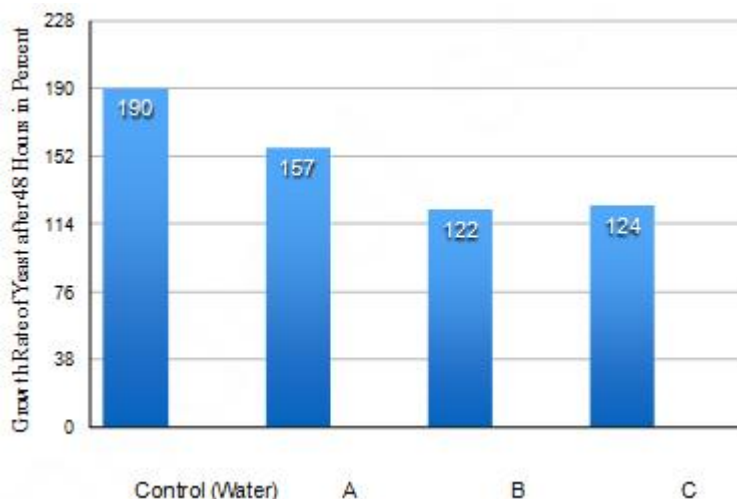


CK2 is a serine/threonine-protein kinase that has been implicated in a number of cellular processes, including maintenance of cell viability, protection of cells from apoptosis, and tumorigenesis. Elevated CK2 activity has been pinned to numerous cancers where it is believed to promote oncogenesis. As such the role of CK2 in the progression of tumorigenesis has become increasingly evident as the dysregulation of a number of pathways has been attributed to abnormally high levels of CK2 activity. In this study, the CK2 inhibitory properties of four novel dicinnamate analogues, namely, 3-(3,4-dimethoxy-phenyl)-acrylic acid; 2-hydroxy-3-(3-ptyllyl-acryloyloxy)-propyl ester; 2-acetoxy-5-((E)-3-(3-((E)-3-(3,4-dimethoxyphenyl)acryloyloxy)-2-hydropropoxy)-3-oxoprop-1-enyl) benzoic acid; 4-((E)-3-(3-((E)-3-(3,4-dimethoxyphenyl)acryloyloxy)-2-hydropropoxy)-3-oxoprop-1-enyl)benzoic acid were investigated. The results to date showed that 4-((E)-3-(3-((E)-3-(3,4-dimethoxyphenyl)acryloyloxy)-2-hydropropoxy)-3-oxoprop-1-enyl)benzoic acid, exhibited tremendous inhibition activity with low % Ctrl, high CK2 affinity, $K_d=24 \mu\text{M}$ and high selectivity to CK2 (0.005). The results of the study suggest HL-04 as a suitable candidate for further development and possible therapeutic treatment of aggressive high grade astrocytoma (HGA) brain cancer and some neurodegenerative disorders.

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Digital Information Transmitted by Scalar Waves Effects Biological Response in Yeast

Johannes A Ebbers, Konstantin Meyl

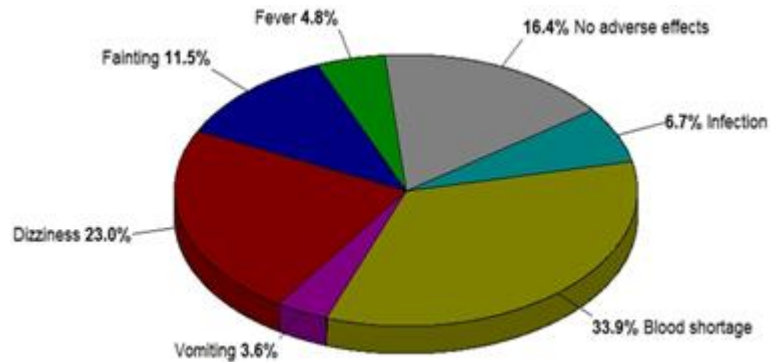


Scalar waves (longitudinal waves) seem to play an important role as a carrier for biological information. Previous investigation provided evidence for the assumption that analogue information can be brought to effect in a biological target by scalar wave transport. In a series of experiments we obtained results pointing out that also digital information can be transported effectively to a biological target.

Medical Science, 2016, 20(78), 41-44

Awareness, Knowledge and Attitude of Students of a Plateau State Tertiary Institution to Blood Donation

Damulak OD, Jatau ED, Dacob D, Nokshuan S, Reng T



Introduction: Inadequate blood donors and lack of voluntary blood givers in our setting may be linked to the lack of correct information on blood and its donation against popular myth and assumptions that deter people from blood donation. Aim: This study seeks to determine the awareness, knowledge and attitude of newly admitted students of a state own health care training institution on blood donation. Methods: Structured questionnaire on Awareness, knowledge and attitude to blood donation was administered to consecutively recruited subjects. The attitudinal disposition to blood donation was confirmed by positive history of or actual donation. Results: one hundred and eighty out of two hundred newly admitted students mean aged 23.7 ± 3.0 years completed and returned their questionnaire. One hundred and sixty one (89.4%) subjects are aware of blood donation mainly through personal communication, the media and the national blood transfusion service. All the subjects knew something about blood and blood donation while 75% were positively disposed to blood donation. The positive attitude to blood donation was confirmed by both 16.1% history of previous donation and 8.9% actual end of study donor enrolment and donation. Conclusion: we conclude that the awareness about blood donation among new intake into tertiary institutions may be high in our setting. A high number of individuals favourably disposed to blood donation may not actualise their intention by actual blood donation.

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Malaria parasitaemia in children presenting with fever in Effurun, Nigeria

Blessing O Okperi, Okiroro Ighosewe

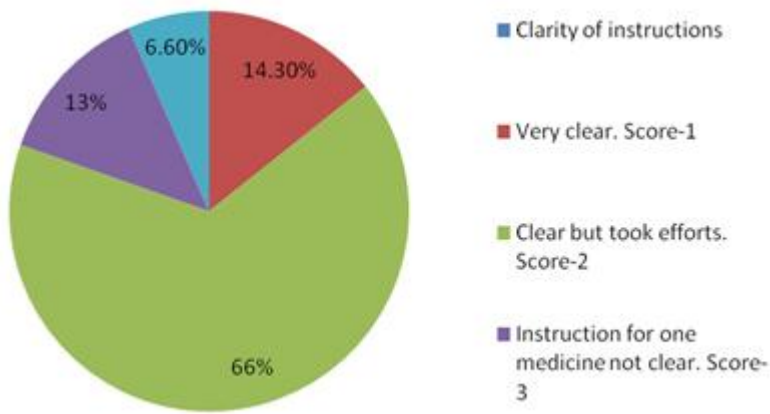
Background: Malaria is the greatest cause of childhood mortality in Sub-Saharan Africa. The commonest presentation of uncomplicated malaria is fever. However all childhood fevers are not due to malaria. Objective: To determine what proportion of children presenting with fevers have actual malaria parasitaemia. Materials and Methods: A prospective study was on 1,096 children presenting with fever to the Rapha Specialist Children & General Clinic, Effurun, Nigeria. All these children are from birth – 18 years had their blood film (thin and thick film) done for malaria parasite identification and parasite density. Result: The result shows that the males had 470 (76.9%) positive for malaria parasite. Conclusion: The high malaria parasitaemia clearly indicates that malaria is obviously the leading cause of childhood fever in this part of the world. It is recommended that in every rural hospitals which may not be equipped with competent laboratory facilities and personnel the empirical use of antimalarial in children presenting with fever is justified if a cause is not obvious.

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“Prescription writing- The mistakes we make”: A Prospective Study

Srinivasan K, Chitra S

Aims and Objective: This study aimed to describe the quality of prescriptions by Private Practitioners for legibility and accuracy. Materials and Methods: Three hundred prescriptions of Private Practitioners were taken for assessment of legibility and accuracy. The prescriptions were assessed by two investigators and a third adjudicated in case of disagreement. For assessment of handwriting, a scoring method was used. Other parameters which were assessed were: spelling of medicine names, formulation, drugs strength and dosage form, use of nonspecific abbreviations, use of archaic terminologies such as OD, HS etc. and use of capital letters. The samples were collected over a period of 7 days. The samples were then analyzed for their content based on an ideal prescription format and the results were tabulated. The collected data were entered and analyzed using Statistical software package (SPSS version 14) and the results were presented as percentage. Results were analyzed and presented using tables, and pie charts.

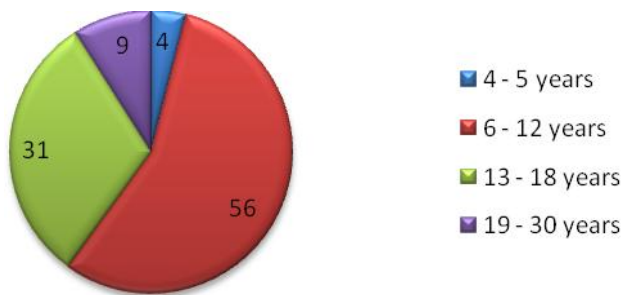


Results: Three hundred prescriptions of Private Practitioners were taken for assessment of legibility and accuracy and Clarity of dose. Results were expressed in percentages. Spellings of Medicine names in all prescriptions were incorrect (79%). In formulations and drugs strength not mentioned in the prescriptions (81%) of cases. Abbreviations of names of drugs were written by 40.6% of prescribers. 72% of prescribers preferred to use archaic terminology and only 69% of the prescribers had written the prescriptions in capital letters. Nearly 39.6% of the prescribers did not put the leading zero where applicable. Legibility Clarity of instructions and Clarity of dose of prescriptions was clear but requires effort to read which constituted about 93%, 80.3 and 90% respectively (scored 1 or 2). The findings of the study suggest that most of the prescriptions given are woefully inadequate in content. Conclusions: A major percentages (72%) of Private Practitioners using the archaic terminologies which usually cause confusion to the dispensers and consumers. Use of capital letter while preparing a prescription, avoiding use of abbreviations and archaic terminologies as well as using the technology such as printing the prescription may ensure a quality service to the consumer. It can be concluded that a clear policy about the standard of prescriptions and periodic internal monitoring is the answer for quality prescriptions. To have better prescriptions and better health care facilities a computerized format would be the answer.

Medical Science, 2016, 20(78), 56-62

Prevalence of bacterial pathogens and its relative distribution in various chronic tonsillitis

Rajesh K, Prabhusaran N, Sahoo GC, Prabhakar K, Jesudoss A



A prospective study was carried out to identify the possible bacterial isolates and their antibiotic sensitivity among 100 cases of chronic tonsillitis whose age group was from 4 to 30 years, where 34% and 66% were males and females respectively. The predominant symptoms of the patients in the study were sorethroat and odynophagia where majority of the patients had chronic parenchymatous tonsillitis. Enlarged adenoids were also observed as co-morbidity with chronic tonsillitis. Among the bacterial isolates, aerobes predominated with 87% whereas both aerobes and anaerobes were possible with 13%. Beta haemolytic streptococci dominated followed by *Staphylococcus aureus* and *Streptococcus pneumoniae*. Among anaerobes, *Bacteriodes* and *Fusobacterium* were isolated. Raised ASO titre was observed in majority of the cases. Maximum isolates were identified as sensitive to norfloxacin and ciprofloxacin whereas resistant patterns were determined to cotrimaxazole and gentamycin. Since bacterial isolates in the core play an important role in causing and sustaining chronic tonsillitis, further newer techniques are required to indentify the bacterial pathogens without the need for tonsillectomy. With the view of examining antibiotic therapy to overcome chronic tonsillitis, ampicillin, tetracycline, gentamycin and cotrimoxazole that are commonly used drugs.

Medical Science, 2016, 20(78), 63-68