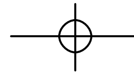


EDITORIAL BOARD

Chairman
HS Fraser

Editor-in-Chief
EN Barton

Associate Editors
C Escoffery
V Naraynsingh
GD Nicholson
R Roberts

Assistant Editors
P Desai
PJ Ramphal
D Brady-West
MO Castillo Rangel

Deans
HS Fraser
O St C Morgan
P Pitt-Miller
H Spencer (Director, UWI Clinical Training Programme)

Treasurer
E Robinson

T Alleyne
S Bandara
F Bennett
LL Douglas
J Frederick
F Henry (CFNI),
J Hospedales (CAREC)
G Hutchinson
AH McDonald
EY St A Morrison
A Pearson
D Picou
H Reid
GR Serjeant
DT Simeon (CHRC)
MF Smikle

Editorial Advisory Board
B Bain
B Barnett
E Besterman
V Boodhoo
G Burkett
H Daisley
CE Denbow
LF Ferder
JP Figueroa
PR Fletcher
B Hanchard
N Harris,
N Kissoon,
PN Levett
S Marshall-Burnett
TC Martin
A McCaw-Binns
T Seaton
OR Simon
WH Swanston
AAE Verhagen
RJ Wilks
B Wint,
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

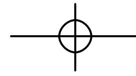
BUSINESS INFORMATION

Correspondence should be addressed to:
THE EDITOR-IN-CHIEF
West Indian Medical Journal, Faculty of Medical Sciences,
The University of the West Indies, Kingston 7, Jamaica
e-mail: wimj@uwimona.edu.jm
webpage: http://wimj.uwimona.edu.jm/ www.juniordoctors.com.wimj
Telephone (876) 927-1214 Fax (876) 927-1846

ANNUAL SUBSCRIPTION:
Overseas US$100.00 Local J$5,000.00

West Indian Medical Journal, Vol 52, Supplement 5; 2003
Published by the Faculty of Medical Sciences, The University of the West Indies, Mona, Jamaica,
St Augustine, Trinidad and Tobago and School of Clinical Medicine and Research, Cave Hill, Barbados

SUPP52.qxd 11/10/2003 4:18 PM Page 2

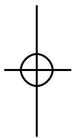


West Indian Medical Journal
Volume 52: Supplement 5, 2003

UWI Medical Alumni Association Seventh International Conference

Research and Caribbean Healthcare

November 4 – 8, 2003
Bahamas



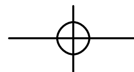
Editor-in-Chief
Professor EN Barton

Supplement Sub-Editor
Professor HS Fraser

Programme Director of CME Credits
Dr VR Boodhoo

Scientific Programme Coordinators
Professor HS Fraser
Dr VR Boodhoo
Dr JP Figueroa
Dr KE Hagley

SUPP52.qxd 11/10/2003 4:18 PM Page 3



THE UNIVERSITY OF THE WEST INDIES MEDICAL ALUMNI ASSOCIATION

7th International Conference

November 4 – 8, 2003
Bahamas

Alumni Association – Executive Officers

Victor R Boodhoo – Chairman

Adrian Sawyer – Bahamas

Jeff Massay – Barbados

Karl Massiah – Canada

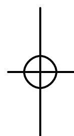
Nadia Williams – Jamaica

Godfrey Rajkumar – Trinidad & Tobago

Novelle Kirwan – USA (Central Florida)

Hardat Sukhdeo – USA (Tri State)

Zelma Richards – UWIMAA Secretariat



Conference Organizing Committee

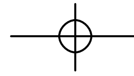
Victor R Boodhoo
Zelma Richards
Bahamas Chapter

Scientific Programme Coordinators

Henry S Fraser
Victor R Boodhoo
J Peter Figueroa
Knox E Hagley

CME Credits: *Reunion 7 International Medical Scientific Programme approved for 12 hours of Prescribed Credits by th American Academy of Family Physicians (accepted as equivalent to Category I Credit by the AMA).*

SUPP52.qxd 11/10/2003 4:18 PM Page 1



CONTENTS

Foreword 1

Message from the Editor-in-Chief 2

Editorial 3

Scientific Programme 4

Session 1 9

Session 2 12

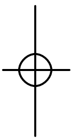
Session 3 15

Session 4 20

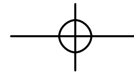
Session 5 24

Session 6 28

Index of Authors 31



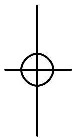
SUPP52.qxd 11/10/2003 4:18 PM Page 1



FOREWORD

We have come to expect that The University of the West Indies Medical Alumni Association (UWIMAA) scientific conferences provide informative and outstanding presentations. This seventh meeting clearly maintains that tradition. The wide array of papers includes updates in many clinical areas with an unusually large number of topics dealing with research throughout the Caribbean. The theme of the conference "Research and Caribbean Healthcare" is most appropriate.

Consistent with the conference theme is Professor Niranjan Kissoon's thought-provoking keynote address on *"Research Issues in Academic Medicine: Juggling Career Aspirations with Quality."* In the second keynote address, Professor Frederick Hickling arouses our curiosity with his topic *"Medical Education at The University of the West Indies, Mona: Truth and Consequences."*



The late Professor Nigel Gibbs, Dean of the Faculty of Medical Sciences at Mona, is remembered as an excellent administrator, superb teacher and distinguished haematologist. A consummate professional, his untimely death was a great blow to UWI and UWIMAA. Delivering the second Nigel Gibbs Memorial Lecture is Professor Henry Fraser, Dean, School of Clinical Medicine and Research, Cave Hill. Professor Fraser, an illustrious physician, scholar, teacher, administrator and UWI public orator, shares with us his hopes and dreams – *"UWI and a Vision of Health for the Caribbean."*

Several papers deal with the selection, attitudes and evaluation of training methodology for medical students. Others examine the demographics, distribution and specialization of medical graduates. Topics covered range from neonatal to end-of-life issues, infectious diseases new, old and recalcitrant, and epidemiology from regiona and international perspectives.

There is no doubt that UWI-trained physician continue to make a significant contribution to research not just for the Caribbean Health and Research Council but at our reunion conferences for the benefit c practitioners. We applaud the presenters for heightenin our awareness of ongoing research in the Caribbean regio and beyond.

While research is expected to influence regiona national and institutional healthcare initiatives, in the fina analysis, it is translated to the benefit of patients at th practitioner level. We would like to remind our readers c the importance of the engaged attention of the user of th most sophisticated research as an instrument of healing:

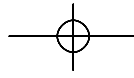
If there is any posture that disturbs a suffering man or woman, it is aloofness. No one can help anyone without becoming involved.
Henri Nouwen, The Wounded Healer, 1972.

In this vein, let us bear in mind the timeless aphorism by S William Osler:

It is much more important to know what sort of a patien has a disease than what sort of a disease a patient has.

Victor R Boodhoo
Chairman
The University of the West Indies
Medical Alumni Association

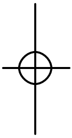
SUPP52.qxd 11/10/2003 4:18 PM Page 2

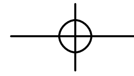


MESSAGE FROM THE EDITOR-IN-CHIEF

The focus of this Seventh Reunion Conference of The University of The West Indies Medical Alumni Association (UWIMAA) is most timely. The West Indian Medical Journal has been at the forefront of publication of Caribbean research over the last 52 years and is pleased to be associated with this conference. The richness which the UWlMAA brings to the academic calendar of the Caribbean is undoubted. Its interest in research will enhance local efforts and help to foster that culture of research so vital if academic institutions are to be fully responsive to the healthcare needs of the region. It is also important that strategies be developed and implemented meet these needs. Funding for research and up-to-d research equipment may be areas where the UWIMAA c work closely with academic departments to enhance th full potential for research. I wish you a most successf conference.

Everard N Barton
Editor-in-Chief



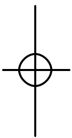


EDITORIAL

Are We Doing as Much as We Can?

Reunion 7 of the University of the West Indies (UWI) Medical Alumni is surely a sign of maturity and an event to remember. Seven is an important number; according to the Book of Genesis, God rested on the seventh day. But this reunion is a re-affirmation that the UWI Medical Alumni have no intention of resting - either on their laurels or with a job incomplete – but will redouble efforts to promote the health and success of our *alma mater.*

Reunion 7 breaks with the tradition of alternate reunions (odd numbers) at Mona and even numbers in other campus countries or Caribbean countries. The venue is appropriate in view of the recent establishment of a medical teaching unit in Nassau, as a satellite of the Faculty of Medical Sciences at St Augustine, Trinidad and Tobago. And who does not enjoy a meeting where "it's better in the Bahamas"! In fact, this is the second large Caribbean medical meeting in Nassau for the year, following on the heels of the biggest and best ever Caribbean Health Research Council (CHRC) meeting there six months ago.



The Science

The scientific programme, as usual, is rich and varied. Topics range from cutting edge work on asthma and HIV/AIDS to clinical reviews. It concludes with a symposium on teaching and medical curricula. The keynote lectures by Professors Hickling and Kissoon address issues of quality, medical education and research, while the Nigel Gibbs Memorial Lecture looks at the role of UWI and a vision for Caribbean healthcare. The message of the latter is that UWI must play a far more pro-active role in defining the vision and the means of fulfilling it.

The People

But the social programme and interaction, as usual, is the real *raison d'etre* of all reunions. Underneath the warmth and camaraderie, the reunions and reminiscences, is the deep and abiding faith and hope that each of us in our own small (or not so small) way can, does and will contribute to the health and success of UWI and our medical faculties and school. As we recall our halcyon days in medical school, and the treasured memories of the great teachers and mentors still with us, even at a distance, such as Dave Stewart, Eric Cruickshank, Gerit Bras, Andrew Masson, John Waterlow, Don Christian, Mike Woo Ming, Ken George Alleyne, and those like Sir Harry Annamunthado Sir John Golding, Pamela Rodgers-Johnson, Rolf Richards Bill Brooks and Ronnie Irvine, in blessed company in th Elysian fields; and as we recall the wonderful times c passion, of play and of power without responsibility as w struggled with new concepts and old ideals of how t become a doctor; how can we not tighten the knot tha binds us to this unique institution of UWI – th quintessence of West Indian nationhood?

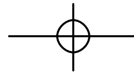
Sir George Alleyne

As this issue goes to press, we have just heard the news c the appointment of Sir George Alleyne, Professor c Medicine at Mona from 1972 until 1980, and Director c PAHO from 1995 to 2003, as the fifth Chancellor of ou beloved University. Sir George entered UWI in 1951, on Barbados Scholarship in classics and proceeded to be th golden boy at Mona for the next 30 years. As he was m own research mentor, I can safely say, 32 years later, that h laid a path for the rest of us to follow. His life has been tha of a role model of heroic proportions, and his appointmen as Chancellor is an affirmation of excellence, and a sig that UWI will respond magnificently to the huge challenge it faces in this decade. We congratulate our mos distinguished alumnus. We wish him well in his ne leadership role, and we look forward to working closel with him in renewed efforts to promote UWI as th foremost Centre of Excellence for tertiary education in th developing world – a light that surpasses many bette endowed institutions in the developed world.

To quote from a previous editorial: "No one shoul underestimate the potential of the almost 5,000 UW medical alumni to make a difference to the health of th Caribbean people. And so we end this note as we began: ar we doing as much as we can?"

Henry S Fraser
Professor of Medicine and Clinical Pharmacology
Dean, School of Clinical Medicine and Research
Director, Chronic Disease Research Centre,
Tropical Medicine Research Institute,
The University of the West Indies, Cave Hill, Barbados

SUPP52.qxd 11/10/2003 4:18 PM Page 4



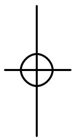
UWI Medical Alumni Association
Seventh International Conference

Scientific Programme

Nassau, Bahamas
Radisson Cable Beach and Golf Resort

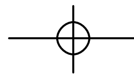
Wednesday, November 5, 2003

	7:50 am	***Scientific Sessions/Opening Address*** ***Dr Marcus C Bethel*** ***Minister of Health, Bahamas***
Session 1		***Medicine and Paediatrics I***
		Chairpersons: E Harry, R Roberts
(1 – 1)	*8:00 am*	*Diabetic foot – the rotten potato syndrome* *V Naraynsingh*
(1 – 2)	*8:15 am*	*Osteoarthritis – what's new in medical management?* *WA Wilson*
(1 – 3)	*8:30 am*	*Diabetic autonomic neuropathy: spectrum of clinical involvement* *JD Stewart, G Bartlett, T Townsend*
(1 – 4)	*8:45 am*	*Congenital adrenal hyperplasia in the Bahamas* *SA Peter*, G McDiegan, P Sandiford, T Smith*
(1 – 5)	*9:00 am*	*Centers for Disease Control and Prevention-defined diseases and opportunistic infections in Jamaican children with HIV/AIDS* *R Pierre*, T Evans-Gilbert, B Rodriguez, P Palmer, S Whorms, I Hambleton, JP Figueroa, C Christie*
(1 – 6)	*9:15 am*	*Ocular manifestations of systemic diseases* *G Taylor*



** = Presenter*

NB: All papers are of 10 minutes duration, followed by 5 minutes discussion

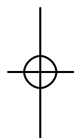


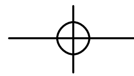
(1 – 7)	*9:30 am*	*The effect of montelukast on the time-course of exhaled nitric oxide in asthma: influence of LTC_4 Synthase A_{-444} Polymorphism* *N Kissoon**, *GJ Whelan, K Blake, LJ Duckworth, J Wang, JE Sylvester, JJ Lima*
(1 – 8)	*9:45 am*	*Outcome of neonates admitted to the Intensive Care Unit at the University Hospital of the West Indies: a 15 - year review* *H Trotman*, M Barton-Forbes, V Mitchell*
(1 – 9)	*10:00 am*	***Keynote Address: Medical education at The University of the West Indies, Mona: truth and consequences*** *FW Hickling*
	10:30 am	***COFFEE BREAK***

Session 2 — ***Medicine and Paediatrics II***

Chairpersons: N Williams, R Singh

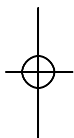
(2 – 1)	*11:00 am*	*Atrial septal aneurysm at the Queen Elizabeth Hospital – an echocardiographic and patient profile* *RJ Massay, KL Connell**
(2 – 2)	*11:15 am*	*A study of electrolyte abnormalities in patients with the acquired immunodeficiency syndrome* *S Kshatriya*, O Ablack*
(2 – 3)	*11:30 am*	*I^{131} Therapy for hyperthyroidism - the Bahamian experience* *SA Peter*, L Carroll, C Sawyer*
(2 – 4)	*11:45 am*	*Myglobinuric acute renal failure: physical fitness gone awry* *K Hewan-Lowe*, C Nzerue*
(2 – 5)	*12:00 noon*	*Tuberculosis, chickenpox and scabies outbreaks in a home for children with HIV/AIDS* *M Geoghagen*, R Pierre, T Evans-Gilbert, B Rodriguez, C Christie*
(2 – 6)	*12:15 am*	*Relevance of type of catheters for central venous pressure measurement* *M Gayle*, S Santelices, KJ Sullivan, N Kissson, LJ Duckworth, SP Murphy*
(2 – 7)	*12:30 am*	*Transvenous pacing in young children: safe and effective* *CH Gaymes*, LT Kelly, AM Mehta, MR Ebeid, JC Shores, JC Smith, JA Joransen*
(2 – 8)	*12:45 am*	*Disease or illness* *MD Hoyos*
(2 – 9)	*1:00 pm*	*Ocular manifestations of pharmacologic agents* *G Taylor*
	1:15 pm	***LUNCH***



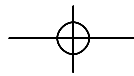


Thursday, November 6, 2003

Session 3		***Surgery***
		Chairpersons: LL Douglas, P Da Camara
(3 – 1)	*8:00 am*	*The terror of anaphylaxis* *JRK Butchey*
(3 – 2)	*8:15 am*	*New advances in the treatment of erectile dysfunction by oral agents* *J McDonald*
(3 – 3)	*8:30 am*	*Failure of bromocriptine therapy to control juvenile mammary hypertrophy* *GDL Arscott*, L Gabay, HR Craig*
(3 – 4)	*8:45 am*	*Epidemiology of burns at the University Hospital of the West Indies* *R Venugopal*, D Ferron-Boothe, N Meeks-Aitken, R Carpenter, GDL Arscott*
(3 – 5)	*9:00 am*	*Autism: the role of the otolaryngologist* *H Shaw*
(3 – 6)	*9:15 am*	*Differences in patient characteristics in men of African descent, with prostate cancer from Jamaica and Chicago* *WD Aiken*, T Tulloch, V Freeman, F Bennett, KCM Coard, B Panton, T Mason, J Cudeki, R Flanigan*
(3 – 7)	*9:30 am*	*Report on the start-up of a prostate brachytherapy programme in a community-base cancer centre measuring both clinical outcomes and cost benefit analysis* *C Springer*
(3 – 8)	*9:45 am*	*Severe Acute Respiratory Syndrome (SARS): the Toronto experience and relevance to the Americas* *UD Allen*
(3 – 9)	*10:00 am*	***Keynote Address: Research issues in academic medicine: juggling career aspiratio with quality*** *N Kissoon*
	10:30 am	***COFFEE***



Session 4		***Surgery, Obstetrics and Gynaecology***
		Chairpersons: G Rajkumar, JD Stewart
(4 – 1)	*11:00 am*	*Acute pulmonary embolism after major head and neck surgery* *H Shaw*
(4 – 2)	*11:15 am*	*Oesophageal foreign bodies at the University Hospital of the West Indies* *E Williams*, D Chambers, H Ashman, J Williams-Johnson, P Singh, AH McDonald, J Lindo, A Wierenga, R Forde*
(4 – 3)	*11:30 am*	*The challenge of managing dermatofibrosarcoma protuberans* *GDL Arscott*, R Venugopal*

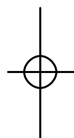


(4 – 4)	*11:45 am*	*Retrospective review of extra corporeal surgery in gynaecology* *S Persad*
(4 – 5)	*12:00 noon*	*Evaluation of clinical practices associated with Caesarean sections at the University Hospital of the West Indies, Jamaica* *R Blanc*, S Kulkarni, A Mullings, L Matadial*
(4 – 6)	*12:15 am*	*Pregnancy after laparoscopic intracorporeal myomectomy* *G Rajkumar*, SV Potluri*
(4 – 7)	*12:30 am*	*Mortality statistics of Grand Bahama, 1993 - 2002* *AF Brathwaite*
(4 – 8)	*12:45 am*	*Life in remission* *D Raje*
	1:00 pm	***LUNCH***

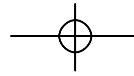
Friday, November 7, 2003

Session 5 ***Caribbean Medley***

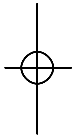
Chairpersons: C Aird, A Standard-Goldson

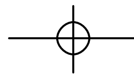


(5 – 1)	*8:00 am*	*Tetanus - going but not gone! preventive strategies revisited* *E Williams*, H Harding, R Forde, D Chambers, K Alagappan, J Williams-Johnson, S French, R Hutson, P Singh, AH McDonald*
(5 – 2)	*8:15 am*	*Requests for admission to the Intensive Care Unit, the University Hospital of the West Indies* *R Augier*, I Hambleton, H Harding*
(5 – 3)	*8:30 am*	*Predicting outcomes in the Intensive Care Unit at The University of the West Indies* *A Williams*, H Harding, I Hambleton*
(5 – 4)	*8:45 am*	*Tuberculosis and human immunodeficiency virus co-infections in Jamaican infants and children* *M Geoghagen*, J Farr, R Pierre, I Hambleton, C Christie*
(5 – 5)	*9:00 am*	*Knowledge, attitudes and practices of medical students and doctors at the University Hospital of the West Indies with regards to diagnosis and management of tuberculosis* *C Stoutt, C Allen, C Lord, M Barton-Forbes*, K Brightly, P Scott, C Christie, JP Figueroa*
(5 – 6)	*9:15 am*	*The Ophthalmological Society of the West Indies; a model for regional specialty organizations in medicine* *D Singh*
(5 – 7)	*9:30 am*	*A paediatric and perinatal HIV/AIDS leadership initiative in Kingston, Jamaica* *C Christie*



(5 – 8)	*9:45 am*	***The Nigel Gibbs Memorial Lecture***
		Introduction of Speaker – Chairman: VR Boodhoo
		The University of the West Indies and a vision of health for the Caribbean *HS Fraser*
	10:30 am	***COFFEE***
Session 6		***Medical Education***
		Chairpersons: W Wilson, K Massiah
(6 – 1)	*11:00 am*	*Medical graduates of the University of the West Indies: demographic characteristics specialties and geographical distribution* *KE Hagley*
(6 – 2)	*11:15 am*	*Changes in the selection criteria for the MBBS Degree, Faculty of Medical Sciences, Mona – an early evaluation* *JM Branday*, A Wierenga*
(6 – 3)	*11:30 am*	*Twenty years of internship at the Princess Margaret Hospital, where are the doctors* *CO Sin Quee*, R Roberts, CS Brown, A Regis*
(6 – 4)	*11:45 am*	*A comparison of the final written examination with the clinical clerkship in surgery* *S Williams-Lockhart*
(6 – 5)	*12:00 noon*	*Spiritual health assessment in the undergraduate medical curriculum at The Univers of the West Indies, Mona – stepping out in faith!* *EA Allen*, TJ Paul*
	12:15 pm	***Closing Remarks*** *Chairman: VR Boodhoo*





Medicine and Paediatrics I

-

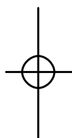
Chairpersons: E Harry, R Robert

(1 – 1)
Diabetic foot – the rotten potato syndrome

V Naraynsingh
Faculty of Medical Sciences, The University of the West Indies, St Augustine, Trinidad and Tobago

In Trinidad and Tobago, approximately 250 major lower limb amputations are done annually. Some 85% of these are in diabetics and 84% of diabetic limb loss is associated with sepsis. The septic diabetic foot is the commonest cause of limb loss and focus on its prevention and treatment should reduce amputation rate significantly.

Experience with surgery in 415 septic diabetic feet has shown that the amount of deep tissue loss and sepsis consistently exceeds the outward appearance on the skin and subcutaneous tissue – hence the title 'Rotten Potato Syndrome'. Because the septic process is usually deep to the deep fascia (which is unyielding), there is only little swelling (tumor) and very little redness (rubor). Because of diabetic neuropathy, there is minimal pain (dolor) while warmth (calor) remains the most consistent of the four cardinal features of acute inflammation. Because only one of the four cardinal features of inflammation is consistently obvious both patients and healthcare workers often underestimate the severity of sepsis. A high index of suspicion along with specialist teams to care for the diabetic foot could improve the outcome for these patients.



(1 – 2)
Osteoarthritis – what's new in medical management?

WA Wilson
Louisiana State University, School of Medicine, New Orleans, Louisiana, USA

The management of patients with osteoarthritis provides a model for many chronic diseases, for which cure is not an option, only attempts to improve functional outcome. For most patients with symptomatic osteoarthritis, a multi-faceted approach is needed that incorporates newer approaches with well known traditional methods most of which involve lifestyle modification, such as physical or occupational therapy, weight reduction, and joint

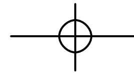
- glucosamine – a relatively inexpensive over-the counter nutritional supplement that may slow th disease process in articular cartilage
- analgesic anti-inflammatory drugs that prefer entially inhibit cyclo-oxygenase-2 and ar associated with relatively less gastrointestina toxicity
- "viscosupplementation" – the intra-articula injection of synovial fluid substitutes.

These newer approaches, though controversial in som respects, are useful in selected patients. Especially wit respect to the large subset of patients with chronic co morbidities such as hypertension and cardiovascula disease, more time is needed to judge the true impact of th newer therapies on overall outcome.

(1 – 3)
Diabetic autonomic neuropathy: spectrum of clinica involvement

JD Stewart, G Bartlett, T Townsend*
Montreal Neurological Institute, Montreal, Quebec, Canada

Background: Unlike polyneuropathy (PN), diabeti autonomic neuropathy (DAN) has been little studied. Th objectives of this study were to evaluate (1) the pattern c involvement of different organs/systems in DAN; (2) th relationship of DAN to PN and duration, type of diabete mellitus (DM) and to other microvascular complications.
Methods: The charts of patients with DAN symptoms wer reviewed. Autonomic dysfunction was assessed b symptoms. Organs/systems evaluated were: cardiovascula (CV), bladder (BL), upper (UGI) and lower gastrointestina tract (LGI), anorectal incontinence (ARI), lacrimation an salivation (LS), sweating (SW), and erectile dysfunctio (ED) in males. Polyneuropathy was quantified clinically.
Results: Ninety-five patients (75 men) were studied. C the 8 autonomic nervous system (ANS) organs/systems i men and 7 in women (the difference being ED), mean orga involvement was 2.5 (minimum 1, maximum 8). Frequenc of involvement was: CVS 59%, SW 34%, LGI 33%, B 27%, UGI 24%, LS 10%, ARI 5%. ED was present in 80% of males. Mean PN score was 1.6 (maximum 4) (SD 0.8



organs/systems involved (r-0.21, p-value – 0.04). There was no correlation between DAN and duration, type of DM, or retinopathy or nephropathy.

Conclusions: DAN produces patchy and selective symptomatic autonomic dysfunction. It correlates weakly with PN severity, but not with duration or type of DM, retinopathy or nephropathy.

(1 – 4)

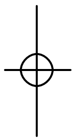
Congenital adrenal hyperplasia in the Bahamas

SA Peter, G McDiegan, P Sandiford, T Smith*
The University of the West Indies Training Programme, Nassau, Bahamas

Objective: To determine the frequency of 21-hydroxylase deficiency in the Bahamas and the spectrum of this disorder.

Methods: Patients referred for evaluation of virilization, precocious puberty, ambiguous genitalia, and salt wasting had 17 – hydroxyprogesterone levels measured by radio-immune assay. Population statistics were obtained from the 2000 population census.

Results: Nine patients (six females, three males) had elevated 17 – hydroxy progesterone levels – confirming 21 – hydroxylase deficiency. Range of levels was from 55 ng/dl to 25, 654 ng/dl. The age at diagnosis was 21 days to 16 years.



5 – Precocious development
3 – salt wasting
1 – virilization
1 – ambiguous genitalia – also had salt wasting

The incidence of 21–Hydroxylase deficiency was 60/100,000; salt wasting was 40/100,000; the prevalence of 21-Hydroxylase deficiency was 3/1000.

Conclusion: The frequency of 21 – Hydroxylase deficiency in the Bahamas is one of the highest worldwide.

(1 – 5)

Centers for Disease Control and Prevention – defined diseases and opportunistic infections in Jamaican children with HIV/AIDS

R Pierre, T Evans-Gilbert, B Rodriguez, P Palmer, S Whorms, I Hambleton, JP Figueroa, C Christie*
The University of the West Indies, the University Hospital of the West Indies, Bustamante Hospital for Children Hospital, KPAIDS Programme, Tropical Medicine Research Institute, National AIDS Programme, Kingston and Spanish Town Hospital, St Catherine, Jamaica

Objective: To document the frequency of Centers for Disease Control and Prevention -defined clinical conditions among children with HIV/AIDS.

Methods: This is a prospective study of 204 childr followed in multicentre ambulatory clinics from Septeml 1, 2002 to June 30, 2003. We report the clinico-patholog characteristics of 95 children with HIV/AIDS, using t CDC criteria.

Results: The median age of 95 children with HIV/AII was 5.0 years (range 0.9 – 17.5 years). Mode of trai mission was primarily Mother-to-Child (87%) and t majority (85%) did not receive antiretroviral prophylax Grouped by CDC category: 25% were asymptomatic (I 18% mildly symptomatic (A), 25% moderately sym tomatic (B) and 32% severely symptomatic (C). The m common CDC-defining symptoms were lymphadenopat (34%) and asymptomatic (28%) in category lymphadenopathy (31%), dermatitis (27%) and persiste or recurrent upper respiratory tract infections (22%) category **A**; bacterial sepsis (29%) and recurrent diarrhc (24%) in category **B**; and encephalopathy (29%), wasti (27%) and serious bacterial infections (18%) in category Pulmonary tuberculosis (8%) and severe candidiasis (3 were the most frequent opportunistic infections. Thirty-o per cent commenced antiretroviral drugs (ARVs). The were 48 hospitalizations and six deaths.

Conclusions: The study is an important step towa documentation of the natural history of paediat HIV/AIDS in a primarily ARV-naïve population fron developing country. It promotes training in paediatric H management as we move toward affordable access of AR in the Caribbean and the implementation of clinical trial

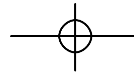
(1 – 6)

Ocular manifestations of systemic diseases

G Taylor
Chief, Department of Ophthalmology, Cornwall Gene Hospital, Ontario, Canada

There are many systemic diseases that have ocu manifestations. On many occasions the ophthalmologist the first person to recognize and diagnose these diseas based on ocular findings seen most often during regu ophthalmic examinations. Sometimes the findings could sight and or life threatening. The more common systen diseases will be discussed: metabolic diseases, autoimmu diseases, haematological diseases and connective tiss disorders.

SUPP52.qxd 11/10/2003 4:18 PM Page 11



(1 – 7)

The effect of montelukast on the time-course of exhaled nitric oxide in asthma: influence of LTC_4 synthase $A_{-444}C$ polymorphism

N Kissoon, GJ Whelan, K Blake, LJ Duckworth, J Wang, JE Sylvester, JJ Lima*
Department of Pediatrics, University of Florida Health Science Center; and Centers for Pediatric Pharmacology Research and Pharmacogenetics, Nemours Children's Clinic, Jacksonville, Florida, USA

Objective: Leukotrienes (LT) mediate inflammation in asthma. The fraction of exhaled nitric oxide (FE_{NO}) is thought to be a sensitive and reproducible method for assessing airway inflammation in asthmatics and the anti-inflammatory effects of drugs. A number of factors are known to contribute to intra-patient variation in FE_{NO}, which can confound interpretation. The aims of this study were to characterize the time course of FE_{NO}, determine the effect of montelukast on the time course of FE_{NO}, and to evaluate the influence of the LTC_4 synthase $A_{-444}C$ polymorphism on montelukast-evoked changes in FE_{NO}.
Methods: Following a 2-week run-in, 7 males and 5 females with asthma, 10-16 years old, received 5 or 10 mg of montelukast or an identical placebo at bedtime for 7 days in double-blinded, crossover fashion followed by a 7-day washout. FE_{NO} was quantified every 30 minutes for 3 or 6 hours at baseline and on days 1, 2, 3, and 7 of treatment. A time-averaged value for FE_{NO} was calculated (FE_{NO}*), and % change in FE_{NO}* relative to baseline *versus* time following placebo and montelukast were compared. The genotype of the $A_{444}C$ polymorphism was determined by PCR and RFLP.
Results: FE_{NO} varied markedly as a function of time in each patient. Time-averaged values of FE_{NO} (FE_{NO}*) during placebo and montelukast treatment were similar. Montelukast significantly reduced the slope of the % change in FE_{NO}* *versus* time curve in heterozygotes (n = 4), but not in A/A homozygotes (n = 8). These data suggest that heterozygotes respond better to montelukast compared to A/A homozygotes, at least with respect to changes in FE_{NO}.
Conclusions: Assessment of inflammation or the anti-inflammatory effects of drugs in asthma based on single determinations of FE_{NO} can be misleading. The $A_{-444}C$ polymorphism in the LTC_4 synthase gene probably contributes to inter-patient variability in montelukast-evoked changes in FE_{NO}* and warrants further study.

(1 – 8)

Outcome of neonates admitted to the Intensive Car Unit at the University Hospital of the West Indies: a 1 year review

H Trotman, M Barton-Forbes, V Mitchell
Department of Obstetrics, Gynaecology and Child Healtl and Department of Surgery, Radiology, Anaesthesia an Intensive Care, The University of the West Indies, Jamaic

Objective: To determine the outcome of ventilator support of neonates admitted to the intensive care unit c the University Hospital of the West Indies (UHWI).
Methods: A retrospective analysis of neonates admitted fc ventilatory support to the Intensive Care Unit of the UHW from January 1987 to December 2001, was conductec Data on demographics, birthweight, diagnosis, length c stay and outcome were extracted from the case notes Differences in outcome by gender, weight, diagnosis length of stay and time period were determined usin ANOVA.
Results: One hundred and fifty-three neonates wer admitted to the ICU during the study period of whom 7 (48%) died. Forty (56%) female neonates survive compared to 40 (49%) male neonates. The main reasons fc admission were Prematurity/Respiratory Distress Syr drome RDS, Hypoxic Ischaemic Encephalopathy an Meconium Aspiration Syndrome. The most commo reason for admission was Prematurity/ RDS 102 (66.7%) c which 53 (52%) survived. Mean length of stay for survivor was 7.4 ± 7.1 days compared to 4.4 ± 7.8 for non-survivors ($p < 0.05$).
Conclusions: Mechanical ventilation improves outcome c neonates provided prompt intervention occurs as soon as c shortly after the development of respiratory failure. To thi end, the development of a neonatal ICU with its ow dedicated ventilators would help to reduce unwante neonatal outcome.

Keynote address

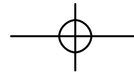
(1 – 9)

Medical education at UWI, Mona: truth and consequences

FW Hickling
Section of Psychiatry, The University of the West Indie. Kingston, Jamaica

NO ABSTRACT

SUPP52.qxd 11/10/2003 4:18 PM Page 12



Medicine and Paediatrics II

-

Chairpersons: N Williams, R Sin

(2 – 1)
Atrial septal aneurysms at the Queen Elizabeth Hospital – an echocardiographic and patient profile

*RJ Massay, KL Connell**
Departments of Cardiology and Medicine, Queen Elizabeth Hospital, Bridgetown, Barbados

Background: Historically, atrial septal aneurysms have been observed as an incidental finding at autopsy. Their clinical significance was not appreciated until recently when some authors suggested an association with an increased risk of cerebrovascular events. As a result of this observation, the cardiological community has been questioning the role of antiplatelet drugs in the management of these patients diagnosed with atrial septal aneurysms by transthoracic imaging.

Methods: Data were obtained from the echocardiographic registry at the Queen Elizabeth Hospital for the period July 1990 – May 2003. The notes of this patient group were reviewed to ascertain information regarding the patient profile. The echocardiographic statistics were obtained by review of both the notes and the echocardiographic images. This patient group was reviewed to ascertain whether they developed any acute cerebrovascular or cardiovascular events.
Results: The results showed an echo incidence of approximately 0.03. Only one patient either presented with a cerebrovascular event or developed one in the average follow-up period of 7.4 years.
Conclusions: Only one patient presented with an ischaemic event. There was no preclinical diagnosis of an atrial septal aneurysm made on clinical examinations. Atrial septal aneurysm as diagnosed by transthoracic echo, was not a risk factor for CVA in our cohort.

(2 – 2)
A study of electrolyte abnormalities in patients with the acquired immunodeficiency syndrome patients

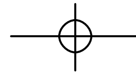
S Kshatriya, O Ablack*
Princess Margaret Hospital, Nassau, New Providence, Bahamas

Objective: To determine the most common electrol abnormalities in patients with the acquired immur deficiency syndrome (AIDS).
Method: Twenty-five consecutive patients with AIL admitted to the ward with electrolyte abnormalities duri a one month period, were selected and consent participation in the study was obtained. They were th interviewed and their charts were reviewed for t following: sodium, potassium, chloride, bicarbonate, blo urea nitrogen and creatinine. Patients electrolyte seri levels were measured with the SMA C Technicon system the usual manner (hospital laboratory).
Results: Of the 25 patients in the study, 12 were female a 13 were male. Ages ranged from 17 to 66 years. A total 16 (64%) of the patients admitted had hyponatraemia (ni females and seven males). While 15 had potassiu abnormalities, eight (32%) were hypokalaemic and sev (28%) were hyperkalaemic (two of these patients with rer insufficiency). A total of five patients had renal sufficiency. Fourteen patients were acidotic.
Conclusion: Hyponatraemia is the most comm electrolyte abnormality in the acquired immunodeficien syndrome patient and appears more common in the fem patient.

(2 – 3)
I^{131} Therapy for hyperthyroidism – the Bahami experience

SA Peter, L Carroll, C Sawyer*
The University of the West Indies, Nassau, Bahamas

Objective: To determine the efficacy of an ablative dose I^{131} in the management of Hyperthyroidism.
Subjects and Methods: Patients clinically and bio-cher cally hyperthyroid, who chose this mode of therapy we referred consecutively for I^{131} therapy at Doctors Hospital New Providence, Bahamas. The first four patients h radioactive iodine uptake of the thyroid to assist determining the ablative dose of I^{131}. For ease of thera and cost effectiveness, the remaining patients had estimated ablative dose of I^{131} therapy without pr radioactive uptake. Patients were followed to determine t



period from therapy to becoming euthyroid and hyperthyroid. Serum TSH and T_4 levels were measured by the usual assays.
Results: There were 30 patients (23 females, 7 males) of average age 47.4 years; average gland size was 50 g, average dose of I^{131} was 15.7 millicures. Twenty patients kept regular follow-up appointments. Thirteen of these patients became hypothyroid within six months of therapy and seven euthyroid. Of this euthyroid group, six patients became euthyroid within four months and one patient with a multinodular gland of approximately 100 g became euthyroid 12 months following I^{131} therapy.
Conclusion: An ablative dose of I^{131} is efficacious in the management of hyperthyroidism. Measurement of the 24 hour radioactive iodine uptake of the thyroid is not necessary to determine the ablative dose of I^{131}.

(2 – 4)
Myoglobinuric acute renal failure: physical fitness gone awry

K Hewan-Lowe, C Nzerue*
Department of Pathology, East Carolina University, Brody School of Medicine, Greenville North Carolina; Department of Internal Medicine, University of Rochester, School of Medicine and Dentistry, Rochester, New York, USA

Myoglobinuric acute renal failure (ARF) may result from traumatic injury, drugs, toxins and metabolic disorders. Strenuous exercise can cause the uncommon complication of myoglobinuric ARF. We report the case of an adult who developed myoglobinuric ARF when he initiated a physical fitness programme.

Following recovery from cosmetic surgery, a 56-year-old male began physical fitness training. After an episode of strenuous exercise, he complained of rigors, chills and nausea. He noted that his urine was "chocolate coloured". Although his urine colour improved over a three day period, he developed dysphagia and myalgia. His admission laboratory data showed anaemia, leucocytosis with a left shift, elevated creatinine phosphokinase (435), elevated lactic acid dehydrogenase (1,479), elevated serum creatinine (10.6), and elevated blood urea nitrogen (92). Urinalysis revealed 3^+ blood and 3^+ protein. Red cells (5-19/hpf) and white cells (5-19/hpf) were also present. An IgG-M component was present in the serum and the urine. Diagnostic renal biopsy was performed. The renal biopsy showed acute tubular necrosis. Pigment casts, immuno-positive for myoglobin, and red cells were present in the lumen of the renal tubules. Haemodialysis was performed. At the time of discharge, his blood urea nitrogen had decreased to 49 mg/dl and serum creatinine was 3.3 mg/dl.

With increasing emphasis on physical fitness, physicians, personal fitness trainers and the public need to be aware of the morbidity of exercise-induced myoconditioning is the key to prevention of physical fitness gon[e] awry.

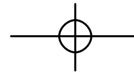
(2 – 5)
Tuberculosis, chickenpox and scabies outbreaks in [a] home for children with HIV/AIDS

M Geoghagen, R Pierre, T Evans-Gilbert, B Rodrigue[z], C Christie*
The University of the West Indies and the Universi[ty] Hospital of the West Indies, Bustamante Hospital f[or] Children, Spanish Town Hospital and the Kingston PAID[S] Programme, Jamaica

Objective: To describe the outbreaks of tuberculosi[s] chickenpox and scabies in a home for children wi[th] HIV/AIDS.
Method: We reviewed outbreaks of tuberculosis (TB) (cases), chickenpox (15 cases) and scabies (14 cases) in home for 24 abandoned children with HIV/AIDS. Modifie[d] WHO criteria for diagnosing TB and clinical criteria f[or] chickenpox and scabies were applied.
Summary of Results: Of the surviving 22 children, ag[e] range was one to 13 years. Primary immunization wa[s] documented for 16 children, but was incomplete for si[x]. One child had varicella vaccine. Eleven (50%) we[re] receiving antiretroviral triple therapy since 2002 (CD[C] immunological categories 2-3). Two cases of TB die[d] between 2001 and 2002; these were not on antiretrovir[al] therapy. All staff contacts tested Mantoux negative. Fiftee[n] children and three caregivers developed chickenpox. Th[e] index case was a 13-year-old resident attending a nearb[y] school with HIV negative children. Caregiver househol[d] members and residents in adjacent residential facilitie[s] were also affected. Scabies affected 14 children; the inde[x] cases were three children transferred from other home[s] with scabies infestation. Scabies was resistant to therap[y]. Concurrent chickenpox and scabies occurred in seve[n] (31%) of the residents. No cases of shingles, disseminate[d] varicella, hospitalization or death were documente[d]. Diagnosed cases of chickenpox were treated with or[al] acyclovir. Knowledge about these disease outbreaks an[d] their control was generally lacking.
Conclusions: Increased awareness about prevention an[d] control of acute opportunistic infections in children wi[th] HIV/AIDS living in residential facilities and developme[nt] of infection control protocols are needed.

(2 – 6)
Relevance of type of catheters for central venous pressure measurement

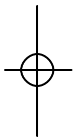
M Gayle, S Santelices, KJ Sullivan, N Kissoon, LJ Duckworth, SP Murphy*
University of Florida, Health Science Center, Jacksonvil[le] and Nemours Children's Clinic, Jacksonville, Florida, US[A]



Objective: To compare simultaneous central venous pressure (CVP) measurements from rigid polyurethane and soft tunnelled silicone elastomere catheters (SC).
Methods: Five children undergoing bone marrow transplantation with pre-existing polyurethrane and silastic catheters in a bone marrow transplant unit in a tertiary care children's hospital were studied. Simultaneous CVP readings were obtained by two observers blinded to the other readings and to the type of catheter. Readings were done in triplicate (total of 690 readings). Each triplicate was averaged to one data point yielding 115 paired CVP measurements.
Results: No significant difference was demonstrated between polyurethane and silicone catheters (-1 +/- 3 cm H_2O). Using Bland and Altman method revealed no significant bias (mean –1cm H_2O) and acceptable agreement between catheter types.
Conclusion: Silicone and polyurethane catheters yield similar values of central venous pressures. Permanently implanted silicone elastomere catheters can be used to measure central venous pressure in the emergency setting.

(2 – 7)
Transvenous pacing in young children: safe and effective

CH Gaymes, LT Kelly, AM Mehta, MR Ebeid, JC Shores, JC Smith, JA Joransen*
University of Mississippi Medical Center, Jackson, Mississippi, USA



Objective: To assess the safety and efficacy of transvenous pacing in young children.
Methods: Retrospective evaluation of transvenous pacing in children ages less than 5 years, from 1994 to 2003, at the University of Mississippi Medical Center.
Results: There were 10 children, aged 9 to 50 months, 6 males and 4 females. The technique was 10/10 left subclavian vein approach with 10/10 single lead: 6/10 ventricular, and 4/10 atrial. There were no complications. 10/10 excellent chronic impedance, sensitivity and pacing threshold.
Conclusions: Transvenous pacing in young children is safe and effective and should be considered as an alternative to epicardial implant.

(2 – 8)
Disease and illness

MD Hoyos
School of Clinical Medicine and Research, The Univers of the West Indies, Cave Hill, Barbados

In the Primary Care Setting, one has to be prepared to d with any problem in a patient. This is a daunting task many and the initial task is to differentiate between disea and illness. Today's medical science identifies a classifies disease and provides established guidelines therapy.

Illness is a more subtle problem. It is an unhealt condition of the body, often defying nomenclature a classification and may exist with or without disease. Illne must be understood rather than proven and science a technology is not helpful in this regard.

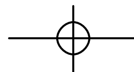
Crucial in understanding illness is knowing t person with the illness, their personality, attitudes a feelings in addition to important environmental fact such as family, domestic, occupation, social and religio The skills for this are embodied in the traditional art medicine and are today marginalized by science a technology. There needs to be a balance of the art a sciences to better care for the needs of the people.

(2 – 9)
Ocular manifestations of pharmacologic agents

G Taylor
Chief, Department of Ophthalmology, Cornwall Gene Hospital, Ontario, Canada

This paper will address the ophthalmic manifestations pharmacologic agents administered either topically systemically. In some situations, the eye is the first org to be observed to manifest the presence of a systemica administered medication. This is important because t Ophthalmologist can alert the patient's physician so th prompt action can be taken to decrease or discontinue t medication in order to avoid further complicatio Topically administered medications can also be se manifested in the ocular and adnexal tissues.

The list is prohibitive; therefore I will only disc the more commonly used agents. I will also present t paper from an anatomic viewpoint starting with the lids a conjunctiva, cornea, lens, vitreous, retina and optic nerv



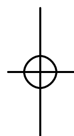
Surgery

Chairpersons: LL Douglas, P Da Camar

(3 – 1)
The terror of anaphylaxis

JRK Butchey
University of Western Ontario, London, Ontario, Canada

Anaphylaxis is one of the medical emergencies with which most physicians should be familiar. It was recognized and recorded in Egyptian hieroglyphics as long ago as 2640 BC, when an Egyptian pharaoh succumbed to a wasp sting. Subsequently, the reaction was not investigated until 1902, when Portier and Richet reported “shock” in dogs that were re-injected with a toxin from a sea anemone.



True incidence is unknown but appears to be increasing. Fortunately, fatal anaphylaxis is rare whereas non-fatal anaphylaxis is much commoner. Numerous agents (more than 100) have been implicated as triggers and the list appears to be growing with time. Common causes include penicillin and other drugs, foods, insect venoms, blood products, allergy extracts and latex. Idiopathic anaphylaxis refers to those patients in whom a cause cannot be identified, despite intensive investigation.

The syndrome may involve a number of organ systems, the most common being skin, respiratory, cardiovascular and gastrointestinal. In the differential diagnosis, one should consider other conditions that can be confused with anaphylaxis – these include other causes of shock, vasovagal reactions, panic attacks, severe asthma exacerbations, ‘flush and restaurant syndromes’. In the investigation, a very careful history is still the most important tool. Skin testing, radio-allergosorbent tests and serum tryptase measurements can be helpful in selected cases.

The cornerstone of treatment is early recognition, followed by removal/avoidance of the offending substance, early administration of epinephrine, antihistamines, steroids and other supportive treatment *eg* oxygen and fluids. Following acute treatment, strict avoidance of triggers should be emphasized, patients should wear a Medic-alert bracelet to indicate their sensitivities and an epinephrine kit (Epipen, Anakit) should be carried at all times. Sublingual epinephrine appears to be as effective as parenteral epinephrine and this may, in future, provide a safe and alternative route for its administration. Effective desensitization is available for patients who have ha anaphylactic reactions to insect stings and some drugs. I addition, some novel approaches to treatment are bein developed – these include immunomodulatory therapies the most current being the administration of anti-Ig monoclonal antibodies.

(3 – 2)
New advances in the treatment of erectile dysfunctio by oral agents

J McDonald
North Middlesex University Hospital Trust, London, Unite Kingdom

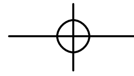
Erectile dysfunction (ED) is defined as the persiste inability to achieve and/or maintain an erection sufficie for satisfactory sexual activity. Worldwide, 152 millio men are estimated to have some degree of ED. It is thougl that the prevalence of ED will double over the next 20 yea to 322 million.

The physiology of an erection has both central an peripheral components and involves the paraventricul nucleus (erectomotor area) as well as cellular activatio and smooth muscle relaxation in the corpora cavernosa.

Common risk factors for ED include diabete mellitus, cardiovascular disease, hypertension, hype lipidaemia and prescribed drugs. Oral agents are now th first line treatment for the majority of patents with ED an may act centrally *eg* dopaminergic agonists or periphérall *eg* phosphodiesterase type 5 (PDE-5) inhibitors.

Sildenafil revolutionized the treatment of ED whe launched in 1999 and is now used worldwide in over 11 countries. Two new phosphodiesterase inhibitors have bee launched in the United Kingdom and in Europe in earl 2003 and these will be presented. Tadalafil has a half life c 17.5 hours, may be taken with food, and has an overa efficiency of 81%. It offers freedom from planning so th an erection can be obtained after stimulation during a 24 hour period. Adverse events are mild to moderate.

Vardenafil is structurally similar to Sildenafil but is more potent PDE-5 inhibitor showing responses of up t 91% in trials. The response rates in patients with diabete mellitus and post radical prostatectomy are encouraging



These new drugs offer treatment diversity and aim to restore the normal pattern of lovemaking.

(3 – 3)

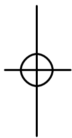
Failure of bromocriptine therapy to control juvenile mammary hypertrophy

GDL Arscott, L Gabay, HR Craig*

Department of Surgery, Radiology, Anaesthesia and Intensive Care, The University of the West Indies, Kingston Public Hospital, Bustamante Hospital for Children, Department of Obstetrics, Gynaecology and Child Health, The University of the West Indies, Kingston, Jamaica and Department of Obstetrics and Gynaecology, University of Arizona School of Medicine, Arizona, USA

Introduction: Juvenile mammary hypertrophy is an uncommon syndrome characterized by exaggerated breast growth at the time of puberty. Attempts to control rapid breast growth using endocrine therapy have generally been met with mixed results. We report a case of juvenile mammary hypertrophy in early adolescence unsuccessfully treated with the anti-prolactin agent bromocriptine.

Case Report: In 1992, a 12-year-old girl presented to the Accident and Emergency Department of the University Hospital of the West Indies with a four month history of sudden rapid breast enlargement complicated by infra-mammary skin ulceration. She had not yet reached menarche and had no signs of pubertal development until onset of breast growth in January of 1992. By April, the enormous growth caused a severe lordosis and made walking difficult.



Bilateral breast biopsies done in May of 1992 revealed extensive oedematous intralobular stroma with scattered hyperplastic ducts. Endocrine evaluation confirmed normal cortisol luteinizing hormone, follicle stimulating hormone and thyroid stimulating hormone levels. Skull X-ray and pituitary computed tomography were normal. Serum prolactin was elevated at 56 ng/ml. A diagnosis of juvenile mammary hypertrophy with associated hyperprolactinaemia was established.

On May 6, 1992, bilateral reduction mammoplasty with free nipple areolar grafts was done and 4.7kg of tissue was excised from the right and left breasts respectively. Post-operative evaluation confirmed continued prolactin elevation of 95 ng/ml.

The decision was taken to administer a course of bromocriptine in an effort to arrest further breast development and 2.5 mg twice daily was initiated and the prolactin levels decreased to 11 ng/ml. Despite this therapy, by August 1992, re-growth took place.

On August 15, 1992, bilateral near total subcutaneous mastectomy was performed and 2.5 kg and 3.5 kg was excised from right and left breast respectively. We were unable to salvage the nipple areola complex. Approximately, 25 g of tissue were left in each brea Healing was again uneventful but rapid regrowth of t breasts was noted after one month. Follow-up prolac level was 9ng/m and bromocriptine dose was decreased 0.25 daily.

On October 31, 1992, a complete subcutaneo mastectomy was done. Bromocriptine was discontinued December 1993. Breast reconstruction commenced February, 1995 and was completed in November, 1996.

Conclusion: Juvenile mammary hypertrophy occurs in racial and ethnic groups and has no predisposing facto Growth is benign and is associated with no oth abnormalities. Aetiology is thought to be due to exa gerated breast tissue response to normal changes circulating hormones during puberty. Prolactin is essent for pubertal breast growth; responses to bromocripti therapy have met with mixed success whereas most cas of gestational gigantomastia respond well. Bromocripti failed to slow the rate of breast enlargement in our patie The aetiology of her hyperprolactinaemia is uncertain but unlikely to have contributed to her breast hypertrophy.

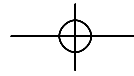
(3 – 4)

Epidemiology of burns at the University Hospital of t West Indies

R Venugopal, D Ferron-Boothe, N Meeks-Aitken, R Carpenter, GDL Arscott*

Department of Surgery, Radiology, Anaesthesia a Intensive Care, The University of the West Indies, Kingst Jamaica

To improve burn care delivery, a review of t epidemiological features of burn patients needs to analyzed. This was done by reviewing the age, gend cause of burn, type of burn, burn surface area, dispositi and days in hospital of patients between August, 1998 December, 2002. There was a total of 281 patients with male to female ratio of 2.1:1 with the modal age gro between 19 and 45 years. Accidents caused 79% of t injuries with flame burns, scalds, chemical burns a electrical burns accounting for 50%, 30%, 13% and 7 respectively. The majority of burns affected 0% to 10% body surface area and 27.8% of patients were discharg within 3 days. The overall mortality rate was 7.5% with mortality rate for burns with 50% or greater being 77.8 The general epidemiological patterns are similar to repo in the world literature except for the frequency of chemi burns. Patients with short admission periods suggest th there may be a group of patients that may not requ hospitaliza-tion. The mortality rate for major burns may improved with better intensive care services as the major of deaths occurred in the first week. Better and mo detailed docu-mentation of data needs to be instituted improve our audit and research.



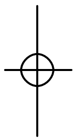
(3 – 5)
Autism – The role of the otolaryngologist

H Shaw
Department of Surgery, Radiology, Anaesthesia and Intensive Care, The University of the West Indies, Kingston, Jamaica

Autism is a syndrome manifested as abnormal body movements, communication and language disorder, impairments in social relatedness, a need for routine activity plus sameness of expression, and sensory dysfunction. The worldwide incidence of autism and autism related disorders has now reached epidemic proportions and it is not justified to infer that the increase noticed is due to increased reporting and better diagnostic facilities.

No one knows how many causes of autism and related disorders there are, but there are some that we do know. We will discuss the topic under the following headings:

- Genetic factors and inborn errors of metabolism
- Infections, antibiotics and vaccines
- Heavy metal toxicity
- The role of the otolaryngologist and audiologist
- Preventive and biological treatments.



(3 – 6)
Differences in patient characteristics in men of African descent, with prostate cancer from Jamaica and Chicago

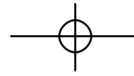
WD Aiken, T Tulloch, V Freeman, F Bennett, K Coard, B Panton, T Mason, J Cudecki, R Flanigan
Departments of Surgery, Radiology, Anaesthesia and Intensive Care and Pathology, The University of the West Indies, Kingston, Jamaica and Department of Medicine and Urology, Loyola University, Chicago, USA

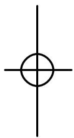
Objectives: To make comparisons between prostate cancer in patients of African descent in two diverse environments one North American, the other Caribbean, in order to determine relative contributions of ethnicity/genetics versus environment.
Methods: Incident cases of prostate cancer were identified at each site with baseline demographic and clinical data as well as pre-treatment blood samples for measurement of prostate specific antigen (PSA) collected at the time of enrollment. The Gleason scores of patients who had radical prostatectomy were recorded. Demographic comparisons were made by chi-square analysis while mean PSA and Gleason scores were compared by 2-sample t tests.
Results: One hundred and sixty-one patients were identified, 81 from Chicago and 80 from Jamaica. There were no significant differences in demographic characteristics between the two groups. When compared to Jamaicans, the patients from Chicago had lower mean PS/ (26.2 *versus* 81 ng/ml, p = 0.0026) and median PSA (*versus* 20 ng/ml, p < 0.001), a higher mean Gleason sur (7.0 *versus* 6.8, p = 0.0l52), and a higher likelihood c having localized prostate cancer (76.5% *versus* 51.3% p = 0.0008). There was no significant difference in time t treatment, but Jamaicans had a greater likelihood c receiving hormone therapy, consistent with a highe incidence of extraprostatic disease.
Conclusion: Differences in clinical characteristics betwee men of African descent in environmentally disparat situations probably reflect differences in prostate cance screening practices as well as awareness and access t healthcare, rather than biological differences influencin clinical presentation and tumour characteristics.

(3 – 7)
Report on the start-up of a prostate brachytherap programme in a community-based cancer centre measuring both clinical outcomes and cost benef analysis

C Springer
Windsor Regional Hospital (Metropolitan Campus), Windsor, Ontario, Canada

Purpose: Review and report on the toxicity, quality of lif and treatment outcome of patients receiving prostat brachytherapy at the Windsor Regional Cancer Centr (WRCC) as well as the unit cost compared to surgery an external beam radiotherapy (EBRT).
Subjects and Methods: Over the last five years, prostat brachytherapy has been chosen by an increasingly larg number of patients because of its relatively low cost an morbidity. In June 1998 WRCC, implemented a brachy therapy programme using $200 000 US to cover all start-u costs. A total of 268 prostate cancer patients have bee treated to date. One hundred and eighty-six patients in th low risk group defined by PSA $\leq$ 10, Gleason Score of $\leq$ and a T stage of $\leq$ 2b, were treated with prostat brachytherapy as monotherapy. The remaining 82 in th intermediate and high risk groups were treated wit brachytherapy combined with EBRT.
Results: Prostate implants were well tolerated by patient with less than 10% requiring temporary catherization an approximately 5% experiencing minor rectal bleeding Data are immature to report on tumour control rates but t date only 5 patients have recurred. A single patient has die from a second malignancy with no evidence of prostat cancer at the time of death. Cost-benefit analysis confirm the relatively low unit cost per patient with brachytherap in this community setting which serves a population c 300 000. It is proposed that similar programmes b implemented in developing countries.





(3 – 8)

Severe Acute Respiratory Syndrome (SARS): the Toronto experience and relevance to the Americas

UD Allen
Division of Infectious Diseases, Hospital for Sick Children, Toronto, Canada

In recent years, several diseases have emerged with the potential to have a major impact on public health globally. Severe acute respiratory syndrome (SARS) represents yet another of these challenges with the potential for a devastating global impact. The outbreaks of SARS have been caused by a novel strain of coronavirus (SARS-CoV). SARS-CoV is a very robust virus with the ability to survive for relatively long periods in the environment. The virus is stable in faeces and urine at room temperature for up to 1-2 days. Stability is enhanced in stools from patients with diarrhoea. The concentration of the virus is only reduced one log after 48 hours at room temperature. The outbreaks of SARS were largely linked to travel to SARS affected areas, contact with specific healthcare institutions or healthcare workers from these institutions. However, community spread was not identified as a significant contributor to the number of new cases that occurred globally. Many experts are concerned about the potential for SARS to re-emerge. Health authorities need to be vigilant in this regard, as a single case of SARS could trigger an outbreak with serious consequences.

This presentation will summarize the Toronto experience with SARS in relation to the above characteristics of the virus and the outbreak. The potential relevance of the Toronto outbreak to the Caribbean region and the Americas will be discussed.

Keynote address

(3 – 9)

Research issues in academic medicine: juggling career aspirations with quality

N Kissoon
Department of Paediatrics, University of Florida Health Center, Jacksonville, Florida, USA

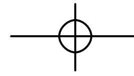
Research has different challenges, rewards and disappointments as compared to clinical medicine. In clinical medicine competence, dedication, empathy and good clinical care usually lead to respect from colleagues, nurses and other professionals. In addition, patients and families show their gratitude in a variety of ways. On many occasions, instant gratification is the reward for our efforts.

On the other hand, the journey in research is one of frustration and rejection at many junctures. For instance, our research ideas may be rejected outright. Even when the ideas are endorsed by funding agencies, the request for funding may be denied since the competition is fierce and of high calibre. Potential subjects may reject requests participate in clinical trials. In addition, abstracts a manuscripts may be rejected many times. Finally, if we a dogged, the manuscript is published but the journey has l us spent and relieved rather than ecstatic. Published stud represent the sanitized, succinct summary of ma painstaking hours of toil from the embryonic idea throu periods of doubt, despair, exhilaration and finally relief a a sense of accomplishment. We should therefore cognizant of the time, dedication and dogged effort that the currency for success.

Therefore, why do we do research? We do it becau it is of value to us. Michael Kramer, in acceptance of t research award of the Ambulatory Pediatric Associati (January 1995), put it in simple and elegant terms. I stated there are five reasons to do clinical research. T lowest level is improving one's *curriculum vit* Unfortunately, this is a very common case scenario a should not be supported. People who are doing resear because they have to should be doing something else a hence should not be supported by academic departmen Level two is doing research solely to derive perso satisfaction. This in itself is an insufficient goal to justi the time, effort and money involved. Besides, research who reach one of the higher levels can gain additio satisfaction above and beyond that gained by doing t research itself. Level three involves the use of research a means of increasing knowledge. This may be true mathematics and theoretical physicists, but those who a responsible for expenditures on medical research shou expect more than that. The increased knowledge shou lead to the higher levels rather than be an end in itself. much worthier goal is level four, which entails changing other researcher's behaviour. Research that improves t way other investigators conduct their research m eventually lead to the highest level. Level five, the high level, should be the ultimate goal of research: to impro health. Kramer pointed out that "very few of us can point direct links between our own research and improved heal but one thing is sure: if improving health is not our goal, will never get there." It is this goal that we should all asp to and our trainees should adopt.

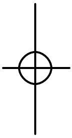
I would like to share some of my research endeavo in exhaled nitric oxide as a biological marker inflammation in asthma and a potential indicator of sicl cell patients who are prone to develop acute ch syndrome, as examples in which I have tried to achieve t higher goals of research. While I have not been successf in achieving these goals, in all cases we need to continua think of them because if we do not, there is no hope success.

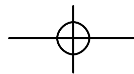
Finally, we should be cognizant of the myths a realities of our role as clinicians and clinical researche As Ward stated in 1996: "Researchers must strive to aboli uncertainty, to be unwaveringly committed to truth, and rid themselves of all bias. Clinicians, in contrast, m



frequently manage patients in the absence of certainty, handle truth creatively and be willing to be biased on their patient's behalf as part of their professional obligation. These differences constitute powerful selection pressures for individuals for particular skills, personalities and sources of job satisfaction. Clinical practice and research are intrinsically different activities and it is probably unreasonable to expect an individual talented in one to be similarly expert in the other."

Moreover, I sincerely hope that every one will com to the realization as to what is best for them.While a fe lucky ones will be able to have a fulfilling research an clinical career, most will face the proverbial two road diverging in the woods. I sincerely hope that some wi choose the road less travelled, as it may be the path to thei Holy Grail.





Surgery, Obstetrics and Gynaecology

Chairpersons: G Rajkumar, JD Stew

(4 – 1)

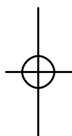
Acute pulmonary embolism after major head and neck surgery

H Shaw
Department of Surgery, Radiology, Anaesthesia and Intensive Care, The University of the West Indies, Kingston, Jamaica

Introduction: Sudden death from acute pulmonary embolism following surgery remains a major concern and a source of momentary depression for surgeons. We will never know how many lives were saved by applying preventive measures pre-and post-operatively.

Definition: Pulmonary embolism (PE) is the impaction of material into branches of the pulmonary arterial bed. Despite total blockage, pulmonary infarction is rare due to:

- Dual circulation (bronchial and pulmonary) to lung parenchyma.
- Direct exchange of O_2 and CO_2 between alveolar gas and tissue.



Pathognesis: PE is a complication of venous thrombosis; 70% of emboli come from deep veins of the pelvis and lower extremities. Uncommon sites include:

- Renal vein in nephrotic syndrome
- Head and neck and upper extremities
- Jugular and subclavian vessels with intravenous catheters
- Mural thrombi in the right chambers of the heart

Causes of emboli formation: Emboli are caused by:

- Intravascular stasis of blood from which clots break off
- Endothelial injury causing stasis of blood
- Increased predisposition for inappropriate blood coagulation

The risk of acute PE post surgery ranges from 1% to10% in hip and thoracic surgery in patients over 40 years. These risks are further increased in:

- Advanced age
- Length of surgery
- Malignancy
- Pre-existing venous disease
- Prolonged bed rest after surgery
- Post-operative infection
- Increased tissue thromboplastin and decreas blood fibrinolytic activity

Prevention, diagnosis, pathology, pathopysiology a management will be discussed in the presentation.

(4 – 2)

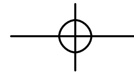
Oesophageal foreign bodies at the University Hospit of the West Indies

E Williams, D Chambers, H Ashman, J Williams-Johns P Singh, AH McDonald, J Lindo, A Wieranga, R Forde*
Departments of Accident and Emergency and Surge Radiology, Anaesthesia and Intensive Care, The Univers of the West Indies, Kingston, Jamaica

Objective: The problem of foreign bodies in t oesophagus differs from that of foreign bodies (FBs) mo distal in the gastrointestinal tract. This study seeks evaluate patients with swallowed oesophageal FB w respect to the types of objects swallowed, their clini presentation, the usefulness of radiographic studies and t role of endoscopy in our setting.

Methods: Over a period of six years (1996-2002), patients with a presentation suggestive of a swallowed F were admitted to the Ear, Nose and Throat (ENT) ward the emergency room. The charts were analyzed for ea patient's age, time of ingestion to presentation, presenti symptoms, type of FB and treatment. Both antero-poster and lateral cervical radiographs were done in all patients. diagnosis of an oesophageal FB was made on combination of history, symptoms and radiologi findings. FBs in the oropharynx or distal to the oesophag (*eg* stomach) were excluded.

Results: Over the six year period, 97 patients were a mitted to the ENT ward. Most of these patients we symptomatic of dysphagia and/or odynophagia. The ma to female (M:F) ratio was 3:1 and the age range was months to 99 years with a median age of 52 years. For one patients (42.3%) were over the fourth decade of li Nearly all of this group had impacted bones of one sort another. In fifty patients (51.5%), there was no positi radiological identification of any FB. Thirteen (26%) this group actually had a FB identified and removed w endoscopy. Rigid endoscopy was the primary treatment

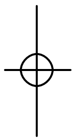


78 (80.4%) of the total patients. Of these, 31 (39.7%) had successful removal of the FB. Forty-three patients (51.1%) had negative endoscopy whereas 4 (5.1%) patients had their FB pushed distally into the stomach. No deaths or major complications were noted.
Conclusion: A significant number of patients with FB in the oesophagus were over the fifth decade of life. The commonest FB impacted were bones in fish, chicken and mutton in that order. A negative radiological finding is not a reliable screening test to select patients for endoscopy. Endoscopy is a safe and reliable means of diagnosis of oesphageal FB and is strongly recommended.

(4 – 3)
The challenge of managing dermatofibrosarcoma protuberans

GDL Arscott, R Venugopal*
Department of Surgery, Radiology, Anaesthesia and Intensive Care, The University of the West Indies, Kingston Public Hospital and Bustamante Hospital for Children, Kingston, Jamaica

Introduction: The Plastic Surgery services at the University Hospital of the West Indies and the Kingston Regional Hospital have been playing a major role in the management of soft tissue tumours. The incidence of dermatofibrosarcoma protuberans, in particular, appears to be increasing. The major challenges in the management of dermatofibrosarcoma relates to the remarkable recurrence rates. Some controversy exists with regards to surgical approach, histopathology and the use of adjuvant therapy.



Material and Methods: Cases presenting to the Plastic Surgery Services at the University Hospital of the West Indies, Kingston Public Hospital and Bustamante Hospital for Children during the period April 1990 to April 2001 are presented. Sixteen cases of dermatofibrosarcoma protuberans were studied, 12 females and 4 males. The anatomical sites were: supraclavicular fossa (3), the back (2), abdominal wall (4) and lower limb (7).

The majority of patients referred had multiple episodes of recurrent disease. There were two patients presenting with primary disease. Histopathology was most important in guiding surgical approach.

The use of Mohs micrographic surgery is discussed. Surgical management was essentially radical excision and soft tissue cover. The role of adjuvant radiotherapy is controversial but was employed in five cases.
Results: Four cases developed further recurrent diseases and two patients developed new lesions in the contralateral limb. Recurrence has not yet been detected in cases which had radical surgery followed by adjuvant radiotherapy.
Conclusion: Dermatofibrosarcoma protuberans is an uncommon soft tissue tumour with a prohibitively high recurrence rate following surgical treatment. Recurrence occurs even with histologically confirmed clear margins. The importance of the surgical approach of the primar operation needs to be stressed. Adjuvant radiotherapy wa controversial but is being more widely used. Thoug essentially a benign tumour, metastatic disease has bee reported in about 1-4% of cases with multiple episodes c recurrence.

(4 – 4)
Retrospective review of extra-corporeal surgery in gynaecology

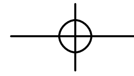
S Persad
Candler/St Joseph Hospital, Savannah, Georgia, USA

Objective: To assess the practicality of routine extra corporeal approach to pelvic surgeries.
Methods: This is a retrospective chart review for duratio of surgery, intra-operative and post-operative complica tions. A computerized search was undertaken of a laparotomies done from January 1995 to December 200 A total of 164 cases were studied. Most patients, (112) ha hysterectomy; seven had large dermoid cysts; 22 ha myomectomy; 17 had tubal ligation reversal; and six ha ectopic pregnancies. A malleable and dever retractors wer the only instruments used in the surgeries. No packing c self-retaining retractor was used in any of the cases.
Results: Duration of surgery varied from 15 – 75 minute There were no complications of intra- or post-operativ haemorrhage. There was no organ injury or post-operativ fever. One patient with myomectomy had ileus. There wa no return to surgery. General endotracheal anaesthesia wa used in all patients.
Conclusions: There are several advantages to thi approach. A smaller abdominal wall incision is used bu large enough to extract the offending organ out of th pelvis. A pfannensteil incision was used in over 90% c cases. Tissue layers and planes become stretched makin surgical dissection easier. Avoiding bowel packin theoretically reduces the risk of post-operative intestina complications. Avoidance of self-retaining retractor eliminates risk of peripheral neuropathy. Most importantly the offending organ is pulled away from vital organs bowel, bladder, and ureter, making surgery safer.

(4 – 5)
Evaluation of clinical practices associated wit Caesarean sections at the University Hospital of th West Indies, Jamaica

R Blanc, S Kulkarni, A Mullings, L Matadial*
Department of Obstetrics, Gynaecology and Child Health The University of the West Indies, Kingston, Jamaica

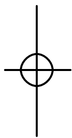
Objective: To assess the quality of clinical care associate with Caesarean sections, anaesthetic use, prophylacti antibiotic use, acid prophylaxis and thromboprophylaxis.



Methods: Study period was from September 1, 2002 – November 30, 2002. Study population included all patients who had Caesarean sections performed in the study period (187). Data were collected using a close-ended questionnaire. The questionnaires were completed within 48 hours of the completion of the procedure.
Results: Anaesthesia: general 10.0%, spinal 90.0%; combined spinal-epidural anaesthesia was not used. Prophylactic antibiotics were used in 97.3%. Gastric acid prophylaxis was used in 97.3%. Thromboprophylaxis was used in only 2.1% (fragmin/heparin 1.6%, aspirin 0.5%)
Conclusions: High level of use of regional anaesthesia, acid prophylaxis and prophylactic antibiotics should be continued. There is a need to evaluate the requirement of a thromboprophylaxis protocol.

(4 – 6)
Pregnancy after laparoscopic intracorporeal myomectomy

G Rajkumar, SV Potluri*
The Lukuni Clinic, #2 Lukuni Road, Valsayn South and Auzonville Medical Centre, Auzonville Road, Tunapuna, Trinidad and Tobago



This series of eight patients and eleven post-operative pregnancies is the first in the reported literature of pregnancy after laparoscopic myomectomy (LM) without removal from the abdomen or pelvis after extirpation from the uterus, *ie* laparoscopic intracorporeal myomectomy (LIM). Laparoscopic myomectomy was first reported 20 years ago with most studies to date reporting colpotomy, *ie* removal of fibroids via vaginal incision or laparotomy. More recently the expensive and time-consuming alternative of laparoscopic morcellation has been reported. Seven of the eleven post-operative pregnancies were delivered at full term – 6 by spontaneous vaginal delivery and one by Caesarean section because of cervical dystocia. This afforded second-look surgery confirming disappearance of one of two fibroids removed and few filmy adhesions around that which persisted as marble size in the Pouch of Douglas. All eight patients conceived spontaneously with the earliest at two months and the longest at five years post surgery. This conception rate (100%) compared favourably with 80% and 70% reported elsewhere. There were eleven intra-uterine and no extra-uterine pregnancies. There were four spontaneous abortions, of which one was a missed abortion. The rate of spontaneous abortions (36%) in this series was greater than that reported by Rossetti et al (19%). Spontaneous vaginal deliveries occurred in six of the seven full term pregnancies (86%). This compared favourably with 26.6% reported in 29 patients in April 2001. Likewise, in the present study, the Caesarean section rate (14.2%) was lower than reported (73.4%).

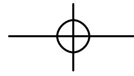
The largest fibroid removed was 6 cm (grapefruit risk of recurrence in LM when compared with laparotor myomectomy seems to be the same or slightly higher b the attendant haemorrhage at surgery is less as is adhesi formation and spontaneous rupture. There has been spontaneous uterine dehiscence reported to date. The ra report of fibroids left within the abdomen or pelvis has be of those lost at laparoscopic surgery. There are no reports pregnancy patterns following the intentional retention fibroids within the abdomen or pelvis.

The mean age in this study was 31.25 years w follow-up to five years post surgery. Two patients defaul by migration, but delivered within five years.
Conclusion: This is the first report, in the English lite ture, of intentional retention of fibroids by laparosco myomectomy with preservation and observation subsequent fertility.

(4 – 7)
Mortality statistics of Grand Bahama, 1993 – 2002

AF Brathwaite
Rand Memorial Hospital, Freeport, Bahamas

Objective: To review the main causes of death on t island of Grand Bahama, Bahamas, from 1993 to 2002.
Methods: Hospital medical records of deceased perso from Grand Bahama were reviewed. The causes of dea were collated and analyzed from the death certificat utilizing a multiple coding system for diseases of the hea cerebrovascular accidents, diabetes mellitus and hyp tension.
Results: For the ten year period, there were 1575 (M8 F720) deaths of persons normally resident on Gra Bahama (with a censal population increasing from 40 8 in 1990 to 46 954 in 2000), not including those who di outside of the island, about 10 per year. The correspondi multiple codes numbered 1883 (male 986: female 89 The top seven causes of death in descending order we cancer (13.3%) with the leading forms being of the prost in men and breast in women, diseases of the heart (12.2 accidental causes (11.5%), cerebrovascular accide (11.0%), hypertension (9.6%), HIV disease (7.4%) a diabetes mellitus (6.1%). These were responsible for 71 of all deaths. Associated with the above were ot conditions that included septicaemia and chronic re failure as more immediate causes. For a two-year period t mean ages of death, in years, were 63 from cancer, 62.4 diseases of the heart, 68.3 from diabetes mellitus, 68.8 fr cerebrovascular accidents and 83.9 from hypertension. the other hand, the mean ages in years at death were 40 HIV disease and 31 for victims of homicide and road traf accidents. Less frequently stated causes of death includ alcoholic liver disease, senility, pneumonia and pulmona emboli.
Conclusions: Chronic non-infectious diseases were t major causes of death on the island of Grand Bahan



occurred in relatively large numbers, with the latter increasing from one in 1993 to 21 in 2001, but decreased in 2002 to 7. Environmental factors coupled with lifestyle and social behaviours must be considered as major initiating and contributing agents of death on the island of Grand Bahama.

(4 – 8)
Life in remission

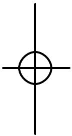
D Raje
Myton Hamlet Hospice, Warwick, United Kingdom

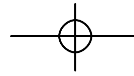
Anecdotes, such as this, do not make a science. However, one only dies once and there is no opportunity to collect data from multiple episodes of death. Many of our former faculty have recently died unexpectedly of cancer. They were not able to record their death experience or indeed convey their feelings when they faced their death. I was lucky to have survived several near–death episodes from the most fatal blood cancer and its equally lethal chemotherapy. Basically a surgeon by craft, I was able to cope with the shock and horror of the sudden diagnosis and the urgency of drastic treatment needed to avoid immine death.

Being an active palliative care consultant managin one of the large hospices in the United Kingdom at th time, I had to swallow a strong dose of my own medicin and face the hard task of supporting our friends an colleagues through the period of my grave illness. In thi process of transfixation, I had totally forgotten an neglected my own self, I, the person. There followed period of increasing detachment which a "conscious death provides. This deathly silent period gave me an opportunit to focus on myself and my family and fortunately remai very positive about the outcome.

Luckily, the prayers worked and after the darkness c death came the dawn of remission. I was no longer afrai of death and we, the family, began to live for each day, no more open, and close to each other. The two golden year of life in remission have been a period of renaissance fc us.

Science or fiction, this is real life experience of or who got away, which all our colleagues who passed awa untimely would have liked to have endorsed. It speaks fc all those non-survivors and a few of us lucky survivors.





Caribbean Medley

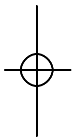
-

Chairpersons: C Aird, A Standard-Golds

(5 – 1)
Tetanus – going but not gone! Preventive strategies revisited

E Williams, H Harding, R Forde, D Chambers, K Alagappan, J Williams-Johnson, S French, R Hutson, P Singh, AH McDonald*
Departments of Accident and Emergency and Surgery, Radiology, Anaesthesia and Intensive Care, The University of the West Indies, Kingston, Jamaica

Objectives: Tetanus is now a rare disease in the developed world. Though preventable, it is still fairly frequent in underdeveloped countries and has a high mortality. The objective of this study is to evaluate the epidemiological profile of patients with tetanus admitted to the University Hospital of the West Indies (UHWI) and to identify high risk groups for preventive strategies.

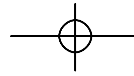


Methods: The medical record of all case of tetanus admitted to the UHWI between June 1993 – June 2003 were reviewed. The following data were retrieved: age, gender, grade of severity (Table 1 Alblett Classification), duration in hospital and ICU stay and outcome. Information was cross-correlated with reported cases from the Ministry of Health.
Results: During the period of study, 13 patients were clinically diagnosed with tetanus. Most (10 out of 13) had grades 3-4 and were admitted to the Intensive Care Unit (ICU). The most common presenting symptom was trismus. There was a preponderance of male patients with a male to female (M:F) ratio of 10.3. The age range was 35-83 years with a mean of 63.2 years and standard deviation of 18.1. There were no neonatal cases. The average duration of stay in the ICU ranged from 20-109 days with a median of 30 days. There were two deaths representing 15.4% of the study population. Both were in the elderly age group. There was no correlation between length of stay and age.
Conclusion: This study clearly illustrates that tetanus though, a preventable disease, is not gone. Besides the unimmunized, the elderly are a high risk group which requires special attention. More emphasis should be placed on routine booster shots in older persons not only in hospital but routine clinic for chronic medical disorders immunizing all adult patients with tetanus toxoid unle there is proof of immunization within the preceding t years or a convincing history of a reaction to the toxo

(5 – 2)
Requests for admission to the Intensive Care Unit, t University Hospital of the West Indies

R Augier, I Hambleton, H Harding*
Department of Surgery, Radiology, Anaesthesia a Intensive Care, and Epidemiology Research Unit, Tropic Medicine Research Insitute, The University of the W Indies, Kingston, Jamaica

Objective: To assess the demand for Intensive Care U (ICU) admission and identify any differences between t admitted and the non-admitted populations.
Design: Prospective, descriptive, analytical study.
Interventions: During a one year period all patients triag for admission to a multidisciplinary ICU at the Univers Hospital of the West Indies, were studied. Information w compiled on patient's name, age, diagnosis, departme making the request, reason for admission, urgenc operative status, major organ system affected, Acu Physiological and Chronic Health Evaluation (APACHE score, and mortality. The number of patients in ICU and t number of nurses on duty at the time of triage and t reason for refusal of admission were obtained.
Results: There were 356 requests, 284 (80%) we admitted and 72 (19%) were refused admission. T number of emergency admissions (60% of requests) w significantly higher than the number of elective admissio (15% of requests). The surgical sub-specialties account for the majority of requests (58%) and the high admission rate (58% of total requests). Seventy-fo patients (20% of requests) admitted, had to accommodated outside of the ICU in the Recovery Ro and Annex areas. Distribution of the admitted *versus* t non-admitted populations showed the median age a APACHE II scores to be less than for the non-admitt patients ($p = 0.01$ and $p < 0.001$ respectively); admitt patient APACHE II score was the only strong predictor admission (OR = 0.94, 95% CI 0.91, 0.98, $p = 0.001$). Th suggests that triage is taking place based on the patien



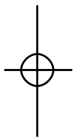
severity of disease. The number of patients (OR = 0.79, 95% CI 0.64, 0.98, p = 0.03) was a weak predictor of admission. Mortality among admitted patients was 27% and among non-admitted patients 68%. The mortality among the non-admitted patients who were considered suitable for ICU admission was 81%.

Conclusion: Triage decisions were based predominantly on severity of disease. The demand for ICU space was greater than the supply. There were patients who might have benefitted from ICU admission but who were not admitted, due to an unavailability of space. We recommend enlargement of the present ICU and improving the conditions for staff.

(5 – 3)

Predicting outcome in the Intensive Care Unit at the University Hospital of the West Indies

A Williams, H Harding, I Hambleton*
Department of Surgery, Radiology, Anaesthesia and Intensive Care and Tropical Metabolism Research Unit, The University of the West Indies, Kingston, Jamaica



Objectives: To evaluate and compare the Acute Physiology and Chronic Health Evaluation (APACHE) II, the Simplified Acute Physiology Score (SAPS) II, and the admission and 24-hr Mortality Probability Model (MPM^0, MPM^{24}) II scoring systems in a cohort of Intensive Care Unit (ICU) patients independent of the developmental sample.

Design: Retrospective, cohort study.

Method: All patients were admitted to the ICU of the University Hospital of the West Indies during the period October 1, 2001 to August 31, 2002. Demographic, clinical and laboratory data required to calculate the APACHE II, SAPS II, MPM II scores were collected on 145 patients, who met the study criteria. Admission diagnosis, length ICU/hospital stay and outcome at hospital discharge were also documented. Model calibration and discrimination were assessed using the Hosmer-Leme show goodness-of-fit test, calibration curves and the receiver operating characteristic curves (ROC) respectively. Distribution differences were assessed using the Mann-Whitney distribution-free procedure

Results: Thirty-seven (25%) patients died in ICU with a further 13 (9%) dying on the general ward after ICU discharge. The observed hospital mortality rate was 34%, compared to the predicted mortality rates of 31% (APACHE II), 30% (SAPS II), 20% (MPM_0 II) and 41% (MPM_{24} II). Discrimination was 0.79 for SAPS II (95% CI, 0.71, 0.86), 0.78 for MPM II_{24} (0.70, 0.86), 0.77 for MPM II_0 (0.68, 0.85), and 0.75 for APACHE II (0.66, 0.84). There was no significant difference between the models ($\chi^2_3 = 1.3$, Pr = 0.74). The probability of death increased, while the time until death decreased, as the APACHE II score increased. Survivors had a shorter ICU stay (< 14 days) but the time to discharge increased as their APACHE II scor increased.

Conclusion: All the systems assessed showed simila ability to predict outcome in this study. Simplicity an reliability of data collection and cost, would therefor influence the choice of which model is best suited for us in our setting. Such tools would be of significant usefulnes in the continuing development of intensive care in th region.

(5 – 4)

Tuberculosis and human immunodeficiency virus co infections in Jamaican infants and children

M Geoghagen, J Farr, R Pierre, I Hambleton, C Christie*
Department of Obstetrics, Gynaecology and Child Healt and Tropical Metabolism Research Unit, The University o the West Indies, Kingston, Jamaica

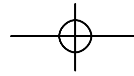
Objective: To determine associated factors and outcome of tuberculosis in HIV-infected and non-infected childre in Jamaica; where 1:5 HIV cases are associated wit tuberculosis (TB).

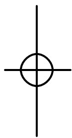
Method: We reviewed records of children aged 0 – 1 years attending the University Hospital of the West Indie during January 1999 – December 2002. Associated factor and outcomes in HIV-infected and HIV-negative cases wit TB were compared using exact statistical methods t account for the small number of children and an adjustmen for multiple testing. TB diagnosis was determined usin modified WHO criteria.

Results: There was a statistically significant increase c active TB cases from 1999-2002 with 24 childre diagnosed; 15 occurred in 2002; 11 were HIV-infected fror mother-to-child transmission. HIV-infected children wer statistically more likely to be younger (mean 2.6 *vs*. 4. years), have failure to thrive, splenomegaly, digita clubbing, hepatomegaly, generalized adenopathy an negative Mantoux tests.

Appropriate in-hospital anti-TB therapy was giver Three of 11 HIV-infected cases received triple antiretrovira therapy. Hospital stay was longer (median 7.4 vs. 2. months) and death was more likely (7/11 vs. 2/13) in HIV infected *vs* non-infected children. Household member with TB were identified in 12 cases.

Conclusions: HIV and TB co-infection is an increasin problem in Jamaican children. Severity of illness and deat is greater in HIV-infected children, despite appropriat anti-TB therapy. Antiretroviral drugs must be mad available to this population. Efforts must be maximized t reduce mother-to-child-transmission of HIV/AIDS; t achieve full contact tracing and complete TB therapy b Directly Observed Therapy Shortcourse (DOTS) to elimir ate the spread of TB.





(5 – 5)

Knowledge, attitudes and practices of medical students and doctors at the University Hospital of the West Indies with regards to diagnosis and management of tuberculosis

C Stoutt, C Allen , C Lord , M Barton-Forbes, K Brightly, P Scott, C Christie, JP Figueroa*
The University of the West Indies, Bustamante Hospital for Children and Ministry of Health, Kingston, Jamaica

Objective: To determine knowledge of physicians at different levels of training in a teaching hospital with regards to diagnosis and management of tuberculosis (TB).
Methods: Physicians employed in Child Health, Internal Medicine, Microbiology and Emergency Medicine were invited to participate in a survey conducted at the University Hospital of the West Indies between October and December 2002. Final year medical students were also invited to participate. Demographic, educational and experience profile of the participants were determined using questionnaire. A 12-item knowledge assessment tool was used to grade the knowledge of participants about diagnosis and management of TB. Test scores were then compared between medical students and physicians. Comparison of means was done using analysis of variance.
Results: Seventy-three physicians and medical students participated giving a response rate of 73%.

Mean age of participants was 28.8 ± 6.9 years. Thirty (41.1%) respondents were junior having graduated before the year 2000. Forty-six (63%) respondents thought that the topic of tuberculosis was well taught in medical school. Forty-seven (68.1%) participants demonstrated inadequate overall knowledge of the topic. Areas of inadequate knowledge identified included presenting features in 45 (64.3%); paediatric radiological features in 40 (57.1%); referral indications in 39 (56%) and TB treatment in 49 (70%) respondents. Significant differences in knowledge of diagnostic tests ($p < 0.007$) and treatment ($p < 0.05$) occurred between junior and senior staff.
Conclusion: Physicians' perception of knowledge is not a reliable indicator of actual knowledge of diagnosis and management of TB. Regular educational seminars are required to update physicians' knowledge of re-emerging diseases.

(5 - 6)

The Ophthalmological Society of the West Indies (OSWI) – a model for regional specialty organizations in medicine

D Singh
Caribbean Eye Institute, Trinidad and Tobago

Ophthalmological Society of the West Indies was launched in 1990 due to the efforts of alumni from Barbados, Jamaica, and Trinidad and Tobago. The internet has solv communication problems and networking among regior colleagues has resulted in a realistic manpower apprai and needs analysis. Our website (www.oswi.org) w accommodate internet grand rounds, net consultations a patient education.

Annual congress presentations are referenced in t West Indian Medical Journal. Congress attendance creased from thirty ophthalmologists in 1990 to o seventy in 2003. Digital recordings are made of oral a slide presentations wet labs and hands-on training ass members in adopting new clinical and surgical techniqu Cost-containment and use of appropriate and affordal techniques and technology are emphasised. Research encouraged and the best resident paper receives a trav grant. We have obtained sponsorship for members to atte conferences and donations of books and equipment.

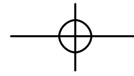
OSWI has played an important role in guiding t direction of the lions eye care centre, Barbados; t production of guidelines for eye care programmes aimed the major causes of blindness; and launching the Caribbe leg of Vision 20/20, a worldwide prevention of blindne initiative. Members undertake cataract surgery proje within the region and beyond. We are now addressing a c by Haitian colleagues for help with training and equipme OSWI's challenges include assisting the university with t development of the DM in ophthalmology; and setting minimum standards for licencing and practice.

(5 – 7)

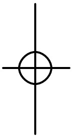
A paediatric and perinatal HIV/AIDS leadership initiative in Kingston, Jamaica

C Christie
Department of Obstetrics, Gyanecology and Child Heal
The University of the West Indies, Kingston, Jamaica

Objective: In Jamaica, 1-2% of pregnant women are HI positive; 876 HIV-positive pregnant women will deli and at least 283 newly infected HIV-infected infants will born this year. HIV/AIDS is the leading cause of death children aged 1-4 years. We describe a collaborative "To and Gown" programme, to address the paediatric a perinatal HIV epidemic in Kingston.
Method: A team of academic and government healthca personnel, comprising pediatricians, obstetricians, pub health practitioners, nurses, microbiologists, data mana ment and information technology personnel collaborated address this public health emergency.
Results: A five-point plan was implemented. Tl comprised leadership and training of a core group paediatric/perinatal HIV professionals to serve Kingst and be a model for the rest of Jamaica. Mother-to-chi transmission of HIV/AIDS is prevented by counselling a HIV-testing of women in the antenatal clinics, giving A to HIV+ pregnant women beginning at 28 weeks gestati



throughout labour and to the HIV-exposed infants for the first six weeks of life. A unified parallel programme for identifying the HIV-infected infant and delivering paediatric HIV care at the major paediatric centres, was developed and implemented. We are HIV-testing 30,000 pregnant women, identifying 600 HIV-exposed babies and preventing 140 pediatric HIV infections in three years. We are building research capacity which emphasizes a strong outcome-based research agenda and implementation of clinical trials. We are collaborating locally, regionally and internationally.
Conclusions: Collaboratively, we can achieve our mission of reducing mother-to-child transmission of HIV/AIDS, while improving the quality of life for those already living with and affected by HIV/AIDS.



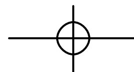
The Nigel Gibbs Memorial Lecture

(5 – 8)
The University of the West Indies and a vision of healt for the Caribbean

HS Fraser
School of Clinical Medicine and Research, The Universi of the West Indies, Cave Hill Barbados

NO ABSTRACT

SUPP52.qxd 11/10/2003 4:18 PM Page 28



Medical Education

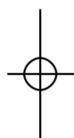
Chairpersons: W Wilson, K Massi

(6 – 1)
Medical graduates of The University of the West Indies: demographic characteristics, specialties and geographical distribution

KE Hagley
Departments of Community Health and Psychiatry and Medicine, The University of the West Indies, Kingston, Jamaica

Demographic Characteristics: Over the years, the University of the West Indies (UWI) undergraduate medical population has exhibited marked growth in both the number of students and the number of countries of origin of the students. The first undergraduate class of 33 persons which commenced its training in 1948 at Mona, was made up of students from six different countries but in the ensuing years, students from 28 countries received their training at the various campuses of the institution.

The first batch of medical graduates (class of ’54) numbered 13 and, initially the growth in number of graduates was small – a total of 43 graduates in classes ’54, ’55 and ’56. Thereafter, there was an average increase of 100% in number of graduates over a ten-year period. The class of 1973 with 104 graduates marked the beginning of the era with classes exceeding 100 graduates per year. The coming on stream of the Eric Williams Medical Sciences Complex subsequently led to a dramatic increase in the number of graduates to an average of 190 each year.



In recent years, there has been a marked shift in gender composition of the classes. Classes between 1954 and 1994 generally had a heavy male preponderance but thereafter, except for the St Augustine classes, females out-numbered males. The total number of medical graduates up until 2003 was 4936 and of this number, 1913 were females.

Specialties: Postgraduate medical training at UWI produced its first graduates in 1972 – products of a course for the Diploma in Public Health. DM programme of training produced its first graduate in 1973 (a paediatrician) and with a steady increase in specialties, has yielded a total number of 457 graduates. A much larger number of UWI medical graduates have obtained postgraduate training and degrees from places other than UWI. Data from the Medical Alumni Secretariat revealed that 1867 gradua have identified their specialties.

Distribution: Approximately 64% of the 4936 medi graduates at present are working in Caribbean countri Further analysis of this number will be given. The v majority of the others are working in Canada and Unit States of America. A substantial number is employed in t United Kingdom and relatively few are scattered in otl parts of the world.

(6 – 2)
Changes in the selection criteria for the MBBS Degr Faculty of Medical Sciences, Mona – an early evaluati

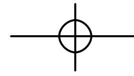
JM Branday, A Wierenga*
Department of Surgery, Radiology, Anaesthesia and Intensive Care and the Dean’s Office, Faculty of Medica Sciences, The University of the West Indies, Kingston, Jamaica

Objective: To describe the recent changes in selecti criteria for entry to undergraduate medical training in t Faculty of Medical Sciences at Mona and the relationsh of entry ratings to early performance.

Methods: The changes to the selection criteria we described for all students who entered the new restructured undergraduate medical programme at Mo The data on the academic and non-academic rating individually and totalled, age, gender and Year 1 and grades for the first two classes were used to evaluate t effect of these changes.

Results: Table 1 shows the mean and standard deviation entry ratings, age at entry, gender distribution and Yea grades for the first two classes and Year 2 grades for t Class of 2006.

Class of	Entry Ratings Acad	Non-acad	Total	Age at entry (yrs)	Gender (%) M	F	Year grade
2006	11.0	7.3	18.3	20.4	41.9	58.1	58.1
(n =105)	(2.2)	(2.7)	(3.2)	(1.9)			(9.3)
2007	10.7	7.5	18.2	20.9	29.6	70.4	58.6



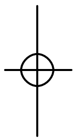
Multiple regression analyses showed that academic ratings were positively and significantly related to academic performance for the Class of 2006 ($\beta \pm$ se,1.58 ± 0.39, sig t = 0.000) and the Class of 2007 ($\beta \pm$ se,1.22 ± 0.39, sig t = 0.002). Non-academic ratings also displayed a positive association, significant only for the Class of 2006 ($\beta \pm$ se, 0.76 ± 0.33, sig t = 0.021). There was a significant positive association between total ratings and academic performance in Year 1 for both classes ($\beta \pm$ se,1.08 ± 0.27, sig t = 0.000) and ($\beta \pm$ se,1.36 ± 0.36, sig t = 0.000) which persisted in Year 2 for the Class of 2006 ($\beta \pm$ se,1.23 ± 0.25, sig t = 0.000).

Conclusions: This early evaluation suggests that the selection process maintains the academic quality of the entrants. Although the students' early academic performance supports the inclusion of non-academic criteria, long-term effects on overall performance remain to be seen.

(6 – 3)

Twenty years of internship at the Princess Margaret Hospital, where are the doctors?

CO Sin Quee, R Roberts, CS Brown, A Regis
The University of the West Indies, Faculty of Medical Sciences, Nassau, Bahamas



Introduction: Since its beginning in 1948, the Faculty of Medicine of The University of the West Indies (UWI) has produced over 4,500 doctors. An estimated 35% emigrated and practise outside the region. We questioned whether this "brain drain" occurred in the Bahamas.

Method: We traced all physicians interned at Princess Margaret Hospital (PMH) from January, 1983 to June, 2003. Databases were reviewed from files at PMH, Bahamas Medical Council, Faculty of Medicine, UWI and available Board Certified Websites. If required, physicians were contacted for verification.

Results: Of 345 interns trained at PMH during this period, 297 (89%) were UWI graduates. All Bahamians were traced; 19 others were not. One hundred and ninety-two (56%) secured postgraduate posts in: USA 106 (55%), UK 33 (17%), Canada 17 (9%), Jamaica 29 (15%), Trinidad/ Barbados 2 (1%), and Bahamas 5 (3%). The first Postgraduate Residency training programme at PMH started in 2002. One hundred and fifty-three (44%) interns were Bahamians – this contribution increased from 26 (34%) during 1983-1987, to 69 (64%) during 1998-2003. One hundred and twenty (78%) are currently practising in the Bahamas – 101 (66%) are employed in the public health services. Five (< 3%) emigrated to other countries. Sixty-seven (44%) Bahamians pursued postgraduate training: 36% USA, 22% Canada, 21% UK, 16% UWI, 4% Bahamas. Thirty-seven completed training – 31 returned to the Bahamas and 29 are government-employed. Eleven non-Bahamians of the study group returned to the Bahamas after completion of postgraduate training; nine are government employed.

Conclusion: Over the 20-year period, a significant "brain drain" of medical professionals did not occur in the Bahamas. This should be strengthened with the establishment of more postgraduate medical programmes at PMH.

(6 – 4)

A comparison of the final written examination with the clinical clerkship in surgery

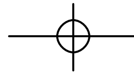
S Williams-Lockhart
The University of the West Indies, Clinical Training Programme and The Princess Margaret Hospital, Nassau, Bahamas

Objective: To determine if the written final examination in surgery at the University of the West Indies (UWI), is a true assessment of the material covered during the clinical clerkship.

Method: Papers of the written final examinations in surgery at UWI for ten years, extending from 1993 to 2002 were analysed. The frequency of the questions representing the different specialities was determined. This was compared to the amount of time spent in these specialties during the clinical clerkship.

Results: Over forty per cent of the questions were of general surgical nature, with fifty-three per cent of the clerkship time allocated to general surgery. Over twenty per cent of the questions were orthopaedic and trauma based, with only thirteen per cent of the clerkship time allocated to this discipline. The other specialties (ophthalmology, ear, nose and throat, anaesthesiology) also showed discrepancies, with a higher frequency of questions asked in the final examinations and a lower amount of clerkship time being allocated to these areas.

Conclusions: General surgery comprised the majority of questions asked in the final written examination. The majority of time in the clerkship was spent doing general surgery. However, more time should be allocated to the other specialities (especially orthopaedics and trauma). Converesly, the frequency of the questions asked on specialities needs to be altered. The written final paper would then more truly represent the students' clinical exposure.

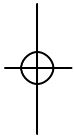


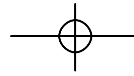
(6 – 5)

Spiritual health assessment in the undergraduate medical curriculum at The University of the West Indies, Mona – stepping out in faith!

EA Allen, TJ Paul*
Whole Person Resource Centre, Kingston, Jamaica and Department of Community Health and Psychiatry, The University of the West Indies, Kingston, Jamaica

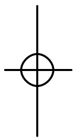
Objective: To examine the usefulness of a framework for exposing medical students to spiritual health assessment and to assess students' feedback to this structured exposure in the medical undergraduate curriculum.
Methods: A Special Study Module (SSM) was developed for first year medical students at The University of the West Indies, Mona, to develop skills at assessing spiritual health from a generic perspective. It was first implemented in 2003 and taken by six students. After completing assigned readings and two hours of tutorials on spiritual health, students conducted patient interviews. A "spiritual history" was taken using a structured open-ended interview form
Students reflected on their experience through essays a
focus group discussions. Impressions and feedback we
reviewed qualitatively.
Results: There was an increase in student awareness abo
spirituality and health from the patients' perspective and t
range of presenting problems. In addition, most studer
looked "at their own spiritual health and examined spiritu
conflicts and issues in their lives". One student felt that l
understanding of spiritual health was broadened beyond t
realms of Christianity and another wanted to see mo
patients from wider belief systems. Conflicts related
student-patient value differences were apparent. Studer
while attempting to extract spiritual-related issues with
an existential framework, struggled with their perceiv
need to "make a diagnosis" and to intervene.
Conclusion: This SSM on Spiritual Health Assessment w
well received by the first group of students and has co
tributed to awareness building on a previously unattend
aspect of patients' well-being. Further integration of re
vant spiritual issues in the medical curriculum should
considered.





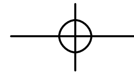
Index of Authors

Ablack, O (2-2)
Aiken, WD* (3-6)
Alagappan, K (5-1)
Allen, C (5-5)
Allen, EA* (6-5)
Allen UD* (3-8)
Arscott GDL* (3-3); (3-4); (4-3)*
Ashman, H (4-2)
Augier, R* (5-2)
Bartlett, G (1-3)
Barton-Forbes M (1-8); (5-5)*
Bennett, F (3-6)
Blake, K (1-7)
Blanc, R* (4-5)
Branday, JM* (6-2)
Brathwaite, AF* (4-7)
Brightly, K (5-5)
Brown, CS (6-3)
Butchey, JRK* (3-1)
Carpenter, R (3-4)
Carroll, L (2-3)
Chambers, D (4-2); (5-1)
Christie, C (1-5); (2-5); (5-4); (5-5); (5-7)*
Coard, K (3-6)
Connell, KL* (2-1)
Craig, HR (3-3)
Cudecki, J (3-6)
Duckworth, LJ (1-7); (2-6)
Ebeid, MR (2-7)
Evans-Gilbert, T (1-5); (2-5)
Farr, J (5-4)
Ferron-Boothe, D (3-4)
Figueroa, JP (1-5); (5-5)
Flanigan, R (3-6)
Fraser, HS* (5-8)
Freeman, V (3-6)
French S (5-1)
Forde, R (4-2); (5-1)
Gabay, L (3-3)
Gayle, M* (2-6)
Gaymes, CH* (2-7)
Geoghagen, M* (2-5); (5-4) *
Hagley, KE* (6-1)
Hambleton, I (1-5); (5-2); (5-3); (5-4)
Harding, H (5-1); (5-2); (5-3)
Hewan-Lowe, K* (2-4)

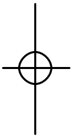


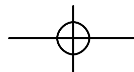
Hickling, FW* (1-9)
Hoyos, MD* (2-8)
Hutson, R (5-1)
Joransen, JA (2-7)
Kelly, LT (2-7)
Kissoon N (1-7)*; (2-6); (3-9)*
Kshatriya, S* (2-2)
Kulkarni, S (4-5)
Lima, JJ (1-7)
Lindo, J (4-2)
Lord, C (5-5)
Mason, T (3-6)
Massay, RJ (2-1)
Matadial, L (4-5)
McDiegan, G (1-4)
McDonald AH (4-2); (5-1)
McDonald, J* (3-2)
Meeks-Aitken, N (3-4)
Mehta, AM (2-7)
Mitchell V (1-8)
Mullings, A (4-5)
Murphy, SP (2-6)
Naraynsingh, V* (1-1)
Nzerue, C (2-4)
Palmer, P (1-5)
Panton, B (3-6)
Paul, TJ (6-5)
Persad, S* (4-4)
Peter SA* (1-4); (2-3)
Pierre R (1-5)*; (2-5); (5-4)
Potluri, SV (4-6)
Raje, D* (4-8)
Rajkumar, G * (4-6)
Regis, A (6-3)
Roberts, R (6-3)
Rodriguez, B (1-5); (2-5)
Sandiford, P (1-4)
Santelices, S (2-6)
Sawyer, C (2-3)
Scott, P (5-5)
Shaw, H* (3-5); (4-1)
Shores, JC (2-7)
Singh, D* (5-6)
Singh, P (4-2); (5-1)
Sin Quee, CO* (6-3)
Smith, JC (2-7)

SUPP52.qxd 11/10/2003 4:18 PM Page 32



Smith, T (1-4)
Springer, C* (3-7)
Stewart, JD* (1-3)
Stoutt, C (5-5)
Sullivan, KJ (2-6)
Sylvester, JE (1-7)
Taylor, G* (1-6); (2-9)
Townsend, T (1-3)
Trotman, H* (1-8)
Tulloch, T (3-6)
Venugopal, R (3-4)*, (4-3)
Wang, J (1-7)
Whelan, GJ (1-7)
Whorms, S (1-5)
Wierenga, A (4-2); (6-2)
Williams, A* (5-3)
Williams E* (4-2); (5-1)*
Williams-Johnson, J (4-2); (5-1)
Williams-Lockhart, S* (6-4)
Wilson, WA* (1-2)

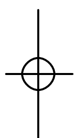




Vol. 52: (Suppl 5) 1 – 32

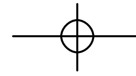
November 4 – 8, 2003

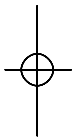
ISSN: 0043-3144 WIMJAD



Radisson Cable Beach and Golf Resort, Bahamas
November 4 – 8, 2003

SUPP52.qxd 11/10/2003 4:18 PM Page 34





The West Indian Medical Journal

congratulates

The University of the West Indies Medical Alumni Association

on its

7th International Medical Conference