



WEST INDIAN MEDICAL JOURNAL

Vol 65, No. 1: 1 – 238

Issue 1, 2016

ISSN 0043-3144 WIMJAD

ORIGINAL ARTICLES

- 1 The Radioprotective Effects of Caffeic Acid Phenethyl Ester and Thymoquinone on Oxidative and Nitrosative Stress in Liver Tissue of Rats Exposed to Total Head Irradiation**

O Cikman, S Taysi, MT Gulsen, E Demir, M Akan, H Diril, HA Kiraz, M Karaayvaz, M Tarakcioglu

This study investigates the effects of the addition of caffeic acid phenethyl ester (CAPE) and thymoquinone on oxidative and nitrosative stress in the liver tissue of irradiated rats. Thymoquinone and CAPE decrease oxidative and nitrosative stress markers and have antioxidant effects, which also increase antioxidant capacity in the liver tissue of irradiated rats.

- 8 Antimicrobial Activity of the Essential Oil from the Leaves and Seeds of *Coriandrum sativum* toward Food-borne Pathogens**

M Rezaei, F Karimi, N Shariatifar, I Mohammadpourfard, E Shiri Malekabad

This study showed that the essential oils possess both bacteriostatic and bactericidal activity against some of the Gram-negative and Gram-positive bacteria when tested in vitro and may be effective on other bacteria.

- 13 Beta Cell Regenerating Potential of *Azadirachta indica* (Neem) Extract in Diabetic Rats**

G McCalla, O Parshad, PD Brown, MT Gardner

Neem leaf extract improved β cell regeneration but did not reduce blood glucose in diabetic rats.

- 18 Newborn Screening for Sickle Cell Disease: Jamaican Experience**

K Mason, F Gibson, R Gardner, L Warren, C Fisher, D Higgs, M Happich, A Kulozik, I Hambleton, BE Serjeant, GR Serjeant

The history and evolution of laboratory technology for newborn screening for sickle cell disease is reviewed with particular reference to Jamaica. The procedures and results of screening 54 566 newborns from southern and western Jamaica are presented.

- 27 Indications for Red Cell Transfusion in the Intensive Care Unit at the University Hospital of the West Indies**

K Fletcher, I Tennant, CA Walters, H Harding-Goldson

This was an observational study of red cell transfusions in intensive care unit patients at the University Hospital of the West Indies (UHWI). It was found that UHWI did not demonstrate a restrictive transfusion practice as defined by the TRICC trial, but was not as liberal as other countries.

(Continued on inside front cover)

EDITORIAL BOARD

Editor-in-Chief

EN Barton

Associate Editors

D Cohall

DT Gilbert

A Hennis

G Hutchinson

Assistant Editors

W Abel

MO Castillo-Rangel

T Clarke

T Ferguson

W Francis

J Plummer

PJ Ramphal

AK Soyibo

H Trotman

Deans

JM Branday

H Fletcher

T Seemungal

R Roberts (Director, UWI Clinical Training Programme)

Treasurer

E Robinson

T Alleyne, F Bennett, C Christie-Samuels, IW Crandon

N Duncan, Y Fugita, F Henry

J Hospedales (CARPHA), T Jones, GC Lalor (ICENS)

W McLaughlin, MO Owolabi, A Pearson, T Richards

DT Simeon (CARPHA), MF Smikle, Y Zhao

Editorial Advisory Board

B Bain, J Bennett, M Boyne, FC Brosius III,

G Burkett, W De La Haye, H Daisley,

D Eldemire-Shearer, C Escoffery, LF Ferder

JP Figueroa, J Frederick, B Hanchard, N Kissoon

M Lee, J Lindo, A McCaw-Binns, C Ogunsalu,

OO Oguntibeju, A Ojo, A Pearson, H Reid,

M Samms-Vaughan, GR Serjeant, WH Swanston,

AAE Verhagen, M Voutchkov, RJ Wilks, R Young

Past Editors

JL Stafford 1951–1955

JA Tulloch 1956–1960

D Gore 1961

CP Douglas 1962

D Gore 1963–1966

P Curzen 1967

RA Irvine 1967–1969

TVN Persaud 1970–1972

GAO Alleyne 1973–1975

V Persaud 1975–1995

D Raje 1995–1996

WN Gibbs 1996–1999

Continued from front cover

32 Carriage of Class 1 and Class 2 Integron in Multidrug Resistant *Pseudomonas aeruginosa* Isolated from Burn Patients in Tehran Hospitals, Iran

M Goudarzi, M Fazeli, M Azad, SS Seyedjavadi, R Mousavi, M Rashidan, E Azargashb

This study investigated the frequency of integrons as a marker of antibiotic resistance and multidrug resistance in P aeruginosa isolates from burn patients and their associations with the existence of different classes of integrons.

40 Beta-lactamase Enzymes of Clinical *Pseudomonas aeruginosa* Strains

O Pasa, B Ozer, N Duran, M Inci, E Yula

Detection of beta-lactamases and monitoring antibiotic susceptibilities is extremely important for the selection of appropriate empirical antibiotic therapy in P aeruginosa infections.

46 Combination Therapy in Pulmonary Arterial Hypertension: Single Centre Long-term Experience

G Taçoy, A Çengel, Y Alsancak, S Ünlü, S Turkoğlu

Pulmonary arterial hypertension (PAH) is a progressive disease of the pulmonary vascular bed, and right heart failure is the leading cause of death. Treatment with vasoactive agents is crucial for these patient groups. We aimed to evaluate our treatment approach in patients with PAH at a tertiary centre.

52 Global Registry of Acute Coronary Events (GRACE) Risk Score as a Predictor of In-hospital Mortality for Acute Coronary Syndrome in Trinidad and Tobago

M Chin, T Cummings, C Thomas, T Seemungal

The Global Registry of Acute Coronary Events (GRACE) risk score, which was developed in a predominantly Caucasian population, was not previously tested in a Caribbean population. This study found it to be a reliable predictor of in-hospital mortality in a multi-ethnic Trinidadian acute coronary syndrome population, making it a useful risk stratification tool.

Continued on Inside Back Cover

BUSINESS INFORMATION

Copyright: Material printed in the Journal is covered by copyright and may not be reproduced in whole or in part without the written permission of the Editor. Single photocopies may be made by individuals without obtaining prior permission.

Microform: The Journal is available in microform from Bell and Howell Information and Learning.

Abstracting and Indexing: The Journal is currently included in major abstracting and indexing services.

Correspondence should be addressed to:

THE EDITOR-IN-CHIEF, MAILING ADDRESS: West Indian Medical Journal, Faculty of Medical Sciences, The University of the West Indies, Kingston 7, Jamaica

Webpage: <http://www.mona.uwi.edu/fms/wimj/>

E-mail: wimj@uwimona.edu.jm

Telephone: (876) 927-1214 **Fax:** (876) 927-1846

ANNUAL SUBSCRIPTION: Overseas US\$175.00

Jamaica J\$9500.00

West Indian Medical Journal

Published by the Faculties of Medical Sciences, The University of the West Indies, Mona, Jamaica,
St Augustine, Trinidad and Tobago and Cave Hill, Barbados

- 60 The Epidemiology of Prostate Cancer in Western Jamaica: Risk Factors, Knowledge, Attitudes and Practices**
SJ Dotson, MD Howard, M Aung, JA Keenan, PE Jolly
This was a retrospective study with quantitative and qualitative components evaluating risk factors for prostate cancer and health-seeking behaviour of men in western Jamaica. Two hundred and four men were interviewed, and twenty men took part in two focus groups.
- 67 Prostate Cancer Knowledge, Attitudes and Screening Practices among Men in Western Jamaica**
T Anderson, T Wallace, M Aung, PE Jolly
This study has identified several sociodemographic and health-seeking behavioural factors associated with prostate cancer screening among men in Jamaica. This information can be used to design interventions to increase prostate cancer screening and decrease prostate cancer morbidity and mortality.
- 78 Obstetric Outcomes of an Afro-Caribbean Cohort Following Universal Screening and Treatment of Subclinical Hypothyroidism**
N Johnson, A-K Taylor-Christmas, V Chatrani, E Choo-Kang, M Smikle, R Wright-Pascoe, K Phillips, M Reid
This paper reports on obstetric outcomes of subjects diagnosed with subclinical hypothyroidism who were treated with l-thyroxine, and seeks to determine if these outcomes were equivalent to those of euthyroid subjects.
- 83 Trona Causes Fetal Loss in Pregnant Rat via an Oestrogen-dependent Mechanism**
AF Ajayi, RE Akhigbe
The study demonstrated that trona causes fetal loss. This could be attributed to the chemical constituents, especially sodium and calcium. This effect is possibly via oestrogen-dependent mechanism.
- 87 Alterations in Gold Nanoparticle Levels Are Size Dependent, with the Smaller Ones Inducing the Most Toxic Effects and Related to the Time of Exposure of the Gold Nanoparticles**
MAK Abdelhalim
Our results indicate that the smaller 10 nm gold nanoparticles (GNP) are mostly taken up and accumulate in different rat organs, suggesting the induced toxic effects, supported by histological investigation. The larger 50 nm GNPs are retained in the blood of rats.
- 93 Different Doses and Routes of Administration of Methimazole Affect Thyroid Status in Methimazole-induced Hypothyroidism in Rats**
X-L Zhou, Y Han, WJ Mail, J Liu, H Wang, L Feng, L Gao, J-J Zhao
In the present study, we established and compared differences in the rat hypothyroid model induced by methimazole added to drinking water or given through an intra-gastric tube.
- 98 Assessment of Workplace Stigma and Discrimination among People Living with HIV/AIDS Attending Antiretroviral Clinics in Health Institutions in Enugu, Southeast Nigeria**
EN Aguwa, SU Arinze-Onyia, F Okwaraji, I Modebe
HIV/AIDS causes global morbidity and mortality and its related discrimination/stigma can affect the management of those infected. Unfortunately, not much work has been done in Nigeria to ascertain the extent of discrimination/stigma occurring at the place of work.
- 106 The Diagnostic Value of FibroScan in Assessing Significant Liver Fibrosis in Patients with Chronic Hepatitis B**
X Zeng, C Xu, M Li, J Xia, M Liu, P Zhu, D Xiang, Y Wang
This study assesses the value of FibroScan and fibrosis serum models, including aspartate transaminase to platelet ratio index (APRI), in predicting significant liver fibrosis in patients with chronic hepatitis B compared with liver biopsy.
- 111 Investigation by the Method of INNO-LiPA of Primary Resistance to Lamivudine in Patients with Chronic Hepatitis B Who Have Not Used Antiviral Therapy**
M Özgüler, A Akbulut, K Demirdağ, M Özden
Lamivudine is an effective oral antiviral agent which inhibits the replication of hepatitis B virus by blocking reverse transcriptase enzyme. Administering lamivudine is an effective and convenient method of early treatment.
- 116 Partial Protection from Metabolic Syndrome in Chronic Hepatitis C Elderly Subjects Due to Lower Triglyceride Level**
K Wang, J-D Lin, C-H Hsu, T-T Chao, C-Z Wu, C-H Hsieh, D Pei, Y-J Liang, Y-L Chen
Chronic hepatitis C is a protective factor against having metabolic syndrome and this effect might be due to lower triglyceride level in the elderly. Further studies are warranted for the underlying mechanisms.
- 123 Prevalence of Congenital Malformations in Grenada**
B Nelson, V Naraine, C Patterson, S Rodrigo
The prevalence of birth defects in Grenada is low in comparison to Jamaica, as well as other developing and developed countries. Cardiovascular malformations were the most prevalent in this five-year study period.
- 128 Sonographic Biometry of Fetal Interorbital Distance as a Predictor of Gestational Age in Enugu, Southeast Nigeria**
UI Nwadike, KK Agwu, CU Eze, OC Okpala, AO Onu
The fronto-transverse sonographic technique was established as a feasible technique for the measurement of fetal

interorbital distance (IOD). There was good correlation between IOD and other fetal biometric parameters. The regression equation of $GA = 6.24 + 4.89100$ was used to predict the gestational age.

134 Prediction of Normal Ovulation by Sonographic Folliculometry Involving Natural Cycles among Women in Ojo, Southwest Nigeria

CU Eze, HC Ugwu, CU Eze, K Ochie, IU Nwadike, C Otika

Accurate prediction of ovulation is important in the management of female infertility. Sonographic observation of complete disappearance of a dominant follicle and reduction in follicular size of surrogate follicles after follicular rupture appeared to be more reliable predictors of imminent ovulation than merely measuring follicular dimensions.

141 The Investigation of Plasma Glucagon-like Peptide-1 Levels in Newly Diagnosed Type 1 Diabetic Children

B Uslu, F Gurbuz, F Temiz, B Yuksel, N Mungan, AK Topaloglu

Fasting and postprandial glucagon-like peptide-1 (GLP-1) and C-peptide levels in 25 newly diagnosed Type 1 diabetic children are not different from 22 healthy children. This suggests that plasma GLP-1 levels do not play a role in the pathogenesis of Type 1 diabetes.

147 Impact of Comprehensive Rehabilitation Therapy on Trunk Controlling Ability of Children with Cerebral Palsy

J-X Wu, S-X Shi, B Wang, X-L Kan

The trunk control training of children with cerebral palsy (CPC) in the sitting posture is still one of the main purposes of cerebral palsy rehabilitation. The aim of this study was to observe the role of a TecnoBody balancing instrument in improving the trunk controlling ability of CPC and its efficacy in assessment in CPC.

154 Clinical and Haematological Manifestations of Typhoid Fever in Children in Eastern Turkey

S Akbayram, M Parlak, M Dogan, G Karasin, HT Akbayram, K Karaman

Typhoid fever is a common and widely distributed food-borne disease that is a global major public health problem. This study was undertaken in order to determine the clinical and haematological presentation of typhoid fever in children.

158 Predicting Osteopenia and Osteoporosis with a Simple Test: A Preliminary Work

M Moallem, H Parsian, A Mosapour, SR Hosseini, H Nooreddini, Z Shir Khanik, M Pouramir

Use of simple serum based tests to classify healthy individuals from patients with osteopenia/osteoporosis is gaining interest. It seems that the "Osteo-Pars" equation has reasonable benefit in discriminating healthy individuals from osteopenia/osteoporosis patients.

165 Can Mean Platelet Volume Be a Surrogate Marker of Inflammation in Rheumatic Diseases?

A Şahin, A Yetişgin, M Şahin, Y Durmaz, AK Cengiz

It has been suggested that low-level mean platelet volume (MPV) in humans may be related to secondary thrombosis due to inflammation. For this reason, MPV can be used as a marker showing inflammation in the body. In this study, we found a strong association between MPV and erythrocyte sedimentation rate and C-reactive protein in patients with rheumatic diseases. Thus, MPV may be used as a negative acute-phase reactant in rheumatic diseases.

170 Nutritional Knowledge, Attitude and Practice among Patients with Type 2 Diabetes in North Central Health Authority in Trinidad and Tobago

MC Webb, JJ Aguilar

A cohort of 122 patients was selected via quota sampling and surveyed using a structured questionnaire to assess knowledge, attitude and practice in relation to their disease and to compare these attributes between patients receiving or not receiving nutrition counselling.

177 Reduced Male:Female Ratio at Birth in Small Islands

V Grech

The male:female ratio at birth (M/F: male divided by total births) approximates 0.515. In The Bahamas, Barbados, Puerto Rico, Trinidad and Tobago, and Mauritius, M/F from 1960–2009 was only 0.5106 (95% CL 0.5101, 0.5110). There were no secular trends in M/F.

180 State and Regional Differences in the Male-to-female Ratio at Birth in the United States of America, 1995–2012

V Grech

Live male births slightly exceed females (M/F). This ratio is influenced by many factors. This study analysed live births (1995–2012, $n = 52\,601\,559$) in the United States of America. Southern states had a higher proportion of Black births and significantly lower M/F. This may be due to chronic stress due to disadvantaged socio-economic conditions.

185 Cleft Lip and Palate and Alveolar Bone Grafting in the United Kingdom: A Brief Overview for Non-specialists

A Shafi, EY Ah-kee, AA Khan

Cleft lip and palate is a common congenital defect that is associated with various functional, aesthetic and psychosocial problems. In this article, we sought to share a brief overview of the management of cleft lip and palate in the United Kingdom, particularly aimed at non-specialists.

189 The Issue of Leptospirosis in Grenada

MW Sperling

The characteristics of *Leptospira interrogans* are analysed and seroprevalence data regarding vectors in Grenada are then assessed from a secondary source. A literature review is then conducted into interventions which can best be suited to Grenada.

CASE REPORTS

- 198 Hyperbaric Oxygen Therapy: An Overlooked Therapeutic Option in Stroke Recovery and a Potential Source of Health Sector Revenue and Health Tourism**
S Lowe, DR Le Mercier du Quesnay, PMH Gayle, F Henry-Pinnock, T Wedderburn-Buddo
- 204 Left Atrial Isomerism in Afro-Caribbean Adolescents and Adults with No Intervention: Echocardiographic Findings**
S Williams-Phillips, M Hoo Sang
- 209 Case Report of a Patient with Relapse of B-cell Lymphoma in the Breast Parenchyma**
D Grebić, PV Zujčić, N Trbojević
- 212 Severe Antiepileptic Drug-induced Gingival Overgrowth in a Physically Disabled Patient**
R Kaomongkolgit, W Tantanapornkul, N Jittapiromsak, P Ngamwannagul, P Sriaroon
- 216 Acute Brucellosis Following Accidental Exposure to *Brucella melitensis* Rev 1 Vaccine**
D Seyman, Z Asik, N Sepin-Ozen, H Berk
- 219 A Case of Seborrhoeic Keratosis and Family Survey**
F Xie, R Wang, Y Chen, Y Jia, X Jia, M Chen, L Yang, X Lan
- 222 Successful Treatment of Cryptococcal Meningitis with Amphotericin B in a Patient with Systemic Lupus Erythematosus**
S Jiang, T-C Lei, S-Z Xu
- 226 Bilateral Septic Neonatal Orchiepididymitis – Case Report**
I Djordjevic, D Zivanovic, A Slavkovic, Z Marjanovic
- 229 Synchronous Onset of Cytomegalovirus Colitis and Ulcerative Colitis in an Immunocompetent Patient: A Case Report**
S Yangzhen, K Liu, T Xu, Y Yang, Y Zhang
- 232 Computed Tomography Identifies Hepatic Portal Venous Gas Caused by Severe Diarrhoea**
J-X Li, Q-G Cui, P-Y Gong
- 236 Stress Fracture of the Lesser Trochanter: A Case Report and Review of the Literature**
J Lee, P Khairandish, R Botchu
- 239 Unravelling the Paediatric and Perinatal Zika Virus Epidemic through Population-based Research**
CDC Christie, C Giaquinto
- 243 Emergence of Zika Virus Epidemic and the National Response in Jamaica**
KR Webster-Kerr, CDC Christie, A Grant, D Chin, H Burrowes, K Clarke, I Wellington, K Shaw, W De La Haye