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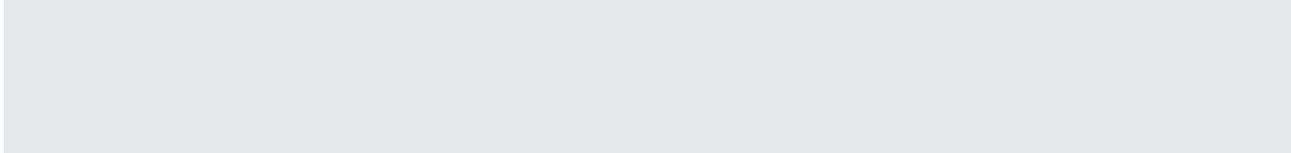
Fifth Maltese Medical School Conference

Conference Abstract Book

4-6 December 2003

Hotel InterContinental, St. Julians, Malta

Continuing Medical Education Committee
Faculty of Medicine and Surgery
The Medical School, University of Malta



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Malta Medical Journal

Conference Abstract Book

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Volume 15 • Issue 02 • December 2003

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Abstract Book

co-ordinated, compiled and edited by

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Detail from the verso of a cylindrical majolica alborello: Caltagirone, 1722-1736; 33.5cm H, 18cm Max Ø.

The crowned coat of arms of Grand Master Antonio Manuel de Vilhena is represented on the *recto*. The rest is decorated with scroll foliage, tulips, peonies and daisies. The alborello is a cylindrical vase with a narrow mouth and concave sides to make grasping easy. It contained ointments and semi-solid medicaments.

The top was covered with a parchment cap tied with a string around the everted lip to protect the contents.

Courtesy of The Museum of Fine Arts



Fifth Maltese Medical School Conference

4-6 December 2003

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Guest Speakers

<i>Guest</i>	<i>Invited by</i>	<i>Sponsored by</i>
Prof Carol Black	Dept Medicine	Ralf Arrigo Lecture Fund
Mr Joseph Coleiro	Dermatology	Organising Committee
Prof Sir Alfred Cuschieri	Dept Surgery	Technoline Ltd
Dr Joe DeGiovanni	Dept Paediatrics	Dept of Health
Prof Winfried de Gooijer	Dept Institutional Health	Dept of Health
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Prof Ian Hall	Dept Pharmacology	Dept Pharmacology
Dr Tim Hegan	Organising Committee	Medical Protection Society
Mr Paul Hunter	Ophthalmology	BMA (Malta Branch)
Prof Giuseppe Noto	Dermatology	Organising Committee
Dr Hugh Peralta	Organising Committee	Organising Committee
Dr Sam Salek	Organising Committee	Dept Pharmacology

**The Organizing Committee
is indebted to and would sincerely like to thank
the following for their support:**

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Prizes

Conference Prize for Best Oral Presentation	Conference Organising Committee
Conference Prize for Best Poster Presentation	Conference Organising Committee
Best Contribution in Medicine	Association of Physicians
Best Contribution in Paediatrics by Junior Staff	Abbott Laboratories
Best Contribution in Surgery	Association of Surgeons

Foreword

It is with great pleasure that I welcome all participants to the Fifth Maltese Medical School Conference. Since its inception fifteen years ago (1988) this conference has been a triennial affair and the academic showpiece of our Medical School. Despite the difficulties of carrying out research locally our medical postgraduates, many of which have had research experience abroad, have always risen to the occasion to submit work of very high standard and scientific value. The multi-disciplinary nature of this meeting has been a successful ingredient in past editions and it was felt to be still the best recipe on this occasion.

I have had the pleasure to be associated with this conference, in one capacity or another, for the past fifteen years. Every conference has had its own particular problems but the present one ran the risk of a premature abortion while still in its gestation period. Planning of the conference started many months ago under the enthusiastic direction of Alfred Caruana Galizia, Chairman Department of Medicine. Unfortunately, Alfred became indisposed and there was a serious possibility that the loss in momentum might scupper the event. It is to the credit of the Organising Committee that rallied to pick up the threads and to guide the ship safely to harbour. Logistic problems forced a change both in the original scheduling and venue for which we apologise. However, it is very salutary to report that Alfred has fully recovered and re-joined the organisation as our Honorary President.

Apart from the organization, the success or otherwise of any conference depends on the scientific contributions and on the overall participation. We were pleasantly surprised by

the large number of papers submitted both for oral as well as poster presentation. The Scientific Committee, chaired by the indefatigable Dr. Simon Attard Montalto, worked hard to draw up an interesting programme that, hopefully, will find favour with a large section of Malta's Medical Fraternity.

I would also like to welcome the many overseas colleagues who have accepted to address this meeting. They come from various disciplines and sub-specialities so that we are guaranteed to have a perfect mix. As in previous years we look forward to meeting old friends and making new ones.

I must thank all those who have contributed to make this meeting a success: our sponsors, the pharmaceutical exhibitors, the Conference Co-ordinators, the secretarial staff, and above all, my Co-Chairman Dr. J. Pace, and all my other colleagues on the Organising Committee who rallied round through thick and thin to give their full support for the ultimate success of this meeting.

It is likely that this will be the last Maltese Medical School Conference to be held under the aegis of St. Luke's Hospital. For those of us who have spent a medical lifetime working in this hospital this should be a nostalgic event. But it is also an opportunity to remember our many past colleagues who over the years have worked in this great local institution to ensure the standard of medical treatment that the Maltese Islands rightly deserve.

Professor CL Cutajar
Conference Chairman

Welcome from the Dean

It is with great pleasure that I welcome you all to the Fifth Maltese Medical School Conference.

As in the previous conferences, the present one is multi-disciplinary and encompasses a wide spectrum of medical and surgical specialities. Indeed, practically all specialities are represented and judging by the number of submissions received, one can be proud of a truly academically vibrant Medical School.

A special warm welcome is extended to our overseas guests who have come over specifically to share with us their vast experience in their fields.

I, on behalf of the Faculty of Medicine & Surgery, would like

to thank the Organising Committee who has worked unstintingly for the success of the Conference; the sponsors, without whose support, funding of the conference would have been difficult and the Medical fraternity, without whose serving loyalty, such events would not be possible.

I wish the Fifth Maltese Medical School Conference every success.

Professor Godfrey LaFerla
Dean, Faculty of Medicine & Surgery

Scientific Programme

Thursday, 4 December

08:45	<i>Welcome</i> Prof Lino Cutajar Chairman, Fifth Medical Conference
08:50	Prof Godfrey Laferla Dean of the Medical School
08:55	The Hon Dr Louis Deguara Minister for Health
09:00	<i>Plenary 1</i> Prof WJ de Gooijer <i>The future of Health Care Systems in an Enlarged Europe</i>
09:45	<i>Parallel Sessions</i> 1A Quality of Care I 1B Dermatology 1C Public Health
11:15	<i>Coffee break</i>
11:45	<i>Parallel Sessions</i> 1D Quality of Care II 1E Infectious Diseases 1F Neurosciences
13:15	<i>Lunch</i>
14:15	<i>Plenary 2</i> Prof I Hall <i>Pharmacogenetics – will it help treat patients with asthma</i>
15:00	<i>Parallel Sessions</i> 1G Medicine I 1H Pharmacology and Pharmacy 1J Family Medicine and Dentistry
16:30	<i>Coffee break</i>
17:00	<i>Poster Session PS1</i>
18:30	<i>Close</i>

Friday, 5 December

09:00	<i>Plenary 3</i> Prof Sir A Cuschieri <i>New Technologies for Cancer Treatment</i>
09:45	<i>Parallel Sessions</i> 2A Surgery I 2B Obstetrics and Gynaecology I 2C Psychiatry
11:15	<i>Coffee break</i>
11:45	<i>Parallel Sessions</i> 2D Cardiothoracic Medicine 2E Genetics 2F Ophthalmology
13:15	<i>Lunch</i>
14:15	<i>Plenary 4</i> Dr J DeGiovanni <i>Interventional Cardiology in Children</i>
15:00	<i>Parallel Sessions</i> 2G Paediatrics I 2H Surgery II 2J Anaesthesia
16:30	<i>Coffee break</i>
17:00	<i>Poster Session PS2</i>
18:30	<i>Close</i>
20:00	<i>Book Launch</i> <i>MCQs in Pharmacy Practice</i> Dr LM Azzopardi (Editor)

Saturday, 6 December

09:00	<i>Plenary 5</i> Prof C Black <i>The impact of the European Union on British Medicine</i>
09:45	<i>Parallel Sessions</i> 3A Medicine II 3B Paediatrics II 3C Geriatrics
11:15	<i>Coffee break</i>
11:45	<i>Parallel Sessions</i> 3D Surgery III 3E Obstetrics and Gynaecology II 3F Medicine III
13:15	<i>Closing Ceremony & Prize Giving</i> Prof Roger Ellul-Micallef Rector, University of Malta Dr Alfred Caruana Galizia Honorary President
13:45	<i>Close</i>

Detailed Scientific Programme

Venue for Plenary Lectures
Cettina De Cesare Hall

Thursday, 4 December

09:00 *Plenary 1*

*The future of Health Care Systems
in an Enlarged Europe*

Professor Dr Winfried J de Gooijer

Professor of Health Care Systems,
University of Leiden, The Netherlands

14:15 *Plenary 2*

Pharmacogenetics

– will it help treat patients with asthma

Professor Ian Hall

Head Division of Therapeutics and
Professor of Molecular Medicine,
University Hospital, Nottingham NHS Trust, UK

Friday, 5 December

09:00 *Plenary 3*

New Technologies for Cancer Treatment

Prof Sir Alfred Cuschieri

Professor of Surgery, Ninewells Hospital and
Medical School, Dundee, UK

14:15 *Plenary 4*

Interventional Cardiology in Children

Dr Joe DeGiovanni

Consultant Paediatric Cardiologist,
Birmingham Children's Hospital, UK

Saturday, 6 December

09:00 *Plenary 5*

*The Ralph Arrigo Lecture: The impact of the
European Union on British Medicine*

Professor Carol Black

President of the Royal College of Physicians,
London, UK

Parallel Sessions

Thursday, 4 December

Parallel Session 1A

Quality of Care I

Strategies for Risk Reduction in Medical Practice

Venue Cettina DeCesare Hall
Chairpersons Prof Lino Cutajar
Dr Myra Tilney

09:45 0-001 Legal liabilities in medical practice
H Peralta

10:05 0-002 Preventing litigation
through effective communication
T Hegan

10:25 0-003 Who is really responsible for the patient?
B Gafà

10:45 0-004 A systems approach
to quality improvement in clinical practice
MK Tilney

11:05 Panel Discussion

11:15 Coffee break

Parallel Session 1B

Dermatology

Venue Neptune Hall
Chairpersons Dr Joe Pace
Dr Lawrence Scerri

09:45 0-005 Cutaneous malignant melanoma
G Noto

10:00 0-006 Euro-Melanoma campaign – 4 years on
L Scerri

10:15 0-007 Sun awareness in Maltese Schools
S Aquilina, L Scerri, A Amato Gauci, M Ellul

10:25 0-008 The skin and the eye
JA Coleiro

Detailed Scientific Programme

10:40 0-009 Role of Botulinum toxin A in the management of axillary hyperhidrosis
MT Sinclair, MF Caruana, W Russell, H Manji, AEP Cameron, IS Osman

10:50 0-010 Tinea Capitis in Malta
L Vella Zahra, L Scerri, P Gatt, MJ Boffa, E Borg, E Mifsud

11:00 0-011 Management of pyoderma gangrenosum
JL Pace, M Camilleri

11:15 Coffee break

Parallel Session 1C Public Health

Venue Jupiter Hall
Chairpersons Dr Andrew Amato Gauci
Dr John Cachia

09:45 0-012 Health behaviour in the Maltese population – a national health survey
N Azzopardi Muscat

10:00 0-013 Changes in geographical distribution of wheezing children in Malta between 1994 and 2002 (ISAAC Malta)
S Montefort, P Ellul, S Caruana, M Montefort, H Agius Muscat

10:10 0-014 Cigarette smoking across three Maltese generations
C Sant Portanier, M Sant Fournier, S Montefort

10:20 0-015 Environmental skin problems in military personnel
J Pace, P Gatt

10:35 0-016 Occupational Medical Screening – an effective health protection tool
R Cali-Corleo

10:50 0-017 Re-analysis of the role played by landfills in the pathogenesis of birth defects
N Calleja, M Gatt, J Calleja Agius, T Cuschieri

11:05 Panel Discussion

11:15 Coffee break

Parallel Session 1D

Quality of Care II Difference Facets of Quality Improvement

Venue Cettina DeCesare Hall
Chairpersons Dr Alfred Caruana Galizia
Dr Myra Tilney

11:45 0-018 Incorporation of Quality of Life Assessment in routine practice as an aid to clinical decision making
S Salek, SA Hudson

12:05 0-019 Perceptions of Maltese patients of current healthcare provision: a preliminary study
MK Tilney

12:20 0-020 Addressing quality improvement in community speech language clinics
GA Buttigieg, MK Tilney

12:35 0-021 An operational analysis of the Accident & Emergency Department at St. Luke's Hospital
T Mellilo

12:50 0-022 An overview of the Maltese ambulance service
M Spiteri

13:05 Panel Discussion

13:15 Lunch break

Parallel Session 1E Infectious Diseases

Venue Neptune Hall
Chairpersons Dr Michael Borg
Dr C Mallia Azzopardi

11:45 0-023 Antibiotic resistance in Malta
MA Borg

12:00 0-024 Antibiotic prophylaxis use in surgery
MA Borg, P Zarb

12:10 0-025 Visceral leishmaniasis in Malta: a 57 year epidemiological study
B Ellul, K England, A Grochowska

12:25 0-026 Highly active anti-retroviral treatment (HAART) durability in the Maltese HIV cohort
T Piscopo, K Vella, C Mallia Azzopardi

12:35 0-027 Immune response to hepatitis B vaccine in drug users: Hepatitis C negative drug users respond better than hepatitis positive users
M Camilleri

Detailed Scientific Programme

12:45 0-028 Seroprevalence of IgG antibodies against measles in the Maltese population
G Zahra, C Barbara

12:55 0-029 The GU clinic: warts and all
P Carabott

13:05 Panel Discussion

13:15 Lunch break

Parallel Session 1F Neurosciences

Venue Jupiter Hall
 Chairpersons Prof Richard Muscat
 Mr Antoine Zrinzo

11:45 0-030 Focal electrographic seizures in acutely ill children: clinical and neuroimaging correlates
S Attard, S White

12:00 0-031 Epilepsy in Maltese children
D Soler, H Agius Muscat

12:15 0-032 Management of pituitary adenomas and the assessment of outcomes in patients with pituitary adenomas undergoing trans-sphenoidal surgery in the UK
J Vassallo, C Bajada, A Galea Debono, JA Azzopardi

12:25 0-033 Assessment of outcomes in patients with pituitary adenomas undergoing trans-sphenoidal surgery in Malta
J Vassallo, L Agius, E Farrugia, A Galea Debono, JA Azzopardi, J van 't Verlaat

12:40 0-034 Study of the human temporal bone after head injury
A Fenech, MT Camilleri Podesta, I Michaels

12:55 0-035 Imaging after acute stroke
A Zammit, S Galea Soler

13:05 Panel Discussion

13:15 Lunch break

Parallel Session 1G: Medicine I

Venue Cettina DeCesare Hall
 Chairpersons Prof Joseph Azzopardi
 Dr Josanne Vassallo

15:00 0-036 Cardiovascular risk factors in Maltese patients with newly diagnosed type 2 Diabetes presenting to the Diabetes Clinic at St. Luke's Hospital in 2003
JA Azzopardi, A Ellul, N Calleja, M Tilney, J Vassallo, M Cachia, S Fava, A Schranz

15:15 0-037 From nature to nurture: Genetics as a tool to understanding predisposition to diabetes
A Vella, JA Todd

15:30 0-038 Prevalence between clinical and subclinical hypothyroidism and outcomes in patients with myocardial infarction
J Vassallo, A Cassar, J Azzopardi

15:40 0-039 Blood pressure control in patients attending the medical consultant clinic
C Azzopardi

15:50 0-040 Audit of the management of congestive heart failure at St. Luke's Hospital
D Sammut, S Schembri, N Camilleri

16:00 0-041 The Malta experience in 'new' treatment strategies of STEMI: has this led to an improvement in prognosis and has age, sex and residential status resulted in a difference in treatment and outcome?
RG Xuereb, M Xuereb, A Borg, MA Sammut

16:10 0-042 An evaluation of the effectiveness of statins in achieving cholesterol reduction in practice
N Azzopardi Muscat, C Azzopardi

16:20 Panel Discussion

16:30 Coffee break

Parallel Session 1H Pharmacology & Pharmacy

Venue Neptune Hall
 Chairpersons Prof Roger Ellul-Micallef
 Prof Anthony Serracino-Inglott

15:00 0-043 The hepoxilin analogs, BPTs, induce apoptosis in K562 leukaemia cells
C Pace Asciak, N Qiao, D Reynaud, M Abdelhaleem

15:15 0-044 Interferon-alpha, dopamine and depression
R Muscat

15:30 0-045 Pulmonary pharmacokinetic studies of a chiral drug in an animal model
L Sghendo, J Mifsud, R Ellul-Micallef, J Portelli

15:40 0-046 Pharmaceutical overdose in Malta
R Messina Fenech, J Mifsud

15:50 0-047 Psychopharmacology in child disability
D Soler, J Mifsud

16:00 0-048 Development of a cue frequency and cue

Detailed Scientific Programme

saliency questionnaire in a substance
dependent sample

A Girard, DC Drummond, R Muscat

16:10 0-049 The use of a non-sedating antihistamine
in a hyperbaric environment
T Pace, J Mifsud, R Cali-Corleo

16:30 Coffee break

Parallel Session 1J

Family Medicine & Dentistry

Venue Jupiter Hall

Chairpersons Prof John Portelli
Dr Philip Sciortino

15:00 0-050 Family Doctors and Health Promotion:
Do we practice what we preach?
MR Sammut

15:15 0-051 A profile of family practice in Malta using
Electronic Medical Records
JK Soler, I Okkes

15:30 0-052 State Primary Health Care:
Addressing Medical Manpower Needs
MR Sammut

15:40 0-053 Dental health status among Maltese
children
JM Portelli, P Vassallo

15:55 0-054 From complete dentures to implant
retained fixed bridges – fast track!
MS Diacono

16:10 0-055 John Eskdale Fishburn
University of Malta's first dental graduate
GE Camilleri

16:20 Panel Discussion

16:30 Coffee break

Friday, 5 December

Parallel Session 2A

Surgery I

Venue Cettina DeCesare Hall

Chairpersons Prof Sir Alfred Cuschieri
Prof Godfrey Laferla

09:45 0-056 Day-case laparoscopic cholecystectomy:
Initial experience in 102 patients
CM Borg, J Psaila, S Agrawal, AG Patel

10:00 0-057 Colorectal surgery:
Laparoscopic versus open technique

P Andrejevic, AR Attard

10:10 0-058 Early experience in laparoscopic
bariatric surgery
J Psaila, CM Borg, S Agrawal, AG Patel

10:20 0-059 Incidental gallbladder carcinoma in the
Maltese Archipelago
J Deguara, CM Borg, G LaFerla

10:30 0-060 Outcome after upper limb
revascularisation

J Deguara, T Ali, KG Burnand

10:45 0-061 Biomechanics of median sternotomy
closures
A Casha, M Gauci, L Yang

10:55 0-062 Does the type of midline incision influence
the incidence of incisional hernia?
P Andrejevic, M Szczepanski, G LaFerla

11:05 Panel Discussion

11:15 Coffee break

Parallel Session 2B

Obstetrics & Gynaecology I

Venue Neptune Hall

Chairpersons Prof Mark Brincat
Mr George Buttigieg

09:45 0-063 Epidemiology of Polycystic Ovaries
MP Brincat, R Galea, D Felice, G Buttigieg

09:57 0-064 Causes of recurrent miscarriage in Malta:
a new factor
*H Consiglio, M Formosa, MP Brincat,
D Felice*

10:10 0-065 Recurrent miscarriage: is it two or three?
M Formosa, MP Brincat, D Felice

10:22 0-066 Genetic and developmental defects
resulting in spontaneous miscarriage
*J Calleja Agius, MP Brincat, A Cuschieri,
P Schembri Wismayer*

10:35 0-067 The outcome of diabetic pregnancies in
the Maltese Islands
*C Savona-Ventura, M Chircop, A Ellul,
J Azzopardi, L Janulova*

10:47 0-068 Laparoscopic electrocautery therapy to
ovaries in patients with infertility
JPC Mamo, A Armatys, J Mamo

11:00 0-069 Use of GUHA method for automatic
generation of interesting hypotheses in the
diagnosis of ectopic pregnancy
I Stabile, LJ Kohout

Detailed Scientific Programme

11:15 Coffee break

Parallel Session 2C

Psychiatry

Venue Jupiter Hall
Chairpersons Dr David Cassar
Dr Myra Tilney

09:45 0-070 Cartesian dualism:
Depression in the medically ill:
Does it go undiagnosed?
J Cassar

09:55 0-071 The validation of the Maltese Edinburgh
Postnatal Depression Scale (EPNS)
E Felice, J Saliba, J Cox

10:05 0-072 Effect of substance abuse
on outcome of psychoses and its impact
on psychiatric services
A Grech

10:15 0-073 Anxiety, depression and spiritual well
being in Maltese patients with first
myocardial infarction
D Baldaecchino

10:25 0-074 The development of an interface between
primary and secondary care in Mental
Health
M Agius, J Butler

10:35 0-075 What do Maltese psychiatric patients think
of their Outpatient Care? A
preliminary study
*MK Tilney, J Saliba, D Gauci,
MT Camilleri Podesta*

10:45 0-076 The communication skills course in the
behavioural sciences programme:
An evaluation
D Cassar, P Sciortino

10:55 Panel Discussion

11:15 Lunch

Parallel Session 2D

Cardiothoracic Practice

Venue Cettina DeCesare Hall
Chairpersons Prof Albert Fenech
Mr Alex Manché

11:45 0-077 Transcatheter closure of post-infarct
ventricular septal defects
*JV DeGiovanni, M Been, C Burrell,
R Henderson, J Motwani, JAS Davis, P Clift*

12:00 0-078 Risk adjusted effect of bypass on mortality
and morbidity in CABG
*C Sherlaw-Johnson, A Nugent,
W Dimitri, N Briffa*

12:10 0-079 Smoking cessation in patients undergoing
coronary revascularisation
A Manche, M Debono

12:25 0-080 Obesity not necessarily a disadvantage
during routine CABG
K Schembri, A Manche

12:35 0-081 Myocardial perfusion scintigraphy in
patients with coronary artery disease
A Samuel, M Delia

12:45 0-082 The prevention of travel related
thrombosis: Should we be
targeting venous stasis?
*MF Caruana, RE Brightwell, E Huguet,
P Whitear, IS Osman*

12:55 0-083 Measurement of prolongation of graft
survival in allogenic vascularised heart
transplants in response to controlled
alteration of pretreatment donor cell MCH
class I and II antigen and Notch ligand

Delta I
R Abela, MJ Dallman

13:05 Panel Discussion

13:15 Lunch break

Parallel Session 2E

Genetics

Venue Neptune
Chairpersons Prof Alfred Cuschieri
Prof Alex Felice

11:45 0-084 The Malta experience: Population tools for
discovery in Genomics and Genetics
AE Felice

12:00 0-085 Molecular cytogenetics: a diagnostic
and research tool in clinical genetics
*I Borg, VM Kalscheuer,
MA Ferguson-Smith, DR Sargan*

12:10 0-086 Genetics and proteomics of the
Hb F/F-erythrocyte
*AE Felice, CA Scerri, W Cassar, R Galdies,
M Pizzuto, S Pulis, B Scicluna, R Caruana,
M Farrugia*

12:20 0-087 Screening for subtelomeric
rearrangements
in patients with idiopathic mental retardation
using FISH

Detailed Scientific Programme

E Said, A Cuschieri, S Suleiman

12:30 0-088 Screening for fragile X among mentally handicapped males and males with learning difficulties

S Suleiman, E Said, A Cuschieri

12:40 0-089 Molecular diagnosis of adult-onset Muscular Dystrophies

E Said, A Galea Debono, A Cuschieri

12:50 0-090 Huntington's disease in the Maltese Islands and frequencies of trinucleotide repeats

A Cuschieri, A Galea Debono, E Said

13:05 Panel Discussion

13:15 Lunch break

Parallel Session 2F Ophthalmology

Venue Jupiter Hall
Chairpersons Mr Paul Hunter
Mr Thomas Fenech

11:45 0-091 Training in Ophthalmology in the EU and the future

P Hunter

12:05 0-092 Diabetic retinopathy: past, present and future

J Diamond

12:25 0-093 Glaucoma in the Maltese Public Health Services

J Janula, D Mallia, M Francalanza

12:35 0-094 Familial pseudoexfoliation in Gozo

F Mercieca

12:45 0-095 Comparative analysis of indications, per-operative procedures, complications and outcome in pars plana vitrectomy in two periods (Nov93-Aug98 & Jan02-Dec03)

MJ Gouder, T Fenech, A Bezzina, J Grech Hardie

12:55 0-096 A retrospective audit of primary rhegmatogenous retinal detachment surgery

J Grech Hardie, A Bezzina, T Fenech, MJ Gouder

13:05 Panel Discussion

13:15 Lunch

Parallel Session 2G Paediatrics I

Venue Cettina DeCesare Hall
Chairpersons Dr Simon Attard Montalto
Dr Joe DeGiovanni

15:00 0-097 Medical problems and international adoptions: a practical solution

S Attard Montalto, E Gouder, L Agius, A Mifsud

15:15 0-098 Type I diabetes mellitus in Maltese children

J Torpiano, A Falzon, V Grech, J Azzopardi

15:30 0-099 Amplatzter ASO device closure of secundum atrial septal defects and patent foramen ovale in Malta

V Grech, A Fenech, H Felice, JV DeGiovanni

15:45 0-100 A comparison of clinical paediatric cardiovascular examination and echocardiography

A Falzon, J Torpiano, M Bailey, V Mercieca, V Grech

15:55 0-101 How reliable is axillary temperature measurement?

A Falzon, V Grech, B Caruana, A Magro, S Attard Montalto

16:10 0-102 Audit of emergency investigations in children with mild gastroenteritis

D Pace, V Said Conti, S Attard Montalto

16:20 Panel Discussion

16:30 Coffee break

Parallel Session 2H Surgery II

Venue Neptune Hall
Chairpersons Mr Frederick Zammit Maempil
Mr Mario Said

15:00 0-103 Defaulting from the waiting list

J Debono, DT Gatt

15:10 0-104 The application of otoacoustic emissions in detecting carriers of autosomal recessive non-syndromic hearing loss

A Lapira, M Cohen, M Bitner-Glindzicz

15:25 0-105 Hyposmia as a predictive value of nasal

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polyposis

HK Borg, B Bingham

15:35 0-106 Experience with video-assisted thoracic surgery (VATS) in children
J Cauchi, DH Parikh

15:45 0-107 The role of atopy in Maltese patients with chronic rhinitis
AM Agius, M Cordina, N Calleja

15:55 0-108 Innovative corrective osteotomy procedure in Paget's Disease of long bones
G Pecotic, K Micallef-Stafrace, A Bernard

16:05 0-109 Scoliosis: An epidemiological review in Malta
V Spiteri, F Zammit-Maempil, M Spiteri, N Calleja

16:20 Panel Discussion

16:30 Coffee break

Parallel Session 2J Anaesthesia

Venue Jupiter Hall
Chairpersons Dr Zaren Azzopardi
Dr Peter Cauchi

15:00 0-110 Using APACHE II scoring to monitor present and future ITU performance
A Gera, M Galea Scannura, E Grech

15:15 0-111 Recent advances in the management of critically ill septic patient
CJ Abela

15:30 0-112 The development of a first Maltese Pain Questionnaire
D Gatt

15:45 0-113 Sedation for endoscopic procedures
D Spiteri

16:00 0-114 Cardiovascular optimization for non-cardiac surgery
E Mellilo

16:10 0-115 The Paediatric Advanced Life Support (PALS) Provider Course in Malta, 1999-2003
M Zerafa, T Esposito, S Attard Montalto

16:20 Panel Discussion

16:30 Coffee break

Saturday, 6 December

Parallel Session 3A Medicine II

Venue Cettina DeCesare Hall
Chairpersons Prof Carol Black
Prof Carmel Mallia

09:45 0-116 Treating rheumatoid arthritis yesterday and today: Local experience with biological therapy
C Mallia

10:00 0-117 A survey of patients with systemic sclerosis in a Maltese population
B Coleiro, C Mallia

10:10 0-118 A novel classification of immune myasthenia based on mechanism of disease
MA Agius, DP Richman, RH Fairclough

10:20 0-119 Maltese physician's knowledge and attitudes towards the use of morphine in cancer pain:
A descriptive study to identify possible barriers to better cancer relief in Malta
M Camilleri

10:30 0-120 Parathyroid scintigraphy in the localisation of parathyroid adenomas - 4 year experience in St Luke's Hospital
S Galea Soler, A Samuel

10:45 0-121 Age related incidence and other epidemiological aspects of myelodysplastic syndromes in Malta: a 13 year study (1999-2003)
A Grachowska

10:55 0-122 Effects of raised ambient pressures on erythrocyte deformability
R Cali-Corleo

11:05 Panel Discussion

11:15 Coffee break

Parallel Session 3B Paediatrics II

Venue Neptune Hall
Chairpersons Dr Paul Vassallo Agius
Dr Victor Grech

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09:45	0-123	Geographical differences in male: female ratios at birth <i>V Grech, P Vassallo-Agius, C Savona-Ventura</i>
10:00	0-124	Current breastfeeding trends in Malta <i>H Borg, L Janulova, S Attard Montalto</i>
10:15	0-125	Quality of life at six years of survivors treated on the neonatal unit in Malta <i>S Xuereb, S Attard Montalto</i>
10:30	0-126	Risk factors for wheezing in 8-10yr old children attending Paediatric Outpatients <i>J Pullicino, C Vella, S Montefort</i>
10:45	0-127	Paediatric Oncology Services in Malta <i>V Calvagna</i>
10:55	0-128	Does the prevalence of Edward's syndrome differ in Malta and Europe? <i>C Sciberras, M Gatt, S Attard Montalto, V Grech</i>
11:05		Panel Discussion
11:15		Coffee break
Parallel Session 3C Geriatric Medicine		
Venue Jupiter Hall Chairpersons Prof Frederick Fenech Dr Nori Graham Hon Dr Franz Agius		
09:45	0-129	Alzheimer's disease: Facing the challenge <i>N Graham</i>
10:05	0-130	Placement in a long stay institution – an outcome measure of a geriatric unit <i>A Fiorini</i>
10:15	0-131	Anti-coagulation for elderly patients with atrial fibrillation <i>S Abela</i>
10:25	0-132	Co-morbidity in older adults with Parkinson's disease in a long-term residence <i>M Abela</i>
10:35	0-133	Abuse within a chronic care institutional setting for older persons in Malta <i>MA Fenech, A Fiorini</i>
10:45	0-134	Seating arrangements for older persons at St. Vincent de Paule residence <i>MA Fenech, ML Grech</i>
10:55	0-135	Feasibility of introducing user charges at Zammit Clapp Hospital

V Massalha

11:05 0-136 Teamwork in Health care delivery – A case study of a Maltese Geriatric Hospital
S Buttigieg

11:15 Coffee break

Parallel Session 3D Surgery III

Venue Cettina DeCesare Hall
Chairpersons Prof Lino Cutajar
Mr Alex Attard

11:45 0-137 Hormonal treatment for carcinoma prostate: Collaborative research between EORTC and Urology Department, St. Luke's Hospital
L Cutajar

12:00 0-138 Osmolysis as a modality for treatment of transitional cell carcinoma of the urinary bladder – a pilot study
A Felice, A Cilia Vincenti

12:10 0-139 Difficult urethral catheterization – use of a hydrophilic guidewire
S Bugeja, P Zammit, S Mattocks, K German

12:20 0-140 Endourethral macroplastique injection for the treatment of female genuine stress incontinence
J Sciberras, S Mattocks, K German

12:30 0-141 Parathyroid surgery in a surgical unit with a small catchment population
J Deguara, J Psaila, AR Attard

12:45 0-142 Breast cancer in a high risk cohort – nuns in Malta
S Bugeja, G Caruana-Dingli, C Swain

12:55 0-143 Microvascular reconstruction with free tissue transfer in Malta
F Darmanin

13:05 Panel Discussion

13:15 Closing Ceremony

Parallel Session 3E Obstetrics & Gynaecology II

Venue Neptune Hall
Chairpersons Mr Donald Felice
Mr Ray Galea

11:45 0-144 Intervertebral disc height is higher in hormonally treated menopausal women and in menstrual women compared to non-

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<p>hormonally treated menopausal women and untreated postmenopausal women <i>Y Muscat Baron, R Galea, MP Brincat, D Felice</i></p> <hr/> <p>11:57 0-145 The effect of marine alga on postmenopausal osteoporosis <i>R Galea, MP Brincat, C Saliba, G Gutierrez, JP Salles</i></p> <p>12:10 0-146 Influence of the vitamin D and oestrogen receptor genes on bone mineral density in postmenopausal women in Malta <i>C Vidal, M Brincat, A Xuereb Anastasi</i></p> <p>12:22 0-147 The value of sonohysterography (SH) in a one-stop menstrual disorder clinic: A one-year audit <i>J Aquilina, J Bhakta, C Davis</i></p> <hr/> <p>12:35 0-148 Reduction in hysterectomy rate following establishment of minimal access surgery <i>AP Scerri, MC Powell</i></p> <hr/> <p>12:47 0-149 A comparative study between oestrogen replacement therapy, anticholinergic treatment and a combination of both in the management of detrusor instability in postmenopausal women <i>M Sant, J Calleja Agius, P Galea, MP Brincat</i></p> <hr/> <p>13:00 0-150 Psychiatrist in the Obstetric Unit <i>E Felice</i></p> <hr/> <p>13:15 Closing Ceremony</p>	<p>12:40 0-155 Comparison of the post-mortem diagnosis to the clinical diagnosis <i>C Salafia Zammit</i></p> <p>12:55 0-156 The evaluation of early signs of complications of thalassaemia and its treatment by magnetic resonance imaging <i>M Micallef, A Camenzuli, V Serafimov, J Castillo, MP Crockford, D Josifova, M Farrugia, C Scerri, A Felice</i></p> <p>13:05 Panel Discussion</p> <p>13:15 Closing Ceremony</p>
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<p>Parallel Session 3F Medicine III</p> <hr/> <p>Venue Jupiter Hall Chairpersons Dr Alfred Caruana Galizia Prof Joseph Cacciottolo</p> <hr/>	
<p>11:45 0-151 Prevalence rate of Hepatitis B in Malta <i>A Khamis, C Barbara</i></p> <p>11:55 0-152 Chronic hepatitis C viraemia: who and when to treat? <i>E Pullicino</i></p> <p>12:10 0-153 Testing for haemochromatosis genotype in Malta <i>J Pocock, A Caruana Galizia, M Stellini</i></p> <p>12:25 0-154 A study on deaths due to drowning in Maltese waters over a ten year period <i>S Ali, G Attard, MT Camilleri Podesta, B Ellul, K England</i></p>	

Oral Presentations

0-001

Legal liabilities in Medical Practice

H Peralta, Legal Advocate, Malta

This presentation will provide a brief overview of legal liabilities in Medical Practice. The subject will be considered from a criminal and civil law aspect. The former will discuss the relationship between the state and the medical practitioner, taking into account the responsibility imposed by the state on the doctor, and the penalty meted out in case of infringement. The latter addresses the relationship between the patient and/or the next of kin, and the medical practitioner.

0-002

Preventing litigation through effective communication

T Hegan, Medical Protection Society, UK

Good communication in all aspects of medical practice is essential.

Effective communication with your patient not only enables you to take an accurate history but also helps the patient to understand their illness and no doubt assists the healing process.

Communication with other health professionals allows the team approach to healthcare to succeed. It reduces the chances of a breakdown in continuity of care, builds relationships and understanding between different disciplines and specialties and helps professionals to learn from each other.

In the medico-legal field poor communication is the underlying problem in the most of cases that MPS deals with. The majority of negligence cases are not related to the clinical quality of care but are triggered by inadequate communication. A breakdown in the doctor-patient often occurs before the incident that leads to a claim. It is as if the patient is just waiting for their moment to sue.

In a busy clinic or GP surgery it is often easy to forget the human needs of the patient and concentrate on their medical needs. First impressions are vital not just with the doctor but also with other staff and even the clinic or hospital itself.

During the consultation careful listening, giving sincere empathy early in the consultation and an expression of understanding of their concerns will go a long way to instill confidence in the patient and reduce the likelihood of a complaint should things go wrong.

0-003

Who is really responsible for the patient in an organization?

B Gafa, Legal Department, Health Division, Malta

When a person finds himself in a hospital, the quality and length of his stay are the result of two tiers of decision - making processes, namely administrative and clinical or surgical. Whereas the administration strives to formulate policies, guidelines and provide the tools and environment with which the clinician has to work with and within, the doctor then has the responsibility to utilize his skill and knowledge to care for and treat the patient who seeks his help. The aim of this paper is to discuss these two processes and show that they are not in conflict, but need to work together in the best interest of the patient.

Naturally, decisions are taken in terms of constraints, financial and otherwise, which are imposed on the administrative provider of care. In the ambit of healthcare such decisions have to be taken after the consultative processes with the practitioners have been concluded. In this manner the best interest of the patient is catered for.

0-004

A systems approach to quality improvement in clinical practice

MK Tilney, Department of Medicine, University of Malta

Aims and Objectives:

- Overview of the quality literature and its' application to medicine
- To describe innovative approaches to quality improvement including a Systems Approach and Medicine.
- Application of different stages of the Quality Improvement process to clinical care.

Resume: Medicine is facing unprecedented challenges resulting in increasing pressure on improving quality of care delivery, and obtaining better value as a result of increasing cost constraints. Quality improvement and the impact of Total Quality Management (TQM) approaches on Medicine and the underlying concepts are explored from the perspective of clinical medicine and the evidence base. A Systems approach is utilised, identifying the implications. Approaches to Patient service quality and assessing patient expectations are described. The review describes how a TQM approach may be applied to medical care. A number of fundamental concepts being applied to healthcare delivery are described including focusing on System quality and zero defects, capability, process improvement, the impact of culture on quality, sound measurement, teamwork, and learning approaches. The review provides a global overview of the main influences impacting upon clinical quality improvement efforts at present.

0-005

Cutaneous malignant melanoma: what's new?

G Noto, U.O. Dermatologia, Dipartimento Oncologico "La Maddalena" and University of Palermo, Italy

Cutaneous melanoma is the most aggressive skin cancer, with an incidence in central Europe of about 9-10 cases every 100.000 people per year. Increasing was quantified in about 10%, the highest increment of annual incidence amongst all tumors of all organs. Early diagnosis and subsequent prompt surgical treatment are, up to now, the main aims. Dermoscopy has recently proven to be a valuable method for improving the clinical diagnosis of melanoma using the so-called pattern analysis. Recently, two additional methods based on diagnostic algorithms have been introduced for increasing sensitivity, the ABCD rule of dermoscopy, based on a semiquantitative analysis of asymmetry, border, colour, and different dermatoscopic structures and a new algorithm, called 7-point checklist, providing a quantitative scoring system and a simplification of the classic pattern analysis. The American Joint Committee on Cancer Melanoma Staging Committee proposed a new staging system for melanoma published in 2001. Salient features of the new staging system include the following: incorporation of ulceration of the primary as an adverse prognostic indicator in patients with Stage I, II, or III disease; merging of satellites and in-

transit metastases into a single staging entity that is grouped into Stage III; incorporation of the number of metastatic lymph nodes and whether or not they are clinically palpable as prognostic indicators for patients with Stage III disease; incorporation of sites of distant metastases and the presence of elevated serum lactic dehydrogenase (LDH) as prognostic indicators for patients with Stage IV disease. The revisions incorporated into the new staging system are important and identify factors that need to be considered when interpreting results from randomized trials, particularly in adjuvant therapy.

0-006

Euro-Melanoma Campaign – 4 years on

*L Scerri, Department of Dermatology,
Sir Paul Boffa Hospital, Malta*

The progressive alarming rise in the incidence and mortality of malignant melanoma in Caucasian populations in recent decades has drawn the attention of health authorities worldwide. The incidence of melanoma in the Maltese Islands has increased by 42% over the last 10 years, whereas mortality rate from melanoma has increased by 93% over the same period. This increase in incidence and mortality has predominantly affected the middle and older age groups, and was significantly more pronounced in males.

Major health promotion efforts across the globe have been directed at educating the public to minimize UV exposure, as well as encouraging early detection of melanoma with a view to reducing mortality. The ultimate measure of a successful public impact of such campaigns is the change in public attitude and behaviour, particularly in rebellious younger generations. With this in mind, European countries including Malta have joined forces in launching the 'Euro-Melanoma Campaign' in the year 2000. There are already early indicators that such an intensive multi-national strategy is bearing fruit locally, also thanks to a snowball effect with greater involvement of relevant authorities such as the health promotion department, education authorities, sports bodies and the media.

Early positive trends include a perceived greater demand for 'mole checks', as well as increasing commitment by the health and safety unit and employers in promoting sun protection among outdoor workers. A number of cases of industrial action over a demand for sunscreen provision by outdoor workers were reported. Many sports organizations and schools are requesting children to adopt basic sun protection measures during daytime outdoor activities in spring and summer. The UV index was introduced in the local weather forecast. More campaigning and education is required to reinforce these encouraging positive trends.

0-007

Sun awareness in Maltese secondary school students

S Aquilina,¹ L Scerri,¹ A Amato Gauci², M Ellul³

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²Department of Public Health,

University of Malta Medical School, G'Mangia,

³Health Promotion Department, Malta

Background: Studies indicate that reducing exposure to ultraviolet light during childhood and adolescence decreases the risk of skin cancer. From a young age, children need to be educated about the sun's harmful effects on the skin and how best to protect themselves.

Objective: To help in the design of school-based interventions to raise sun awareness, a school survey was carried out in order to assess students' sun-related attitudes and knowledge.

Study design: A total of 965 students attending Maltese secondary schools in forms 1, 2 and 3 were surveyed in May 2002, by means of a structured questionnaire.

Results: High scores were obtained by the students on knowledge of the effects of the sun on the skin, knowledge of skin cancer and knowledge of sun protection. However, 55% of the students surveyed thought that a suntan made them look better, and 70% thought that their friends would desire a

tan. These views were commoner amongst the older students. Although girls were more knowledgeable than boys, deliberate suntanning was more frequently reported by the girls.

Conclusion: Maltese secondary school students have a high level of sun-related knowledge, but attitude change lags behind knowledge. Future school sun awareness interventions need to take into account gender and age differences in students' attitudes and perspectives. Attitude change and preventive behaviour may be encouraged through consistent and repeated sun-education messages that are supported by a sun-conscious school environment.

0-008

The skin and the eye

*JA Coleiro Ninewells University Hospital,
Dundee, Scotland, UK*

The skin provides the major protection from ocular exposure; in the elderly loss of elasticity produces redundant folds which overhang the lid margin, causing poor cosmesis as well as disabling limitation of visual field. Allergies cause significant discomfort and itching; this may result from contact with make-up preparations but more frequently by longterm use of topical ophthalmic medications in the form of drops or ointments and their contained preservative. Most patients with glaucoma require lifelong treatment with several drugs; the recent introduction of prostaglandin analogues such as latanoprost and travoprost has produced an observation of abnormal and excessive growth of eyelashes. Reactions to systemically administered drugs may produce the severe Stevens-Johnson syndrome. The young atopic patient may present with intractable vernal conjunctivitis with persistent disabling itching resistant to most topical therapies. Infections with herpes simplex and zoster viruses cause considerable discomfort; corneal ulceration and subsequent stromal scarring lead to visual loss. Acne rosacea is often accompanied by a dry eye and chronic blepharitis requiring regular lid hygiene and recurrent chalazia. Ocular pemphigoid has a cicatricial propensity with abolition of the conjunctival fornices and adherence of the eyelids to the globe despite the use immunosuppressive agents with their attendant side-effects. A particularly severe form of uveitis is associated with the Behcet's disease with formation of a level of sterile pus within the anterior chamber; involvement of the retina and choroid leads to devastating blindness in young people. The revival of indications for hydroxychloroquine in discoid lupus and rheumatoid arthritis has alerted practitioners to their ocular toxicity when used over long periods; this has produced logistical difficulties in the allocation of resources for monitoring which remains debatable.

0-009

The role of Botulinum toxin A in the management of axillary hyperhidrosis

*MT Sinclair, Caruana MF, W Russell, H Manji,
AEP Cameron, IS Osman²,*

*The Suffolk Vascular Unit and Department of Neurology¹,
Ipswich Hospital, UK²*

Introduction: Botulinum Toxin injection is a welcome addition to the arsenal available for the treatment of primary axillary hyperhidrosis and its value in comparison to other modalities of treatment such as drugs, iontophoresis or surgery

Objectives: To assess whether subcutaneous injection of botulinum toxin A (BTA) reduces sweating in patients with axillary hyperhidrosis. To assess safety and complications.

Design: 1) Systematic literature review 2) Double blind randomised controlled trial.

Setting: District general hospital based study.

Outcome measures: Sweating assessment test which measured volume of sweating, subjective sweating, neurological assessment and assessment of complications. Comparison to published data.

Results: Subjective sweating was significantly reduced in axillae injected with BTA compared with controls at 4, 12 and 24 weeks after injection. There was a trend towards a reduction in measured sweating in axillae

injected with BTA. There were no significant complications or compensatory hyperhidrosis. The median duration of action was 9 months.

Discussion: Two intradermal injections as opposed to multiple intracuticular injections of BTA are a safe and effective way to treat axillary hyperhidrosis which avoids the side-effects of surgery. This paper also looks at current techniques and current toxins available for the management of primary hyperhidrosis.

Ref: Sinclair MT, Russell W, Caruana MF, Manji H, Cameron AEP, Osman IS. Botulinum toxin A injections reduce subjective sweating in axillary hyperhidrosis. *Archives of Pharmacology* 2002; 365(2): 166.

0-010

Tinea capitis in Malta

L Vella Zahra, L Scerri, P Gatt, MJ Boffa, E Borg, E Mifsud, D Vella Briffa, JL Pace, Dermatology Department, Sir Paul Boffa Hospital, Floriana, Malta

Over a seven-year period (1995 – 2001), a total of 2352 specimens (1638 skin scrapings and 420 nail and 294 hair specimens) were submitted for mycological investigations from 2236 patients. Of the 690 patients who were diagnosed with dermatophytosis, there were 122 (18%) patients who had tinea capitis. These patients were predominantly children with boys (n = 78) outnumbering the girls (n = 38); their mean age was 6 years (age range 2 – 17 years). Additionally, there were 6 adult females (mean age 63 years, age range 47 – 76 years) with scalp ringworm. The dermatophytes isolated were *Microsporum canis* (n = 102), *Trichophyton mentagrophytes* (n = 7), *T. soudanense* (n = 4), *T. violaceum* (n = 4), *M. audouinii* (n = 3), *T. verrucosum* (n = 1), *T. tonsurans* var. *sulphureum* (n = 1) and *M. persicolor* (n = 1). Tinea capitis due to *M. canis* was more common in boys (n = 64) than in girls (n = 38), although this was not found to be statistically significant (p < 0.05). *Microsporum canis* is also the commonest agent of tinea capitis in Southern European, Eastern Mediterranean and South American countries. Unlike northern Europe and the USA, *T. tonsurans* has not had any significant upsurge in isolation rates over the past years in Malta. Some patients (n = 28) gave a history of contact with a possibly infected animal, principally cats, dogs and rabbits.

1. Gupta A.K., Summerbell R.C.: *Tinea capitis*. *Med. Myc.*, 2000, 38, 255-287.
2. Leeming J.G., Elliott T.S.: *The emergency of Trichophyton tonsurans tinea capitis in Birmingham, UK*. *Br. J. Dermatol.*, 1995, 133, 929-931.

0-011

Management of pyoderma gangrenosum

JL Pace¹, M Camilleri²,
¹Department of Dermatology, University of Malta Medical School & Jefferson Medical College of Thomas Jefferson University, Philadelphia,
²Boffa Hospital, Floriana & Mayo Clinic, USA

Pyoderma Gangrenosum (PG) is a reactive dermatosis characterized by chronic, non-infective, necrotic cutaneous lesions, and which usually occur in association with a systemic disorder, in particular **inflammatory bowel disease** and monoclonal gammopathies. PG is a **neutrophilic dermatosis** characterized histologically by an intense dermal neutrophilic infiltrate **without** primary vasculitis. The exact aetiology and pathogenesis of PG is largely unknown. Systemic diseases associated with PG include: Inflammatory Bowel Disease (IBD); arthritis; monoclonal gammopathy and malignant disease.

The **diagnosis** of PG depends mainly on the recognition of the evolving clinical features, since there are no pathognomonic histopathological features or specific serological or haematological markers. Investigations to detect any associated underlying systemic condition should also be performed.

Treatment: (1) It is of utmost importance to treat any underlying systemic disease; (2) supportive therapy is vitally important in PG; (3) wound care

provides the ideal conditions to promote wound re-epithelialization and closure; (4) specific therapy controls the underlying inflammation that is causing the ulceration and includes steroids, cyclosporin, tacrolimus, azathioprine, 6–mercaptopurine, alkylating agents and cyclophosphamide.

0-012

Health behaviour in the Maltese population – findings from a national health survey

N Azzopardi Muscat, Ministry of Health, Malta

Purpose: To investigate health behaviour in the Maltese population

Methods: A national health interview survey was carried out in Spring 2002 on a randomly selected sample of residents in Malta aged 16 and over. Out of 5510 sampled individual, 4268 responses were collected giving a response rate of 77.5%. A selection of questions on health behaviour were analysed separately for men and women. Logistic regression models were used and outcomes were transformed into binary variables. Smoking, alcohol consumption, physical activity, dietary habits and BMI were analysed according to education and occupation after adjusting for age, employment and marital status.

Results: Overall, men and young adults exhibited the least healthy behaviour. Obesity was the most serious problem with less than 40% of the population having a normal body mass index. Daily cigarette smoking was reported by 30% of men and 18% of women. Cigarette smoking, a high body mass index, unhealthy food habits and lack of leisure time physical activity were significantly associated with low educational status and occupational group. Conversely, alcohol consumption, success in stopping smoking, changing dietary habits and good perceived health were significantly associated with high educational status and occupational group.

Recommendations: A comprehensive health promotion strategy to reduce obesity, encourage healthy eating and physical activity and to reduce smoking is recommended. Particular attention should be paid towards obtaining results in the vulnerable groups. Activities proposed include legislation, educational campaigns and supportive health services. Participation and ownership by stakeholders, appropriate resources, monitoring and accountability are deemed essential for the strategy's success.

0-013

Changes in geographical distribution of wheezing children in Malta between 1994 and 2002 [ISAAC Malta]

S Montefort, P Ellul, S Caruana, M Montefort, H Agius Muscat, Dept of Medicine, University of Malta

The ISAAC [Malta] studies were carried out in 1994 [3506 participants] and 2001 [3800 participants] for the 5 – 8 yr old age group in randomly selected state primary schools and in 1995 [4184 participants] and 2002 [4139 participants] for the 13 – 15 yr olds in randomly selected state and private secondary schools. The standardised questionnaire included enquiries about place of dwelling and a history of wheezing sometime in the participant's life – these data were analysed and a comparison was carried out for the two studies to investigate any changes in geographical distribution of wheezers along the years in the Maltese islands.

In the younger age group where there was an increase of wheezers 'ever' [19.1% in 1994 to 30.2% in 2001]. There was an increase in all regions of the Maltese islands but this increase was more pronounced in certain areas. The Northern and Western regions where the highest rates of wheezers lived in 1995 [26% & 22.4%] increased to 30.4% and 26%, respectively. However, the highest increases in this same period were noted in the Central East [21.8% vs 37.4%], Grand Harbour area [17.5% vs 36.2%], the East [19.4% vs 35.9%] and the Central North [19.6% vs 35.3%].

In the older age group the rate of children who have wheezed sometime

in their life remained practically the same [27.9% in 1995 and 27.4% in 2002] but there were some interesting changes in geographical distribution. Whereas there were decreases in rates of wheezers 'ever' in Gozo [30.9% vs 19.6%], Central West [31.1% vs 25.7%], Central region [30.2% vs 26.9%], West [29.3% vs 24.6%] and South [27.1% vs 16.7%], there were substantial increases in the Central South [18.1% vs 29.3%], the Grand Harbour area [27.8% vs 32.2%], Central East [26.6% vs 30.5%] and Northern regions [24.6% vs 27.4%] Although the Central North region showed a slight decrease in prevalence of wheezers 'ever' [36.6% vs 36.1%] it maintained its 'top spot'.

These changes in geographical distribution of childhood wheezing in Malta lead to a lot of speculation as regards cause and should form the basis for future research in asthma in the Maltese island.

0-014

Cigarette smoking across three Maltese generations *C Sant Portanier, M Sant Fournier, S Montefort*

Depts of Medicine and Pharmacology, University of Malta, Malta

Cigarette smoking is currently the single most preventable cause of disease and death and is still very prevalent in the Maltese Islands.

Objective: To investigate various aspects of smoking among three different Maltese generations using a standardized questionnaire.

Methods: 200 randomly chosen subjects from each of three age groups [16 – 21 yrs, 40 – 45 yrs and 60 – 65 yrs] were asked to answer a standardized questionnaire regarding duration, amount, mode and effects of smoking. They were also asked to undergo spirometry and exhaled CO analysis.

Results: 66.1% of 16-21 yr olds, 59% of 40 – 45 yr olds and 75% of 60 – 65 yr olds chosen participated in the study. 27.7% of the participants were smokers – this comprised 31.1% of the 16 – 21 yr olds, 34.8% in the 40 – 45 yr olds and 19.2% in the 60 – 65 yr older subset [p=0.0105]. As a total study population 35% of the males and 21% of the females [p=0.0013] were regular smokers. In the 16-21 year olds 43.6% of the males smoked vs 20% of the females, while the gender difference for the other two groups were 32.7% males vs 36.5% females in the 40 – 45 year olds and 28.1% vs 6.5% females in the oldest age group. The mean cigarette consumption in the 16-20 yr olds was significantly less than the other two age groups studied [p=0.0076]. Females were most likely to be heavier smokers in the 40 – 45 yr olds. There was no significant variation in geographical distribution of smokers and the less skilled and unemployed were more likely to smoke [p=0.0001]. 43.9% of the 16 – 21 yr olds tried to stop smoking while 73.2% and 82.8% of the two older age groups attempted to cease as well [p=0.001]. Only 5.3% of the smokers sought medical help to try and stop smoking. Smokers had more chest symptomatology [p<0.0001] but only the older age group had decreased PEFr. 19% of smokers suffered from asthma, 29% suffered from ischaemic heart disease and 16% were diabetics.

Conclusions: The Maltese are quite heavy smokers across all ages and genders and are not seeking medical help to try and atop the habit even when suffering from serious co-existing illnesses.

0-015

Environmental skin problems in military personnel

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The frequent and widespread areas of conflict make knowledge of possible environmental skin problems a necessity since according to **Major General Sir W. G. Macpherson: Diseases of the skin ... are generally regarded as lesser maladies, conditions which neither threaten life nor seriously impair health. In the case of an army the collective results of such minor affections may become of high**

importance because a man incapacitated for duty is a loss to the fighting force. Although military personnel deployed in modern wars may be exposed to a large variety of potential biological, chemical and other weapons, Climate is the single most important factor that controls the physical environment and plays a major role in determining, directly or indirectly, the nature and incidence of cutaneous morbidity, that is experienced by military personnel deployed to a specific geographic region. Abnormalities in barrier function are accentuated in those with pre-existing dermatosis. Conditions as diverse as cutaneous infection by 'exotic' skin pathogens, contact dermatitis from protective clothing and equipment, and traumatic lesions such as callosities or blisters on the feet, provoked by marching in rough terrain, or burns acquired in battle.

The skin of military personnel is subject to trauma caused by friction between the skin and their uniforms or footwear. Callosities/ blister formation may make walking over rough terrain difficult. Damp sand in footwear can cause severe trauma to the skin of the feet. Most military environmental skin disease is avoidable if field preventive medicine is rigorously practiced. Failure can be attributed to its perceived unimportance, the immediacy of the tactical situation or lack of knowledge. The results can be disastrous.

The military dermatologist plays an indispensable role in implementing the preventive measures.

Conclusion: Environmental skin disease in military personnel can pose a serious threat to the fighting strength of a unit. Significant cutaneous morbidity in troops can negatively impact morale and efficiency. Prevention remains the cornerstone of management. Preparation for overseas movement is crucial to success.

0-016

Occupational Medical Screening – an effective health protection tool *R Cali-Corleo,*

Hyperbaric Unit, SLH; DAN Europe Research, Malta

Pre-employment and pre-activity medical screening is an established practice worldwide. With the advent of Evidence Based Medicine the advantages of such medical examinations as against a self-administered health questionnaire are not clear.

Occupational divers and caisson workers are obliged to undergo an annual medical examination before being permitted to carry out any pressure related activity. This practice is being increasingly contested by the divers.

The aim of this study is to examine the usefulness of pre-dive medical examinations as a means of reducing diver morbidity and mortality and their validity as health protective measures. The observed morbidity and mortality in Maltese divers during the period 1994 to 2000 was compared to a population of European divers as represented by the Divers Alert Network Europe membership during the same years.

The two populations were found to be similar enough to permit the desired comparison. The incidence rate of decompression illness (DCI) in the Maltese divers was found to be 1 DCI per 16420 dives while that in the DAN Europe divers was found to be 1 DCI per 6400 dives. This gave a relative risk of 0.4 that was found to be significant (p < 0.001).

The only significant difference between the two populations identified in this study is that the Maltese divers are obliged to undergo a diving medical examination before starting to dive and at regular intervals while the DAN Europe population is under no such obligation and may opt to complete a self administered health checklist instead.

The conclusion of this study is that a pre-participation medical examination is a useful health protection tool and has advantages over a self-administered health checklist.

0-017

Re-analysis of the role played by landfills in the pathogenesis of birth defects

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This study investigates this role in Malta, adjusting for maternal age, infant gender and familial socio-economic status.

25472 births were registered between 1996 and 2001. Of these, 961 babies had congenital anomalies, according to the Malta Congenital Anomalies Registry (MCAR). The Malta Environment and Planning Authority (MEPA) provided the distance from each village centre to either Maghtab in Malta or Qortin in Gozo. Poisson regression analysis was used. Due to limited statistical power, analyses had to be carried out at local developmental plan level. Occupations were classified as professional, skilled, service provision, unskilled and elementary. Locality data was used to map overall anomaly rates.

None of the results showed a significant risk ratio with distance from a landfill. Overall and specific groups of birth defects show a higher risk with increasing maternal age. Males are more at risk of overall defects, particularly cleft lip/palate. Females are more at risk of a neural tube or heart defect. Fathers with unskilled or elementary occupations are more at risk of having a baby with an anomaly than professionals. Adjusted analyses did not influence risk ratios. Analysis by local development plan area did not yield any significant results and was not included in the adjusted model. However, the Northwest showed a barely significant lower risk than the North Harbour area.

Congenital anomalies are therefore not significantly related to distance from landfills, unlike gender, maternal age and socio-economic status. Lack of significance can be due to the small size of our population and the rarity of these events, since our risk ratios were similar to those obtained in other studies. The lower rates in the Northwest could be attributable to northwesterly winds. However, further analysis would be indicated. Our all-inclusive heart defect registration criteria may be introducing a bias.

0-018

Incorporation of Quality of Life Assessment in routine practice as an aid to clinical decision making

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Dr Sam Salek is involved in the education and training of medical practitioners working in the pharmaceutical industry. He will present and discuss the introduction and establishment of routine quality of life assessment as an aid to good clinical decision making.

0-019

Perceptions of Maltese patients of current healthcare provision: a preliminary study

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Aims and objectives: Patient perspectives are increasing in importance in healthcare, becoming incorporated in care delivery. This preliminary study assessed expectations and perceptions of public and private healthcare quality in a chronic disease clinic.

Methods: A literature review focused on clinical quality improvement, and patient satisfaction. A Patient Perspective Profile was constructed, including the use of GAP analysis to identify gaps between expectations and perceptions of care, and perceptions of patient safety. Qualitative study; purposive sampling conducted from a chronic disease clinic. Structured interview groups assessed expectations and perceptions of healthcare quality and satisfaction in public/private sectors.

Summary of results: Eighteen patients participated, the majority female; all age groups and educational levels were represented; with experience of public/private healthcare at primary/secondary levels.

Patient satisfaction was high; dissatisfaction with waiting times between appointments, lack of timely access to outpatient care, and lack of chaperones. Areas for improvement included access to outpatient care, continuity of care and access to medication. Gap analysis revealed gaps for 'Better Communication with providers', 'Better Communication between providers', 'Better professionalism by the provider', and 'reliability to perform accurately'. Responsiveness to patient needs, revealed performance surpassing expectation; no significant gaps in tangibility of the service, Empathy to pts and Service recovery. Government primary and secondary healthcare suffer from poorer perception. Patients considered both patient safety and effective communication to be most important aspects of practice; healthcare was incorrectly perceived to be very safe.

Implications: Training needs to focus on gap areas, including communication. The reasons for differing satisfaction in different systems, in spite of care delivery by the same providers, needs to be addressed. Patient safety is not an issue.

0-020

Addressing quality improvement in community speech language clinics

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Objectives and participants: The perceptions about aspects of quality from the customers (patients/carers) point of view, Speech Language Pathologists (SLPs) and Management of the Speech Language Department (SLD) were investigated. Semi-structured interviews were carried out with management of the SLD and 16 service users whilst 3 focus groups carried out with 15 SLPs.

The following questions were investigated

- What is the current status of performance and how could this, through quality assurance, lead to a more effective and efficient service?
- Which are the important standards for Speech Language services in the community to develop quality improvement?

Analysis: Facilitated geographic accessibility, open referral, flexibility of appointments, and service offered free-of-charge at point of use were perceived to be important standards. A sound interpersonal relationship based on primary service provider, and confidentiality were common practice. Despite the fact that the SLD has had the Quality Service Charter (QSC) since 1999 (SLD, 1999) basic standards set by QSC Initiative (OPM 2000) are not adhered to. Service-users perceive provision as satisfactory and recommendable. Management was satisfied with the effort put by SLPs in their duties and lack of complaints by users. SLPs perceived that they delivered as best as they could despite the poor working environments, lack of resources and lack of policies.

Conclusions and recommendations: Implications are that: Policies need to be developed to regulate aspects of service deliver and clinical practice. A Structural Changes Steering and Action Committee is required to take responsibility to handle problems related to structural issues. A customer care unit needs to develop and carry out internal and external customer satisfaction monitoring.

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0-021

An operational analysis of the accident and Emergency Department at St. Luke's Hospital

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Every year the number of patients visiting the only Accident and Emergency department in the country is increasing. In 2002, 118,785 patients visited the department: this is equivalent to one quarter of the whole Maltese population. St. Luke's Emergency department has become synonymous with long waiting times. Long delays can affect the health of patients and the eventual clinical outcome.

A prospective observation of patient's progress through the A&E department was done over a two week period by collecting the time taken by the patients at each stage, from arrival up to discharge/admission. A descriptive research design was done by collecting retrospective data of the daily number and hours of work of all the casualty nurses and doctors together with the total number of patients registering for the whole month of September 2002 and March 2003.

Interviews with patients regarding their satisfaction on the service provided.

Through process mapping, four stages were identified as areas causing delays and increasing waiting times during a patient's journey through the current system.

Waiting to be seen for the initial assessment by the doctor after Triage

Waiting for a blood test

Waiting to have an X-Ray

Waiting to be seen by the SHO on call for a second assessment.

There is mismatch between demand and supply: the staffing levels do not correspond to the peaks and dips of the arrival pattern.

Patients have an overall good impression of the service provided: their complaint is the long waiting time.

Waiting time is a key indicator of Accident and Emergency Department's performance. Reforming Emergency Care can produce significant improvement in the average patient waiting time without compromising the quality of service.

0-022

An overview of the Maltese ambulance service

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Objectives: To establish a baseline of current provision of state ambulance service in Malta.

Methods: A retrospective study of the year 2001, which data was used to establish the distribution of ambulance workload across Malta. A second part of the study included one hundred calls taken at random during the years 2002-2003, which were studied into further detail to establish current performance levels.

Results: The study shows that the heavy workload with which our service has to cope, is equally distributed across the months and days of the year, and is mainly localised around the central part of Malta. Although the number of calls remains the same across different seasons, it was noted that the percentage of emergency calls increases during the summer months. The study also shows that the service, which is being provided to the immediate surroundings of the hospital, is adequate. However, our emergency ambulances fail to meet an eight-minute target, call to response time, for most of the island. Most of these delays originate from within the

hospital grounds itself, where a precious four minutes are lost in trying to set up a team to respond to an emergency. As a result, only 19% of emergency calls are answered on time.

Conclusions: This study highlights the urgent need of a pre-hospital care department, whose role would be that of designing a new ambulance system that is adequate to meet with today's needs. One major challenge would be that of transforming the system into a well coordinated multi-centre dispatch one, which is run by adequately run personnel who are able to give urgent help to whoever needs it.

0-023

Antibiotic resistance in Malta – is it getting out of control?

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Infectious diseases caused by multi-resistant organisms threaten to become the major medical challenge of the new millennium and raises the spectre of untreatable serious infections, turning the clock back to the pre-Fleming era. Bacteria are developing resistance at a much faster rate than science and technology can develop and market new antimicrobials.

The local situation has also seen a major deterioration in the antibiotic susceptibility of locally isolated pathogens. Methicillin-resistant *Staphylococcus aureus* (MRSA) incidence in St. Luke's Hospital remains one of the highest in Europe. Isolates of multi-resistant *Pseudomonas aeruginosa* have increased whilst over the past year a strain of *Acinetobacter baumannii* has emerged which is practically resistant to all available antibiotics.

The emphasis must therefore be placed on the appropriate use of the antibiotics currently available in order to limit the development and spread of resistance as well as the prevention and control of infections in both hospital and community settings.

Keywords: antibiotic, resistance, MRSA.

0-024

Antibiotic prophylaxis use in surgery

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Introduction: Antibiotic prophylaxis aims to reduce the risk of postoperative infection when potential bacterial contamination of tissues occurs during surgery. It contributes to a substantial proportion of antibiotic usage in hospitals. The availability of evidence-based literature and policies offers a scope for auditing local practices to assess non-compliance and plan measures for intervention and improvement.

Objective: To evaluate antimicrobial prophylaxis practices in surgery within St. Luke's Hospital, a 900-bed tertiary care facility in Malta, concentrating particularly on drug choice, timing and duration.

Design: The study was undertaken through a retrospective assessment of patient records. A total of 287 cases of elective surgical procedures were assessed in the departments of general surgery, urology, orthopaedics and obstetrics & gynaecology. Main outcome measures: The data collected was evaluated and compared with local policies and recommendations in evidence based literature.

Results: The results showed that the timing of antibiotic administration was according to recommended guidelines in 48% of cases. The choice of drug showed compliance in 45% of operations and was at least of the same antimicrobial class in another 16%. The most divergent results were found in the duration of prophylaxis where 78% of cases were given prophylactic antimicrobials for more than the recommended maximum of 24 hours.

Conclusion: There is clearly a need for better educational interventions within the surgical establishment of the hospital to improve practices. Since the administration of prophylactic antibiotic is related to the time of induction of anaesthesia, it may be appropriate to assign this intervention as a responsibility of the anaesthetist, to be undertaken in consultation with the surgeon using published local guidelines as reference.

Keywords: antimicrobial prophylaxis, Malta, surgery.

0-025

Visceral leishmaniasis in Malta: a 57 year (1946-2003) population based epidemiological study

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INTRODUCTION: Visceral leishmaniasis is a widespread parasitic disease in the Mediterranean. The rate of visceral leishmaniasis is most likely under reported due to difficulties in diagnosis.

AIMS: To study the epidemiology of visceral leishmaniasis in the Maltese population.

STUDY: This is a comprehensive review of the incidence of visceral leishmaniasis in Malta from 1946 to date, using Public Health records and records of the bone marrow register at Haematology Section St. Luke's Hospital. Data collected includes the sex and age of the patient and the regional distribution. Co-infection with HIV is also documented.

The local data is compared to published data from South Western Europe and the Mediterranean basin.

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0-026

Highly active anti-retroviral treatment(HAART) durability in the Maltese HIV cohort

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The aim of this study was to assess the durability of the most commonly prescribed HAART regimens in the Maltese HIV cohort since the start of HAART.

The case notes and confidential database of patients suffering from HIV were reviewed from the year of the start of HAART, and the response of HIV viral load and CD4 cell counts to HAART recorded.

The majority of patients with HIV are fully suppressed without major changes on anti-retroviral regimens. This might reflect a high level of adherence to anti-retroviral therapy.

0-027

Immune response to hepatitis B vaccine in drug users: Hepatitis C negative drug users respond better than hepatitis C positive users

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Acquiring an infectious disease is one of the biggest risks faced by drug users, especially intravenous drug users. In an effort to reduce this risk, vaccination against hepatitis B was offered to drug users making use of services offered at the Substance Misuse Treatment Unit (Sedqa) at St. Luke's Hospital (Malta). In a series of 228 patients who were offered vaccination against hepatitis B, 143 (62.7%) were given the full course. 91.6% of the vaccinated population were intravenous drug users or had a history of such mode of drug administration while 46.2% had previously tested positive for antibodies against the hepatitis C virus. 73.4% of patients receiving all three doses did so according to the recommended schedule (0, 1 month and 6 months) while 24.5% received the vaccination over a period of 12 months and another 3 over 14 months. 90 (62.9%) of those receiving the full vaccination course were tested for the development of seroprotection (anti HBs above 10 mIU/ml, claimed to be the minimum protective level). 83.3% of the 90 patients tested for the development of seroprotection had an anti HBs level of 10 mIU/ml or more. Only 31 patients from the 43 (72.1%) who were positive for hepatitis C virus antibodies developed seroprotection, while 41 from 44 (93.2%) patients who were negative for hepatitis C antibodies developed seroprotection. This confirms that drug users respond less well to hepatitis B vaccination than healthy adults and indicates that infection with the hepatitis C virus might be one of the factors contributing to an even less likelihood of developing seroprotection possibly due to altered immunity.

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0-028

Seroprevalence of IgG against measles in the Maltese population

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Background: To analyse progress in measles control it is recommended that immunisation be evaluated by means of specific epidemiological disease surveillance. Knowing the prevalence of measles by serological markers is an important tool to assess the risk of measles outbreaks thus providing crucial information if our current prevention strategies for this endemic disease need refinement.

Methods: A laboratory based population of 920 sera including a group of hospital workers was assessed from persons of 6 years of age or older with 5 year birth cohorts between each age group. Five birth cohorts were examined instead of age groups to capture temporal changes in susceptibility as major policy changes occurred during the 3 decades after the measles vaccine was licensed. The sera were tested for measles specific IgG antibody by enzyme immunoassay. Sera positive for measles IgG were considered protected or immune to measles disease. Exact 95 % confidence intervals (CI) was calculated for prevalence estimates.

Results: Prevalence of measles immunity was found to be 95% [95% CI 94 to 95%] suggesting that herd immunity has been achieved. Immunity was higher in persons born during the pre-vaccine era 99% [95% CI 98 To 99%] than those born during the vaccine era 93% [95% CI 92 to 94%]. Decline in immunity was seen in school aged children (6-10yrs) where immunity was 83% [95% CI 78 to 87%]. In general the overall pattern of immunity was consistent for all groups with no difference in immunity between males and females.

Conclusions: Improvement in vaccination coverage at 4-6 years as indicated by study might increase the prevalence of herd immunity in this category thus improving our prevention strategies for this endemic disease.

Keywords: Measles, prevalence, herd immunity.

0-029

The GU Clinic - warts and all

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The GU Clinic has now been in operation for nearly 3 years. On the whole it can be considered a success, but problems persist. Attendance has been encouraging but without doubt the patients seen are but the tip of the iceberg. Of those seen 75% never used condoms and up to 50% admit to casual sex. This year six patients have been treated for syphilis, the first in many a year. All this is cause for concern, and more decisive action needs to be taken.

0-030

Focal electrographic seizures in acutely ill children: clinical and neuroimaging correlates

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Objectives: Focal seizures may be the first sign of a neurological problem in acutely ill infants and children and they may manifest only on EEG without any clinical signs. There is a lack of studies that address the value of neuroimaging in acutely ill infants and children with focal seizures. This retrospective case note study of 51 infants and children receiving intensive care, aims to answer the following questions: (a) do focal seizures correlate with imaging abnormalities and (b) what percentage of focal electrographic seizures have no clinical accompaniment?

Methods: Clinical information and video electroencephalograms of 51 children in ICU with focal seizures were reviewed. Neuroimaging results relative to these cases were then reviewed, looking for a correlation between clinical, EEG and neuroimaging data.

Results: 78% of patients had electrographic-only focal seizures and the remaining 22% had clinical signs of seizure activity. 82% of imaging results were abnormal of which 55% showed a focal abnormality. 79% of patients with a focal abnormality had a direct EEG / imaging correlation and the most common underlying pathology in these cases was hypoxic / vascular brain injury.

Conclusion: 4/5 of acutely ill infants and children with focal seizures will be electrographic seizures, and 1/3 of the same group of children will have a corresponding neuroimaging abnormality.

0-031

Epilepsy in Maltese children

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Purpose: To determine the prevalence of active childhood epilepsy in Malta and to verify the applicability of the ILAE classification of seizures and epilepsies / syndromes in this group of children.

Method: A cross-sectional descriptive survey of children 0-15 years with 'active' epilepsy was carried out among residents of Malta. The age-specific prevalence rates of epilepsy, type of seizures, epilepsies and recognisable syndromes were determined using the ILAE International Classification of Epileptic Seizures (ICES, 1981) and Epilepsies and Epileptic Syndromes (ICE, 1989).

Results: Point prevalence of active epilepsy on 1 January 2000 was 2.4/1,000 of population in children (birth - 15 years of age) (95% CI=2.1-2.79). Seizures were classifiable with certainty in 99% of cases and epilepsy syndromes in 70% of cases. Among the syndromes, cryptogenic and symptomatic partial syndromes occurred in 35%, other generalised idiopathic epilepsies in 11%, childhood absence in 7%, Lennox Gastaut in 6%, West syndrome on 5% and benign childhood epilepsy with centrotemporal spikes (BECT) in 4%. Epilepsy was intractable in 26% of all cases and correlated significantly with symptomatic aetiology, early onset of epilepsy, and with additional, neuroimpairments. Perinatal asphyxia, trauma and brain malformations were the three most common aetiological factors identified. Additional neuroimpairments were present in 106 (52%) of children.

Conclusion: The ILAE classification for seizures (ICES) was found to be satisfactory in the majority of cases. Yet a considerable number of epilepsy syndromes were categorised into the heterogeneous non-specific categories of the ICE, which limits the value of the present epilepsy/epileptic syndrome classification in terms of prediction of prognosis and indication for special investigations in individual cases.

0-032

Management of pituitary adenomas and the assessment of outcomes in patients with pituitary adenomas undergoing trans-sphenoidal surgery in the UK

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Pituitary adenomas are generally classified as benign tumours but may have serious consequences for patients. Management depends on whether the patients have functioning or non-functioning macro- or microadenomas. Pituitary incidentalomas have also been described. Treatment modalities include surgery, radiotherapy or medical management and often entails a combination of all three. The commonest type of pituitary tumour is the prolactin secreting adenoma, but GH, ACTH, FSH, LH and TSH producing adenomas may also be seen in practice.

Between 1971 and 2001, Maltese patients with pituitary tumours were referred to the UK for surgery and radiotherapy and subsequently were followed up in Malta for continued medical treatment. A pituitary tumour register has been established and an overview of the patient characteristics and type of tumours will be described. Outcomes relating to residual disease activity and its management, as well as morbidity and mortality in these patients will be reported.

0-033

Assessment of outcomes in patients with pituitary adenomas undergoing trans-sphenoidal surgery in Malta

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Until 3 years ago patients requiring transsphenoidal surgery were referred to the UK for treatment. In 2001, a programme for the surgical and perioperative management of pituitary adenomas was established in Malta. A multi disciplinary approach was adopted and a protocol was established to ensure optimal management and quality of care. To date 15 patients have undergone surgery in Malta, 7 males and 8 females. The mean age for these patients was 45.4 ± 16.6 years (mean ± sd). 11 patients had non-functioning macroadenomas, 2 patients had ACTH-producing microadenomas, 1 patient had a malignant macroprolactinoma and 1 patient had a craniopharyngioma. Their mode of presentation, symptoms and signs, hormonal and metabolic profiles, radiological findings, the histopathological characterisation of the tumours and continuing management will be presented. Outcomes in the immediate post-operative period and at 3, 6, 12, 18 and 24 months of follow-up in the neurosurgical and neuroendocrine units will be reported.

0-034

Study of the human temporal bone after head injury

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This study is divided into two main parts. In the first part the effects of head injury namely those involved in motor vehicle accident and fall from heights are studied at both the macroscopic and microscopic levels. In Malta the number of deaths from such accidents is on the increase due to the high number of motor vehicles and increase in the incidence of death at places of work.

Immediately after death at the mortuary, the perilymphatic spaces of both inner ears are perfused via a transtympanic approach using buffered formaldehyde thus preventing autolysis. The temporal bones are removed from the cadaver the day after at autopsy. The whole temporal bone is preserved and X-rayed for gross pathology. Then it is microslliced using a special microslicer machine in 3 mm slices.

Each slice is again X-rayed for microfractures and digitally photographed through the dissecting microscope. Some slices are then decalcified, embedded in paraffin wax and again sectioned using a microtome followed by H & E staining.

From some other microslices, the basilar membrane is peeled off from the sectioned cochlear turns (namely the middle and basilar regions), embedded and sectioned again to be viewed under the light microscope.

In the second part of the study those individuals who sustained a head injury especially involving a fracture of the temporal bone/s but did not succumb are followed up from both the otolaryngological and audiological point of views. They are follow-up over several months having a full ENT examination and full audiological investigations namely pure tone audiometry, tympanometry and auditory brain stem responses. Any residual disability from the head injury namely those involving the middle ear and inner ear such as hearing loss, vertigo and tinnitus are noted.

In this study the correlation between the clinical signs and symptoms and the findings in the temporal bones are being investigated.

0-035

Imaging in acute stroke

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Stroke is a common cause for hospital admission. The causes of stroke and the dual diagnostic management scenarios is a topic for discussion in current medical practice.

Today there are conservative and more aggressive approaches to medical imaging management in Stroke. The conservative path includes: CT Scan, Doppler Sonography, eventually Magnetic Resonance(MR) Imaging and MRAngiography. In the more aggressive approach the initial line of investigation is MR followed by Carotid Doppler Sonography.

MRI brain, Diffusion weighted Imaging and MRA of circle of Willis detect early cerebral infarction and confirm cerebral artery occlusion if present. Contrast enhanced MRA together with Doppler Sonography of the Internal Carotid arteries are often enough to diagnose if Stenosis is > 70 % thereby directing towards endarterectomy. Thrombolytic therapy with selective cerebral artery catheterization is also currently undertaken (not locally) if intracranial acute thrombosis is diagnosed particularly in the strategically placed Middle Cerebral Artery territory, which is the area of most morbidity in survivors(in view of the sensorimotor cortex). The development and diagnosis of cytotoxic oedema, its distinction from vasogenic oedema and the progression to infarction will be outlined. Differential depiction of the responsible pathological factors(atheroma, arterial occlusion, infarction, haemorrhage, aneurysm, AVM and venous thrombosis) utilising various radiological modalities will be elaborated.

The conservative diagnostic management approach is the most useful and more readily practiced regimen(locally). The more aggressive approach is extremely costly, more demanding and will need further investment particularly in more dedicated equipment, more human resources and more after-hours organisation for it to be properly utilised locally, in future.

0-036

Cardiovascular risk factors in Maltese patients with newly diagnosed Type 2 Diabetes presenting to the Diabetes Clinic at St Luke's Hospital in 2003, Malta

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Methods: A representative sample of newly diagnosed Type 2 diabetes was studied retrospectively. All patients in the above category (N:110) attending the diabetes clinic on three specific days of the week were studied. Glycaemic status, blood lipid levels, blood pressure, creatinine levels and smoking status were assessed.

Results: During the study period, 93.6% of patients had their blood pressure measured, with 39% and 58.2% of the patients having a level of more than the recommended targets of 140 systolic and 85 diastolic blood pressures, respectively.

62.7% of the study population were tested for HbA1c values with the mean HbA1c value for the entire study population being 7.69%.

66.4% of the study population were tested for lipid values. Overall, 54% had total cholesterol levels of 4.8 mmol/l or more, 52.7% had LDL cholesterol levels of 3 mmol/L or more and 37.2% had triglyceride levels of 3mmol/l or more; these were classified as at increased risk of cardiovascular disease. 19.1% of patients were smokers.

Conclusion: This study showed that the number of patients tested for HbA1c and lipid values needs to be increased and that a high proportion of patients with newly diagnosed Type 2 diabetes have risk factors for diabetes-related complications. Good disease management of diabetes requires attention to a multiplicity of factors if guideline targets are to be met and long term complications avoided.

0-037

From Nature to Nurture: Genetics as a tool to understanding predisposition to Diabetes

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A major focus of current interest in genetics lies in the genetic variation underlying susceptibility to common human disease such as ischemic heart disease, diabetes and malignancy. Such diseases arise from a complex interaction between genetic background and the environment. In contrast to single-gene or Mendelian disorders, susceptibility genes in common diseases are likely to be multiple, each with little individual effect but contributing in a quantitative fashion to expression or otherwise of a trait. Furthermore, the variants in such genes associated with disease-predisposition are often common in a given population because of prior selective advantage. This model of genetic predisposition to common disease differs markedly from that in Mendelian disorders where inheritance of a single genetic trait markedly affects phenotype. Current linkage and association strategies for the mapping of quantitative genetic traits in type 1 and type 2 diabetes will be reviewed together with genetic variants known to be associated with diabetes and our recent contributions to understanding the genetic predisposition to type 1 diabetes.

0-038

Prevalence between clinical and subclinical hypothyroidism and outcomes in patients with myocardial infarction

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Background: Hypothyroidism and subclinical hypothyroidism have been reported to be associated with cardiovascular disease. The studies have been carried out predominantly in the elderly female population. The precise mechanisms involved in subclinical hypothyroidism remain to be elucidated (eg. altered lipid status, altered coagulability, increased blood viscosity, increased plasma homocysteine, autoimmunity) whereas in clinical hypothyroidism, dyslipidaemia and hypertension have been implicated. Data on the thyroid status of patients at the time of acute myocardial ischaemia are not available in the literature.

Objectives: To assess the prevalence of clinical and subclinical hypothyroidism in patients with acute myocardial infarction and/or diabetes mellitus admitted to the coronary care unit at St Luke's Hospital, Malta between 1st August 2002 and 31st July 2003. Patients on amiodarone or beta blockers at the time of diagnosis and patients with treated thyroid disorders will be excluded from the analysis.

Measurements: Establishment of presence of MI (ECG criteria and CK rise), determination of baseline TFTs in patients admitted to the CCU at St Luke's Hospital, Guardamangia.

Results: The prevalence of subclinical and clinical hypothyroidism in patients admitted to the Coronary Care Unit and the impact of thyroid disease on clinical outcomes (as assessed by duration of hospital stay, complications, and mortality) will be described.

0-039

Blood pressure control of patients attending the medical consultant clinic

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Background: Optimal control of blood pressure (<140/90 mmHg) reported from different centers is still low in spite of the different classes of anti-hypertensive medications now widely available. A cross-sectional descriptive study was carried out to determine the proportion of hypertensive patients attending the medical consultant clinic who attained a blood pressure <140/90 mmHg on anti-hypertensive medication.

Methods: The blood pressure of 277 consecutive patients with a primary or secondary diagnosis of hypertension attending for follow-up at the medical consultant clinic between January 1 and July 31, 2003, was recorded. Other parameters recorded were date of follow-up visit, age, sex, and class or classes of anti-hypertensive medication taken.

Results: Systolic blood pressure was less than 140 mmHg in half the patients and diastolic blood pressure was less than 90 mmHg in 83 per cent. Optimal blood pressure control (<140/90 mmHg) was attained in 47 per cent of patients. The mean number of drug classes used was 1.78 (SD+/-0.86) and was not significantly different from the group with sub-optimal control.

Conclusion: Control of high blood pressure in this cohort was better than that reported in a similar population in 1988 (47% versus 34%)¹. Systolic blood pressure was more difficult to control than diastolic blood pressure. More than half the patients would probably need more than two different drug classes to achieve optimal BP control.

Reference: 1. JM Cacciottolo. Control of cardiovascular diseases in the Maltese community. University of Kuopio Finland 1990.

0-040

An audit of the management of congestive

heart failure at St Luke's Hospital

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Aim: To assess management of congestive heart failure in St. Luke's Hospital (SLH) taking the National Institute for Clinical Excellence (NICE) guidelines 2003 as a standard of ideal management.

Method: The files of patients admitted to SLH during the month of January 2002 were retrieved and the patient considered eligible if history included a primary or secondary diagnosis of congestive heart failure. Data from the file pertaining to that specific admission was entered in a pre-prepared form (appended). This consists of demographic data about the patient, investigations performed to reach diagnosis and assess severity, management of heart failure both pharmacological and non-pharmacological, and planned follow-up.

Analysis: We aim to go through the January 2002 admissions and analyse the percentages who have had optimal management in terms of correct diagnosis and assessment, maximal pharmacological therapy, life-style modification advice, and follow-up visits and investigations as outlined by above guidelines.

0-041

The Malta experience in 'new' treatment strategies of STEMI: has this led to an improvement in prognosis and has age, sex and residential status resulted in a difference in treatment and outcome?

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Background: The last decade has witnessed a major upheaval in the treatment strategies of ST segment elevation myocardial infarction (STEMI) in Malta, particularly with the introduction of an on-call invasive team for primary percutaneous coronary intervention (pPCI) for anterior STEMI, increased use of coronary artery bypass surgery, aspirin, ACE inhibitors, b-blockers and statins and a reduction in the use of diuretics, calcium channel blockers, lignocaine and digoxin. The aim of the study was to evaluate whether this has resulted in an improvement in prognosis. Furthermore, we wanted to investigate whether age, sex and residential status affected the treatment strategies and outcome.

Methods: All patients (pts) admitted to the coronary care unit are registered. Data of pts with STEMI were derived from review of case notes. Pts were studied during 1991-92 (period I) and 2001-02 (period II) for comparison of in-hospital and 1 year mortality. The influence of age, gender and tourist / resident status on the treatment strategy and outcome was studied during period II.

Results: The in-hospital mortality was 11.1% (period I) and 13.6% (period II) (p=0.33), the post-discharge 1 year mortality was 7.8% (period I) and 4.3% (period II) (p=0.1). Fewer pts in the advanced age groups and fewer female patients underwent pPCI and received statins, b-blockers and ACE inhibitors.

Conclusion: Despite the dramatic progress in reperfusion treatment over the past decade, there has not been an improvement in the in-hospital mortality. Although residential status does not affect treatment strategy and outcome, advanced age and female pts receive sub-maximal treatment

strategies.

0-042

An evaluation of the effectiveness of statins in achieving cholesterol reduction in practice

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Purpose: This study evaluated the effectiveness of statins in reducing cholesterol in patients with ischaemic heart disease in Malta.

Methods: Literature review on effectiveness of statins in reducing cholesterol; Retrospective measurement of cholesterol reduction with statins; Comparative cost-effectiveness analysis; Comparison of local results with European guidelines and with results from other audits.

Results: Total cholesterol <5.0mmol/L was achieved in 16.5% of patients and low-density lipoprotein cholesterol <3.0mmol/L in 19.1% of patients. Simvastatin (43.5%) was significantly more effective than fluvastatin (7.2%) in achieving targets for low density lipoprotein cholesterol ($p < 0.0001$). Simvastatin was found to be twice as cost-effective as fluvastatin in terms of treatment to target per patient. The results from this study are poor compared to trials and are also poorer than most results from published audits.

Recommendations: The findings from this study lead to recommendations to use higher doses of statins, to use simvastatin as a first line statin and to consider the introduction of more potent statins in high risk patient groups.

0-043

The hepoxilin analogs, PBTs, induce apoptosis in K562 leukaemia cells

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Background: Leukaemia is a heterogeneous disease characterized by malignant proliferation of cells of the haematopoietic system. The use of chemotherapeutic agents is still the mainstay of anti-leukaemia therapy, although significant morbidity and mortality still occurs. We describe herein novel apoptotic effects of PBTs, a family of stable analogs of the Hepoxilins, natural products derived from arachidonic acid via the 12-lipoxygenase pathway.

Materials and Methods: Apoptosis was assessed through inhibition of [methyl ³H]-thymidine incorporation, nuclear fragmentation, DNA laddering, FACS analysis as well as Annexin V binding. Further, the extent of 'cell kill' was demonstrated through exposure of cells *in vitro* to varying doses of PBTs for 2 days, followed by washout of the compounds and measurement of cell growth during a subsequent 9 day incubation in growth medium.

Results: PBTs dose-dependently cause apoptosis of K562 cells *in vitro*. PBT-3 was evaluated further. PBT-3 acts by increasing cytochrome c release into the cytoplasm and by activation of caspase-3 degradation. The effects of PBTs compare favorably with those of STI571 (Gleevec), while thromboxane agonists and antagonists are without effect. PBT-3 in particular, causes dose dependent cell kill reaching maximum at 28 microM concentration.

Conclusion: These results suggest that PBTs may provide a novel platform for the development of apoptotic drugs in leukaemia.

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0-044

Interferon-alpha, Dopamine and Depression

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Interferon- α (IFN- α) is an endogenously produced cytokine that is currently administered in the clinic to treat patients with a variety of cancers and viral diseases such as Hepatitis B and Hepatitis C. The benefits of such treatment are normally hampered following the occurrence of depressive symptomatology, most notably a loss of interest or pleasure, anhedonia. In the laboratory, we have developed a rather simple model of anhedonia in which we have been able to test a range of compounds, including IFN- α , that are purported to induce a loss of pleasure. Consumption of sweet rewards (sucrose solutions) were blunted following the acute and/or chronic administration of IFN- α systemically or directly into the Nucleus accumbens core, a major part of the brain reward pathway. Moreover, these effects of chronically administered IFN- α , were reversed following three weeks of antidepressant treatment with the selective serotonin reuptake inhibitor (SSRI), fluoxetine (Prozac). This reversal would also appear to be dependent on a dopaminergic substrate, in that we were able to acutely block the effects of the antidepressant reversal on sucrose consumption by administering a single dose of the D2/D3 receptor antagonist, raclopride. Subsequently, IFN- α has also been reported to alter the levels of dopamine and its metabolites in various brain regions and in light of this finding and that reported above, we used fast cyclic voltammetry to assess whether IFN- α had any effects on evoked dopamine release at different frequencies of stimulation in brain slices incorporating the nucleus accumbens. IFN- α dose dependently inhibited dopamine release from tissue slices at all frequencies of stimulation, maximal inhibition was of the order of 35% with the highest dose, 1000U/ml. In turn, amphetamine pretreatment attenuated the effect of IFN- α on dopamine release over a range of stimulation frequencies. The mechanism through which IFN- α exerts its effect on dopamine release within the nucleus accumbens is still the subject of much debate but the fact that the drug interferes the system per se may be enough to suggest the use of an adjunct therapy with dopaminergic properties to limit anhedonia in those patient cohorts susceptible to such symptoms undergoing treatment with IFN- α .

0-045

Pulmonary pharmacokinetic studies of a chiral drug in an intact rabbit model

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Lungs have important pharmacokinetic and metabolic functions and arterial concentrations of drugs administered intravenously, may be modulated by first pass pulmonary uptake. It may result in altered intensity and duration of pharmacological effect for the drug and could also lead to errors in estimating pharmacokinetic parameters. Possible stereoselective differences in such lung uptake have not yet been carried out. A 6 mg intravenous bolus dose of a racemic drug, rac-ethosuximide, was administered to 20 New Zealand white rabbits. Under anaesthesia, the rabbits were cannulated in the left and right jugular vein and an angiographic balloon catheter passed through the introducer kit into the right ventricle. After recovery, they were injected with 5 mg indocyanine green dye and 6 mg rac-ethosuximide in normal saline. Indocyanine green is a marker not taken by pulmonary tissue and is useful in such pulmonary uptake studies. Immediately after injection, arterial blood samples were collected at one second interval for 30 seconds, then every minute up to 14 minutes. Indocyanine green concentrations were determined spectrophotometrically and ethosuximide using a validated chiral GC-MS method (Sghendo et al, 2002). The difference between areas under dye curve and enantiomer curve was equal to the fraction of injected drug extracted during first pass. Data analysed using two factor analysis of variance, estimated that (S)-ethosuximide had a mean pulmonary uptake of 39.15+13.38 % and a mean retention of 63.49+8.03 % while (R)-ethosuximide had a mean pulmonary uptake of 24.18 +16.93 % and a mean retention of 54.51+10.16 %. This data indicates that the lung does significantly sequester drugs stereoselectively and due consideration should

be taken of this effect.

0-046

Pharmaceutical overdose in Malta

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Paracetamol has been in clinical use for some forty years. Worldwide consumption exceeds 25 000 tons and international published data has shown a substantial increase in the number of self-poisoning patients being referred to district poison units. The aim of this study was to seek information regarding pharmaceutical overdose cases in Malta and to fit paracetamol into this picture. Data was obtained for overdose cases for seven years between 1995 and 2001. The main types of drugs responsible for drug overdose deaths in Malta were narcotics and psychodysleptics (39.2%), anti-epileptic, sedative – hypnotic, anti – parkinsonian drugs and psychotropics (20.3%), some gases and vapours (18.9%), alcohol (8.1%), anti-pyretics, anti-rheumatics and non-opoid analgesics (4.1%) and other and unspecified drugs (9.3%). The majority of the drug overdose victims (70.3%) were between 20 and 49 years of age. 78.4% were male. Most of the patients who were admitted to hospital because of drug overdose (66.7%) were between 15 and 44 years while the male to female ratio of admissions was approximately 1:1. From the data collected, paracetamol overdose in Malta appears to be less common when compared to the data available from other countries such as UK where eg. 42% of all overdoses in Oxford in 1990 were due to paracetamol.

0-047

Psychopharmacology in children with developmental disabilities

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Drugs that influence central nervous system (CNS) function can be helpful in the treatment of several symptoms that affect children with developmental disabilities. Findings from preliminary studies of major neurotransmitters and other neurochemical agents strongly suggest that neurochemical factors play a major role in determining behaviour/symptoms. This provides the rationale for psychopharmacology.

Purpose: To determine the levels of evidence of effectiveness and safety of drugs used to treat CNS symptoms / behaviour in children with spasticity, autism, attention-deficit hyperactivity disorders and tic disorders.

Method: A search strategy using various sources included Cochrane Library (2003), PubMed, Medline (1965-2003), DARE and OMNI databases. Selection criteria included systematic reviews evaluating efficacy and safety of antispasticity medication, stimulants, classical neuroleptics, atypical antipsychotics and other drugs acting on serotonergic, opiate and noradrenaline systems.

Results: Various systematic reviews have been published. Most included randomised placebo controlled trails (RCTS), which enrolled fewer than 50 children, included heterogeneous populations; study designs varied and few of the objective outcome measures have been validated. Few investigated the prevalence of adverse effects particularly the long-term effects in children. Meta -analyses of RCTs was scarce. Nevertheless, useful information can be derived in order to base clinical decisions on current evidence and this will be presented.

Conclusions: In this population, current pharmacological management is best aimed at target symptoms that have been scientifically demonstrated to respond to medication in treatment studies. It is critical to begin with clear goals of target symptoms, desired effects and tolerability of side effects. The long-term neuroadaptive changes in neurobiology of transmitter systems remain unknown. Consequently, careful periodic reassessment is critical in these children who often need long term treatment.

0-048

Development of a cue frequency

and cue saliency questionnaire in a substance dependent sample

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In the last decade, there has been a substantial amount of focus on cue exposure and its potential as a new form of treatment for drug and alcohol dependence (Drummond et. al., 1990; Marlatt, 1990; Drummond & Glautier, 1994; Dawe et. al., 1993). According to cue exposure and cue reactivity studies, even after long periods of abstinence a person may still remain susceptible to various cues which could be associated or lead to drug seeking or drug taking behaviour (Drummond, 2000; De Wit 2000). This preliminary study was a preparatory procedure leading to the development and validation of two questionnaires' that will measure cue reactivity. A series of open-ended interviews were conducted with alcoholics, opiate abusers and smokers (N=60) frequenting both inpatient and outpatient treatment programmes in Malta. Based on the classification method adopted by Marlatt (1980, 1985) and Annis (1984) the information obtained from the interviews was coded under various headings that were then grouped under three main categories: stressful life events, cognitive and emotional responses and contextual/proximal cues. By means of principal component analysis, the items most frequently mentioned were used to develop two questionnaires. The cue encounters questionnaire, which measures the frequency that cues are encountered and the cue saliency questionnaire, which shares the same items as the cue encounters questionnaire but measures a person's ability to resist temptation in the presence of certain cues. Both questionnaires are 70-item, 5-point Likert scale self-report instruments, designed as measures of the cue reactivity paradigm for drug and alcohol situations.

0-049

The use of a non-sedating antihistamine in a hyperbaric environment

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Antihistamines are associated with drowsiness, and are commonly taken by divers to relieve ENT symptoms and prevent serious injury, especially where the diver has no intention to discontinue diving to allow the infection or allergy to subside. Few studies have been conducted to test whether antihistamines aggravate nitrogen narcosis, cognitive or motor functions due to any alteration in their pharmacodynamics and pharmacokinetics.

Study I was a randomised double-blind placebo-controlled study, involving 50 subjects. The means of the 2 groups did not differ for diving experience, blood cell counts, liver and renal function ($p < 0.05$). Scales used to assess the subject mood and degree of sedation did not elucidate any statistically significant differences prior to the study. Subjects were given a standard oral dose of an antihistamine (20mg cetirizine) or placebo. After 2 hours had elapsed, blood was drawn from the patients for subsequent analysis, and the subjects performed 4 different psychometric tests in a multiplace hyperbaric chamber. The tests used were selected according to their applicability in hyperbaria, and their previous use in studies assessing a drug's effect on psychomotor and cognitive functioning. The tests were performed under 4 different pressures. No significant difference in performance between the means of the drug and placebo groups was obtained ($p < 0.05$).

In Study II, a questionnaire was completed by 100 active divers to assess the drug-taking habits of divers in relation to their diving activities. Most divers continued their diving activities, despite suffering from medical conditions that would otherwise preclude diving. Preparations taken to relieve sinus congestion featured prominently among the medication taken by divers, and, that often the medication was administered quite soon before a dive. No correlation was found between diving injuries and the drug-dive

interaction. Subjects taking antihistamines before a dive did not feel that their dive performance was altered.

0-050

Family Doctors and Health Promotion: do we practise what we preach?

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Introduction: A survey on the 'Attitudes and Knowledge of GPs in Prevention and Health Promotion' was carried out by EUROPREV (European Network for Prevention and Health Promotion in General Practice / Family Medicine) in 2000.

Method: As part of the survey, all local GPs known to the Malta College of Family Doctors were mailed a questionnaire to elicit beliefs and attitudes in practice, possible barriers in implementing preventive activities, and their personal health behaviour.

Results: The response rate was 50% (156 replies out of 313). A difference was found between GPs' beliefs that certain preventive and health promotion activities should be done and their actually doing them in clinical practice. 49% of GPs found some or a lot of difficulty in carrying out such activities, and they identified several barriers in implementation. The top three barriers were: heavy workload and lack of time; problems in patients' accessibility to these activities; and patients' doubts about their effectiveness. Discrepancies were revealed between GPs' prevention and health promotion beliefs and their own personal behaviour.

Discussion: As this study is based on GPs' self-reporting of activities, more objective evidence is needed through audit of properly kept medical records. Prevention and health promotion activities may be facilitated by reduction of doctors' workload through patient registration and an appointment system. GPs should set an example to their patients by adopting a healthy lifestyle to reinforce their advice re prevention and health promotion.

As doctors seem to prefer ordering investigations to giving verbal advice, other healthcare professionals could provide the latter. A practical protocol of health promotion activities needs to be devised for and distributed to family doctors.

0-051

A profile of family practice in Malta built using electronic medical records

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Background: Since 1996 the first author has been proposing research in Family Medicine using Electronic Medical Records (EMR) to collect data. The authors have been collaborating on just such a project in Malta along the lines of the successful Transition project, which has run and continues to run in various countries around the world. The data from 2001 and 2002 is presented.

Aim: To study routine family practice activity in selected family practices in Malta using an EMR to collect data. To study practice activity and patient population profile. To identify common reasons for encounter and health problems encountered and treated by family physicians, and to study process of care including referral and prescription activity within an episode of care structure. To compare data from various areas and practices, and to study the characteristics of family practice in Malta and compare it with family practice in other countries.

Method: A group of ten doctors in solo and group practice, working full or part-time as private Family Physicians all over Malta, have been recruited for this study. Participating doctors have been trained to use a customised EMR in their everyday clinical practice. Clinical data are structured in an episode-oriented format and are classified using ICPC-2-E. Data from all doctors has been collected and collated in a common database, and the

detailed analysis of the data from 2001 and 2002 is presented.

Results: Data has been collected from 31,945 encounters with 9,704 patients in 2001/2 (4,512 male) dealing with 31,435 episodes of care with 41,074 diagnoses recorded. Patients presented 56,840 reasons for encounter, and doctors performed 83,746 interventions, 1,930 referrals and 24,766 prescriptions. Detailed analysis of all the above data is possible since all have been coded precisely.

Results will be discussed, and compared with similar studies using ICPC and ICPC-2 in the past. Similarities and contrasts will be highlighted and discussed, including:

- Practice population profile
- Practice activity, including home visits, clinic visits, telephone consultations, etc., by year and month
- Reasons for encounter, requests for interventions, process of care, and diagnosis, with top 40 lists of each
- Incidence and prevalence of diseases by age/sex
- Distributions of health problems structured as episodes-of-care
- Prescriptions, referrals, and investigations

Conclusions: This is the first long-term epidemiological study from Family Practice in Malta, and will provide an opportunity to demonstrate similarities and contrasts between Maltese Family Practice and that in other countries. The authors trust that the discussion will be very active and will help to stimulate the development of this project.

0-052

State Primary Health Care - Addressing medical manpower needs

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Introduction: A study on job satisfaction among state GPs addressed the problem of the inadequate number of doctors within the government GP Service. It investigated the hypothesis that it is a result of poor job satisfaction, and allowed GPs to come up with other possible reasons and propose practicable solutions.

Method: A mixed methodology was used, with both quantitative (the Spector 'Job Satisfaction Survey') and qualitative methods (open questions in questionnaire and focus group/elite interviews).

Results: Quantitative analysis: Job dissatisfaction was confirmed among health-centre doctors during 1998-2003. Doctors formerly working in health centres were significantly more dissatisfied than present state GPs, and working part-time is significantly more satisfying than working full time. The categories of being male and of doing private practice were negatively related to satisfaction, although such relationships were only of borderline statistical significance.

Qualitative analysis: The great majority of GPs revealed overwhelmingly negative feelings, experiencing job dissatisfaction, stress and depression; feeling unappreciated, neglected and disrespected; and also verbally and physically used, misused and abused. Doctors believed that the top three causes of the lack of government GPs were poor pay and ancillary benefits; poor training prospects/career progression; and poor working conditions.

Recommendations: To enhance GPs' job satisfaction and reduce turnover include: Improving and maintaining the supply of GPs; through appropriate remuneration; training in family medicine (undergraduate, vocational and continuing) with career progression to specialist posts.

Reducing demand on GPs by job facilitation: through improving working arrangements and conditions (mainly by flexible working patterns, interdisciplinary teamwork and continuity of care through information technology); educational campaigns to combat client abuse and raise the profile of the state GP; better management.

0-053

Dental Health status

among Maltese children

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This paper reports on the findings of a study carried out in the spring of 2003 in respect of Decayed Missing and Filled Surfaces (DMFS) among twelve-year old school children in Malta and Gozo.

The prevalence of dental plaque and of calculus was also established. These findings are discussed in relation to the oral health habits of the study population as established by a questionnaire.

The impact of oral disease on school attendance is also reported.

Recommendations are made as to measures which are necessary in respect of national dental strategy.

0-054

From complete dentures to implant retained fixed bridges – fast track!

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Standard implant treatment is normally staged, allowing implants to osseointegrate before they are loaded with the prosthetic reconstruction. This concept has been challenged over the last ten years and immediate loading is now acceptable practice where a large quantity of bone is available to house the implants. Where insufficient bone exists, grafting procedures are required prior to or during the time of implant placement, extending treatment time by four to eight months. Patients are demanding faster treatment outcomes and new developments have provided the implantologist with systems that could by-pass bone grafting and much of the prosthetic work. This talk introduces the concept of immediate loading providing full bridges within 24 hours using standard implants, the Novum Implant and Zygomatic fixtures.

0-055

John Eskdale Fishburn

University of Malta's first dental graduate

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University records show that the diploma in Dental Surgery was awarded, most probably for the first time to John Eskdale Fishburn in 1918¹⁻³. Apart from this data nothing more was known about Malta's first dental graduate. At the turn of the previous century the CGMO had complained about the lack of control on the practise of dentistry and the generally low standards prevailing⁴⁻⁵. The Government had published Ordinances controlling registration as dental practitioners and the University in 1907⁶ published the statute controlling the award of the Diploma in Dental Surgery (Dip.D.S.). There was still no taught course in Dental Surgery at the University but the new regulations allowed the Faculty of Medicine and Surgery to set up a Special Board of Examiners to examine candidates who could prove that they had followed the required amount of theoretical and practical studies in dentistry. Local archival sources initially did not provide the required details and after a two year search the English Archival Record Offices and specialised libraries the breakthrough came utilising Internet resources. Fishburn was born in 1894 and died in 1972 but never practiced as a dental surgeon. Contact has been established with his two sons and we now know more about Malta's first Dental graduate.

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0-056

Day-case laparoscopic cholecystectomy: Initial experience in 102 patients

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Introduction: Laparoscopic cholecystectomy (LC) is the gold standard treatment for cholelithiasis. Day-case LC has not been universally adopted in British surgical practice.

Aim: To assess the feasibility, safety and acceptability of day-case LC at King's College Hospital.

Methods: 102 patients consented for day-case LC between July 2000 and April 2003. A set of inclusion and exclusion criteria were devised before initiating recruitment. Initially, only patients with biliary colic, normal liver function tests (LFTs) and BMI of less than 35 were allowed to participate in this study. After the first 34 procedures, patients with complicated gallstone disease, deranged LFTs and BMI of more than 35 were also offered day-case LC. An information sheet was given to every patient prior to discharge. The patients were asked to fill in a questionnaire at 1 day and at 3 weeks post-operatively.

Results: (See table 1 above). 72 patients filled in the 1st day and 3rd week post-operative questionnaire. 89% of these felt that they were ready to go home on the day of operation and would be happy to have a similar operation again as a day-case.

Conclusion: We conclude that day-case LC is feasible, safe and has a high level of patient satisfaction. This procedure should also decrease the operation costs and help to reduce waiting lists without compromising safety.

0-057

Colorectal surgery:

Laparoscopic versus open technique

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Laparoscopic surgery has revolutionised the treatment of gallstones resulting in shorter hospital stay, less pain and faster return to productive life when compared to the traditional "open technique". Laparoscopic assisted surgery is being applied increasingly to colorectal surgery on the assumption that it will have fewer side effects and improve recovery. The aim of this study was to compare, retrospectively, the results of the first 10 laparoscopic assisted colorectal procedures (Group A) performed on our unit with the 10 open procedures (Group B) performed immediately before the introduction of this technique. These 20 patients underwent colorectal excision during the period November 2001 – June 2003. The indications for surgery were similar in each group. 8 had an anterior resection for rectal carcinoma and 2 underwent sigmoid colectomy for diverticular disease. All procedures were performed by the same surgeon. Patients' notes were examined and analgesia requirement, recovery of intestinal function, hospital stay and postoperative complications in each group were compared. Results show that in Group A, only 1 patient required opiate analgesia compared to all 10 patients in Group B. The average length of time for recovery of intestinal function was 36 hours in Group A compared to 4 days in Group B. Hospital stay was also shorter (mean of 4 days Group A; mean of 8 days in Group B). No infective complications were seen in Group A while 2 patients developed a superficial wound infection in Group B. No anastomotic leaks were observed. Our initial results show that laparoscopic assisted colorectal surgery is safe, improves postoperative recovery and is associated with a shorter hospital stay when compared with the traditional "open" technique. Further evaluation of this technique is therefore worthwhile.

Table 1

Number of patients recruited	Time period	Age range in years (mean)	BMI range in kg/m ² (mean)	Diagnosis-Biliary Colic (%)	Conversion to open (%)	Discharge on same day (%)	Re-admission (%)
First 34 patients	July 2000 - August 2001	20-72 (37)	20-34 (27)	29 patients (85%)	2 patients (6%)	25 patients (74%)	0
Last 68 patients	September 2001 - April 2003	21-76 (41)	18-44 (34)	37 patients (54%)	0	62 patients (91%)	3 patients (4%)

Key words: colorectal surgery, laparoscopic.

Reference: Greene F L. Laparoscopic management of colorectal cancer. C A Cancer J Clin 1999; 49, 221-218.

0-058

Early experience in laparoscopic bariatric surgery

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Introduction: Morbid obesity is a disease of excess energy stores associated with severe physical problems and increased morbidity and mortality.

Aim: To assess the results of laparoscopic gastric banding and laparoscopic gastric bypass.

Patients and Methods: The patients who fulfilled the criteria for bariatric surgery were those with a BMI of 40 or a BMI of 35 and one obesity-related co-morbidity. A total of 43 patients underwent a total of 44 procedures between November 1999 and June 2003.

Two operations were performed: laparoscopic adjustable gastric banding and laparoscopic roux-en-Y gastric bypass. It was left up to the patients to decide which operation they wanted. All patients were assessed pre-operatively by a dietician and an endocrinologist. Only patients with a psychiatric history or having psychological problems were seen by a psychiatrist.

Results: A total of 43 patients were included in this study. All the patients were over 18 years of age and were ASA grade I or II. There were 7 males and 36 females. 25 patients underwent gastric banding and 19 underwent gastric bypass. One female patient had an attempted gastric banding procedure following a bypass at a later date. There was no mortality following the operations. There was no statistical difference between the two groups for age and BMI. The percentage excess weight loss was higher for LRYGB as compared with LGB.

Conclusion: Laparoscopic bariatric surgery can be performed with acceptable morbidity and mortality and satisfactory rate of loss of excess weight. LRYGB patients had a higher percentage of loss of extra weight.

0-059

Incidental gallbladder carcinoma in the Maltese Archipelago

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Background: Incidental gallbladder carcinoma is defined as carcinoma of the gallbladder first diagnosed at histological examination of the resected gallbladder. Gallbladder carcinoma is the most common cancer of the biliary tract worldwide. However, it is a rare neoplasm with a poor prognosis. Incidental gallbladder carcinoma is found in 0.35% to 2% of patients undergoing cholecystectomy.

Objectives: To establish the incidence of unsuspected gallbladder carcinoma in the Maltese islands and to identify any common characteristics amongst these patients.

Patients and methods: We present a series of 2577 cholecystectomies carried out at St.Luke's Hospital and Gozo General Hospital between May 1993 and May 2003. The patients were identified from the pathology

database and from the national cancer registry.

Results: In this series, there were 27 histological diagnosis of incidental gallbladder carcinoma. The M:F was 1:1.7 and the mean age at diagnosis was 71.0 years (range 54 - 89 years). Most patients had co-existing gallstones. Eighteen patients from this series died. Their mean survival time after diagnosis was 9.1 months (range 0 - 48 months).

Conclusions: The incidence of unsuspected gallbladder carcinoma in our series is 1.0%. A high index of suspicion is required in the preoperative management of elderly patients with gallstones, deranged liver-function tests and an irregular walled gallbladder on ultrasound.

Key words: Gallbladder carcinoma - incidental - cholecystectomy

0-060

Outcome after upper limb revascularisation

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Objective: A single centre's 20-year experience of upper limb revascularisation.

Method: All patients undergoing operative or radiological upper limb revascularisation between June 1983 and July 2003 were collected from a database and their results reviewed.

Results: 172 patients underwent 184 upper limb revascularisation procedures. Sixty-one patients had a thrombo-embolic event (35%), 53 patients presented with traumatic vascular injury (31%) and 29 patients presented with chronic upper limb ischaemia (17%). Fifteen patients presented with symptoms of subclavian steal syndrome (9%), 8 patients presented with thoracic outlet compression (5%) and 6 patients had iatrogenic injuries (3%).

Fifty-eight thrombo-embolectomies were carried out, 35 under loco-regional anaesthesia (61%). Ten patients (16.4%) died following embolectomy, all from cardiopulmonary causes.

Fifteen reversed saphenous vein bypass grafts were performed for traumatic damage, 3 for proximal (proximal to teres major) and 12 for distal arterial lacerations. Twenty-seven patients underwent primary arterial repair and 5 required an autologous vein patch. One patient subsequently had an arm amputation and two patients (4%) died.

Twelve patients presenting with arm ischaemia underwent subclavian angioplasty, 12 patients had a proximal bypass and in 5 patients stenoses were stented. Mortality in this group was 6.9% (2/29). Fifteen patients had radiological evidence of subclavian steal syndrome for which 9 prosthetic bypasses, 5 angioplasties and one stent were performed.

Conclusion: The mortality for upper limb revascularisation was 8.8%. The mortality was highest after embolectomy and was similar to the mortality associated with lower limb embolectomy. Only 1 limb was amputated and this followed an arterial injury.

Key Words: Upper limb - revascularisation - ischaemia - embolism - bypass - amputation - angioplasty

0-061

Biomechanics of median sternotomy closures

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Objective: Sternal dehiscence is commonly due to wire cutting through bone. A mathematical model of chest wall forces was formulated to calculate the maximum chest wall forces on coughing and verified on a cadaveric model. The properties of different closure materials and configurations were tested to destruction on a material testing machine. The properties of the bone-wire interface in a sheep sternal model were investigated by fatigue testing.

Methods: Force-displacement graphs were used to assess the rigidity of different closures. Cyclical loading with measurement of the amount of cutting through were conducted on adjacent pairs of bone samples to standardize the test closure technique.

Results: Six different fixation techniques were tested on a metal sternal model with multitwist closure displacing 0.37mm at a force of 20kg, straight 0.78mm, figure-of-8 wires 1.20mm, Sterna -band 1.37mm, repair wires 5.08mm, Ethibond 9.37mm. The single factor Anova test for the rigidity of the different closures had P-Values <0.0001. In the biological group, differences in displacement between each of the polyester (1.01mm), figure-of-eight (0.52mm), peristernal (0.72mm) and sternal band (0.66mm) groups versus standard closure (0.22, 0.22, 2.1, 3.2mm) in the paired samples were statistically significant (Student's paired t test p<0.01). There were statistically significant differences in the percentage cut through of polyester, figure-of-eight, peristernal and sternal bands (Anova p<0.001), versus standard closure.

Conclusion: We conclude that the force of severe coughing exceeds conventional sternotomy closure strength. In our sheep sternum model we have quantified the differing rate of cutting through bone of five types of median sternotomy closure techniques. Peristernal and sternal band closure techniques are significantly superior to standard closure. Use of polyester and figure-of-eight closures requires caution.

0-062

Does the type of closure of midline incision influence the incidence of incisional hernia?

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The surgical literature reports that incidence of incisional hernia for midline incision is about 20%⁽¹⁾. Both systemic and local factors have been implicated. We have studied different methods of wound closure to determine whether these play an important role.

Sixty consecutive patients, who underwent midline abdominal incision, were entered into the study. Informed consent was obtained. Patients were randomly assigned to one of three types of closure:

- 1) Mass closure with Prolene Loop 1 only;
- 2) Mass closure with Prolene Loop 1 and external tension sutures of Nylon 1; and
- 3) Mass closure with Prolene Loop 1 and internal tension sutures of Vicryl 1.

Titanium clips were applied to the wound edges after closure at standard intervals. The patients underwent clinical examination and abdominal X-ray on day 7 and 3 months to determine clip movement.

Results: Of the 60 patients included into the trial 10 were lost to follow-up; 6 patients (12%) developed incisional hernia. This table illustrates the results for different types of closure:

	Group 1	Group 2	Group 3
Number	16	16	18
Hernia	1	3	2

Pearson's Chi-Square test with cross tabs for the different groups (p= 0.548) NS

Conclusions:

- 1) Incidence of incisional hernia for midline incision was 12% (6 patients of 50)
- 2) Different types of closure of midline abdominal incision does not appear to influence the incidence of incisional hernia.

Reference:

- 1) Quantitative Evaluation of abdominal wall perfusion after different types of laparotomy closure using laser-fluorescence videograph.
- 2) Hoer J; Tons C, Schechtrupp et al. Hernia. 2002 March; 6(1): 11-16

0-063

Epidemiology of polycystic ovary disease

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Polycystic Ovaries (PCO) incorporating Polycystic Ovarian Syndrome (PCOS) is a heterogenous condition that still defies absolute rigid definition but is certainly recognisable. Polycystic ovaries can be detected in all with PCOS, in many normal women, in many children and in a proportion of patients with hypogonadotrophic hypogonadism. Several studies have estimated the prevalence to be approximately 20% in normal adult women, but can be as high as 50% in women undergoing IVF treatment.

Polycystic ovaries are related to metabolic sequelae. Amongst the late ones are obesity, diabetes mellitus that is associated with hyperinsulinaemia cardiovascular disease, high LDL and hypertension. These conditions represent a significant health problem in Western societies and increasingly in emerging economies. Familiar aggregates of PCOS is well recognised. There is evidence of the involvement of at least two genes in the aetiology of PCOS, the steroid synthesis gene CYP 11a and the insulin gene VNTR regulatory polymorphism. Apart from the association with infertility and endometrial cancer, the epidemiology of the cluster of metabolic sequelae of PCO could suggest that such sequelae are the result of PCO being present at a younger pre-menopausal age. Intriguingly, it has been suggested that PCO and PCOS can also be inherited from the father's side. It would follow that there is a male PCO like syndrome and logically the incidence in males ought to be as high as that in women and is manifested, in so far as late metabolic sequelae go, in exactly the same way. The implications are therefore that we are dealing with a condition that has serious Public Health consequences and has a wide range of medical implications.

0-064

Causes of recurrent miscarriage in Malta: a new factor

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The Recurrent Miscarriage Clinic within the Department of Obstetrics & Gynaecology aims at investigating and quantifying the causes of recurrent miscarriage in the Maltese community.

Methods: 56 couples were investigated by the Recurrent Miscarriage Clinic at St Luke's Hospital, G'Mangia, Malta. The criteria for referral to the clinic included 2 or more consecutive miscarriages. Referral was open to gynaecologists as well as General Practitioners and other members of the medical profession. A standardised detailed interview with the couple assessed obstetric and other medical issues. Investigations included generic tests such as complete blood count, renal and liver function, folate levels. Thrombophilia screen included Factor II, Factor V Leiden and MTHFR mutations. Activated Protein C resistance, Protein C, S; anti Thrombin III and homocysteine levels were also assessed. Anticardiolipin antibodies were checked as well as anti nuclear antibodies. A full hormone profile including FSH, LH, androgens, prolactin and thyroid function was taken. In view of

the prevalence of Diabetes Mellitus in the Maltese population, a glucose tolerance test and glycosylated haemoglobin were considered appropriate. Anatomical causes were assessed by a pelvic ultrasound. Where further evaluation was thought necessary a hysterosalpingogram was performed and a laparoscopy was performed in a select number of cases. Karyotyping of the both partners was considered in couples who suffered 3 or more consecutive miscarriages.

Results: Of the 56 patients investigated, 26.8% (n=15) were found to have a thrombophilic tendency, 5.36% (n=3) had Factor V Leiden mutation, 3.57% (n=2) had Factor II mutation. 1.79% (n=1) had Protein C deficiency and 1.79% (n=1) had homocysteinaemia. No cases of Protein S or anti Thrombin III deficiency were identified in this group. 3.57% (n=2) carried a homozygous MTHFR mutation while 10.7% (n=6) were heterozygous. Auto immune factors associated with increased thrombotic tendencies i.e. anticardiolipin antibodies were identified in 5.4% (n=3) of cases. Antinuclear antibodies were detected in 1.79% (n=1). Endocrine factors accounted for 21.4% (n=12) of which 14.3% had ovulatory problems or PCOS while 7.14% (n=4) had signs of ovarian failure associated with age. Anatomical causes included cervical incompetence in 7.1% (n=4) of cases. No chromosomal anomalies were detected. 51.8% (n=29) of cases of recurrent miscarriage were unexplained. In addition 8.9% (n=5) patients were diagnosed with Diabetes Mellitus or Impaired Glucose Tolerance while 3.57% (n=2) were found to have impaired liver function and were hence referred for appropriate investigation and treatment.

Conclusion: It is beneficial to investigate the cause if recurrent miscarriage especially in relation to thrombophilias which were found in over one fourth of patients. This could bear significance not only for future pregnancies in these couples but also for their health relating to cardiovascular disease. In addition, in a small population such as Malta this could have broader implications in terms of recall of relatives who may also be identified to be at risk. The introduction of a thrombophilia screen in the routine work up of patients with recurrent miscarriage represents a major advance in this field. Congenital and acquired thrombophilia was found in about 25% of patients. Identification of this condition will help to improve overall results and may have broader health implications in terms of recall of relatives who may also be at risk of this condition.

0-065

Recurrent miscarriage: is it two or three?

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Objectives: Following an audit of an ongoing Miscarriage Clinic the question of whether it is justified to allow patients to suffer three miscarriages before investigation is put.

Methods and Materials: Because of the increasing awareness of the problem of recurrent miscarriage a dedicated miscarriage clinic was set up in the Department of Obstetrics and Gynaecology, St. Luke's Hospital, Medical School, Malta. The clinic is a referral service for patients with at least two miscarriages. The aims of the clinic are to investigate these patients with a view to making a diagnosis and advising on appropriate treatment. The couple are also provided with information, counselling and support which is an integral part of the management of this problem. A review of the clinical notes of one hundred and eighty patients who were assessed at the clinic were reviewed. Patients are investigated according to a standard protocol. The patients concerned were divided almost equally into those who had had two and those who had had three miscarriages. The causes of the miscarriages and the eventual outcome of the two groups were compared.

Results: 180 cases from the clinic were suitable for this study. The greater majority of patients were nulliparous and had two miscarriages while 56 had had at least 3 miscarriages. The percentage of the 1st trimester miscarriages was 86.6% while 13.4% represented the 2nd trimester miscarriages. A cause for recurrent miscarriage was identified in just under 50% of patients with two recurrent miscarriages and 35% achieved a live healthy baby following treatment for a specific condition.

0-066

Genetic & developmental defects resulting in spontaneous miscarriage

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Sporadic spontaneous miscarriage has been observed to occur in 30% of gestations in healthy fertile women. The majority of miscarriages have been attributed to lethal cytogenetic defects, with aneuploidy accounting for over 60% of first trimester pregnancy loss. Many of these anomalies are not seen among neonates with congenital anomalies, precisely because of the lethal nature of the defect that leads to spontaneous abortion. In Malta, miscarried fetuses are not routinely tested for developmental or genetic defects, with the consequence that mothers cannot be given appropriate counselling regarding possible recurrence risk.

For this reason, a cross-sectional study will be conducted on a cohort of miscarried fetuses available at the main public hospital, namely St Luke's Hospital, over a number of months with the aim of investigating the types and frequencies of congenital anomalies in miscarriages. Maternal, gestational and fetal parameters would be recorded. A medical history, using a standardised checklist of known risk factors, and informed consent will be personally taken from all mothers involved in the study. An information leaflet, which will be available in English and Maltese, will be handed out to them outlining the details of the study. All spontaneous abortuses will be examined in a fresh state, as soon as possible after delivery. Karyotyping will be carried out on all specimens, including products of conception following elective removal (ERPC). Samples of placenta and/or embryonic or fetal tissue may be further analysed, using polymerase chain reaction (PCR) &/or fluorescent in-situ hybridisation (FISH). Karyotypically-normal fetuses will undergo a post-mortem examination, including radiological investigations. They will be measured and examined for gross external developmental defects and dissected in order to identify any internal malformations. Histology may be essential for identifying defects in embryos miscarried at an earlier stage of development. To date about 60 fetuses have been examined for anatomical abnormalities and 50% had a gross anatomical identifiable abnormality.

These examinations will be performed in close co-operation with the Pathology Department, and the results will provide additional information that can be used by the Department in issuing pathological reports. In addition, the data collected regarding obstetric factors in each case, will be used for statistical analysis of the incidence of these malformations with respect to specific risk factors. The results will provide data for:

genetic counselling of parents who had one or more spontaneous abortions; constructing an classification of the genetic and developmental defects that lead to spontaneous abortion, together with their respective prevalence in Malta and supplementing the existing register of congenital anomalies.

0-067

The outcome of diabetic pregnancies in the Maltese Islands

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Diabetes in pregnancy is generally associated with a higher morbidity and mortality for both the mother and child.

Objective: The study aims to assess the outcome indicators of pregnant women suffering from diabetes and compare these to the remaining obstetric population.

Research Designs and Methods: Women diagnosed as suffering from diabetes during pregnancy were classified into two groups - pre-existing DM (n = 44), and GDM (defined as a 2-hour post-load blood glucose of >=8.6 mmol/l: n=236). Outcome indicators of these two groups of women were compared to the parameters of the women with a presumed normal carbohydrate metabolism (n = 12260). Statistical analysis was carried out using the Chi-Square test.

Results: The incidence of diabetic problems in the Maltese pregnant population is 2.23% of total maternities. Both women with pre-existing DM

and GDM women showed themselves to be at a significantly increased risk of developing hypertensive disorders during pregnancy and to require delivery by caesarean section. GDM women were more likely to require intervention by induction of labour. The delivery in both groups of women was likely to be complicated by shoulder dystocia. The infants born to both pre-existing DM and GDM women were more likely to be macrosomic or preterm and have a low Apgar score at birth. Infants born to pre-existing DM were more likely to be of low birth weight and suffer from respiratory distress.

Conclusions: It would appear that diabetes complicating pregnancy, whether previously existing or simply gestational, remains a high-risk situation that increases maternal and infant morbidity in spite of the modern management options.

0-068

Laparoscopic electrocautery therapy to ovaries in patients with infertility

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Objectives: Electrocautery therapy is used laparoscopically for the treatment of patients presenting with subfertility, especially in polycystic ovarian disease and endometriosis. This study reviews the patients undergoing laparoscopic electrocautery of the ovaries. The need for gonadotrophins and pregnancy outcome is also assessed.

Method: One hundred and twenty women (age 22 – 39) who underwent laparoscopy as an investigation of infertility, were treated with laparoscopic electrocautery to the ovaries if transvaginal ultrasound indicated polycystic ovarian disease. Additional treatment with goserilin subcutaneous implants if the diagnosis of endometriosis was confirmed at laparoscopy.

Patients were selected after undergoing at least three cycles of clomiphene and 2 cycles of gonadotrophin therapy. Forty-five underwent electrocautery to the ovaries while forty were also treated with goserilin subcutaneous implants. Thirty-five needed no electrocautery. All patients were managed by gonadotrophin stimulation if pregnancy did not ensue spontaneously within 6 months of therapy.

Conclusion: Patients undergoing electrocautery required less therapy with gonadotrophins. Pregnancy rate was higher and hyperstimulation was less frequent.

0-069

Use of the GUHA method for automatic generation of interesting hypotheses in the diagnosis of ectopic pregnancy

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This paper describes the use of a novel statistical software system with data mining capabilities for analysis of medical data that is incomplete. The system is utilised for exploratory statistical analysis and generates interesting hypotheses that can be evaluated for clinical relevance by clinicians. Women with ectopic pregnancy may present with a variety of symptoms eg, amenorrhea, abdominal pain and vaginal bleeding. Unfortunately this combination of features is common to other gynaecological conditions. The choice of which additional test to use in the clinically stable women i.e., ultrasound scanning or biochemical tests, and at which cut off level, is often difficult and is dependent on the facilities available in the given institution. The aim of this work is to evaluate different cut off levels of various biochemical (hCG, SP1, PAPP-A) and ultrasonic parameters in varying combinations in order to improve their diagnostic efficacy in this life threatening condition.

We hypothesised that the use of more than one test will provide increased sensitivity, and questioned which tests are relevant, and how many tests are essential. Three different tests are sufficient to capture all the relevant information in our sample of clinical data as well as all the logical

relationships (including non symmetrical ones) between the different types of tests used in the study. No single test is sufficient to detect the condition in the whole affected population. Thus at least one more test must be added to increase diagnostic sensitivity and specificity to 100%. This is a minimum requirement for the diagnosis of a condition like ectopic pregnancy that has significant associated morbidity and mortality.

It is important to look at the interrelationships and dependencies of several tests using GUHA software to process patient/clinical data. Typical results that will be discussed in greater detail in the presentation are as follows. If hCG is positive, SP1 or PAPP-A will also be positive. If PAPP-A is positive then SP1 or hCG are positive. If hCG and SP1 are positive, then PAPP-A will be positive. If hCG and PAPP-A are negative, then SP1 will be negative. In conclusion, this statistical tool has the important advantage over traditional statistical methods that it can be used with incomplete data, and that directional dependencies as well as those that are symmetrical can be analysed.

0-070

Cartesian Dualism: Depression in the medically ill. Does it go undiagnosed?

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There were two aims in this study; to investigate the differences in the prevalence rates in the medically ill at St. Luke's Hospital in Malta and in the general Maltese population; and to determine whether depression is adequately identified by doctors. The study was carried out using the Beck's Depression Inventory. The rate of consultations done by doctors during the month in which the study was carried out, were recorded and compared to the un-diagnosed cases of depression. There were 300 participants in the study, 50% were from hospital, whilst 50% were from the general public. The ages ranged from 15-94. Depression was present in 50% of the participants in the hospital population, and in 20.7% of the general population. Depression was 1.5 times more common in females. During the same period, doctors diagnosed depression in 1.3% of the cases.

0-071

The Validation of the Maltese Edinburgh Postnatal Depression Scale (EPDS)

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Background: The Edinburgh Postnatal Depression Scale (EPDS) was developed specifically for use with childbearing women as a screening questionnaire to identify possible depression in a clinical setting and also for research purposes.

Aims: To validate the Edinburgh Postnatal Depression Scale (Maltese version) during pregnancy and at eight weeks postpartum in Maltese women.

Method: 239 pregnant women, booking at the antenatal clinic were selected at random for interviewing. The first interview at booking consisted of a detailed sociodemographic history and the Revised version of the Clinical Interview Schedule (CIS-R) together with scoring of the Maltese translated Edinburgh Postnatal Depression Scale. A home visit was performed at 8-10 weeks postnatally.

Results: The translated EPDS had good face validity. The mean EPDS was sensitive to the severity of the depression. During pregnancy the 13/14 cut off is recommended with a sensitivity of 75%, specificity of 96% and a positive predictive value of 75%. In the postnatal validation, 11/12 cut off is recommended with a sensitivity of 83% and a specificity of 97%.

Conclusions: The EPDS was acceptable to women and completed without difficulty.

Reference: Cox, J.L., Holden, J.M. and Sagovsky, R. (1987). Detection of postnatal depression. Development of the 10-item Edinburgh Postnatal Depression Scale. *British Journal of Psychiatry*, 150, 782-786.

0-072

Effect of substance abuse

on outcome of psychosis, and its impact on psychiatric services

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There is little doubt that a person with schizophrenia in remission who then returns to abusing substances can be precipitated into a relapse of his/her psychosis. This may be through a direct effect on psychotic symptoms (eg dopaminergic effects), indirectly (eg by an increase in depression and anxiety), or with resultant treatment non-compliance and/or resultant social crises acting as a trigger. Thus substance abuse is one of the risk factors for poor prognosis in patients suffering from schizophrenia. Our research (Grech et al. 1999), showed this phenomenon occurring with cannabis abuse. But this is also associated with abuse of other substances, thus resulting in patients with both schizophrenia and substance abuse, making more use of services and are more likely to be violent and imprisoned. (Murray et al, 2003). This results in these patients posing a big and complex demand on the psychiatric services, a phenomenon that is becoming more evident in Malta as well.

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0-073

Anxiety, depression and spiritual-well being in Maltese patients with first myocardial infarction

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Through research findings and nursing experience, it could be said that the spiritual dimension has been underestimated in patient care. A longitudinal research study was conducted on a sample of 70 patients with first MI in the main general teaching hospital in Malta. One of the aims was to identify relationships between patients' anxiety and depression and spiritual well-being across the first three months after MI. Anxiety and depression were measured by the Hospital Anxiety and Depression scale (Zigmond and Snaith 1983) whilst SWB was investigated by the JAREL SWB scale (Hungelmann et al. 1989).

Findings revealed that anxiety was more prominent than depression. Negative significant relationships were identified between anxiety and SWB during the early stage of recovery. In contrast, depression was found negatively related in the later stages of the recovery period. Several coping strategies were used including the religious. Hence, in their struggle to find meaning and purpose in life, individuals cope by the use of both religious and non-religious strategies (Baldacchino 2003). This implies that the multidisciplinary team need to give attention to the religious perspective to enhance holistic care.

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0-074

The development of an interface between Primary and Secondary Care in Mental Health

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The interface between primary and secondary mental health care is crucial to the development of Mental Health services generally, and in particular to establishing a seamless system of care whereby each patient receives an appropriate level of care and whereby care is delivered effectively to those who need it [1].

Primary care accounts for 95% of all mental health care, so that 95% of patients never get referred to secondary care. Surprisingly, it took a great deal of debate before Goldberg and Gournay stated that it was appropriate to refer to secondary care those patients which could not be treated by primary mental health care [2].

Thus, logically, if mental health care is to be adequately delivered to the large number of cases who require it, without excessive numbers of referrals to secondary care, there requires to be an increase in the capacity of primary care to deal with simple mental health problems, an increase in supervision of primary care staff who are using their newly acquired Mental Health Skills, and an increased liaison between primary care teams and community Mental Health Teams [3].

The paper describes how we developed in Luton, Bedfordshire, a theoretical model which suggested that the best way of achieving this development of primary care psychiatry was by a combination of training of primary care team staff, and the use of a special team of experienced Community Mental Health Practitioners who acted as liaison between the primary care and secondary [or community mental health teams], and were also available to the primary care staff for advice and supervision [4]. Furthermore, protocols were devised for the management of simple mental health problems in primary care.

The training was offered to Primary Care Staff along the lines suggested by Tylee [5].

Outcomes of this initiative over the last few years and the process of protocol development will be discussed.

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0-075

What do Maltese psychiatric patients think of their outpatient care?

A preliminary study

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Aims and Objectives: Patient views are increasingly being used as part of service improvement methodology. This study explores psychiatric

patient perceptions regarding outpatient care including accessibility, responsiveness, and whether it meets their needs. It assesses patient satisfaction with current service, respect for their dignity and well-being.

Methodology: review of literature and National Policy on Mental Health Service (Ministry for Home Affairs and Social Development, 1995); parameters identified included *referral, treatment, information, emergency care, provision of care by healthcare professionals, standards; support, discrimination within the rest of the service*. Other aspects included *primary/secondary interface, and general outpatient service domains*. Qualitative study using focus group methodology was used to obtain patient perspectives.

Results: Content analysis revealed general satisfaction with professional care; staff were perceived to do their best in spite of pressure of workload, frequent interruptions, and missing notes. Dissatisfaction was expressed with: lack of properly timed appointments; lack of information (treatment, side effects, illness, prognosis); access to care and communication with outpatients were difficult in crisis situations; lack of interaction with Social Services Department; little community support; lack of 'joined-up' care. There was no perception of discrimination within the rest of the service. Privacy and dignity are an issue in the waiting and common areas-though not in the consultation areas. Findings are being used to refine semi-structured interviews with individuals. A qualitative approach is very suitable for psychiatric patient survey and is being used as part of a quality improvement project currently under way using feedback.

Recommendations: A number of areas identified can be solved easily (e.g. providing locks on toilet doors and publicizing Richmond Foundation information in the outpatient waiting area), others will require more planning and new resources (e.g. better coordination for social services and community care, better information provision, clerk receptionist to coordinate appointments and control telephone interruptions). There emerges a general need to make patients and caregivers more aware that they can register their concerns with outpatient staff or with customer care services, with a view to improving services.

0-076

The communication skills courses in the behavioural sciences programme: an evaluation

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The World Health Organisation, the World Federation of Medical Education and the World Psychiatric Association have jointly recommended the development of Behavioural Sciences Courses for medical students.

The Faculty of Medicine and Surgery in a collaborative interdepartmental project has promoted the development of these courses.

Academic Year 2002 – 2003 has seen the introduction of courses in Psychology and Sociology in relation to health care for clinical students and Communication Skills Courses for the pre-clinical years.

The four communication skills courses are aimed at improving the acquisition of skills and professional attitudes that facilitate effective and appropriate interaction with patients, families and colleagues. They focus on interpersonal communication, self-awareness, coping with stress, doctor-patient relationship and teamwork.

These four courses are each three-day residential. Learning is in small groups, interactive and experiential. Didactic teaching is avoided.

One year after their inception, two evaluation seminars have already been held. Students and group facilitators are also being requested individual feedback.

A thematic analysis of the evaluation results will be held and this will be presented at the Conference.

0-077

Transcatheter closure of post-infarct ventricular septal defects

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Ventricular septal rupture causing a ventricular septal defect (VSD) occurs in around 1% of patients who sustain a myocardial infarct. The mortality is high both for those managed medically as well as those repaired surgically; conservatively, the surgical results claim 50% mortality and some of these patients would have had to survive a trial of life for several weeks before surgery is offered. We present a small group who had transcatheter closure of the VSD using an Amplatzer VSD device, all of whom survived the procedure.

Between September 2001 and August 2003, 14 patients with post-infarct VSD were considered for the procedure and of these, 10 underwent closure; of the remaining 4, one was moribund at the time of referral and died within a few hours, one developed an acute abdomen possibly related to bowel infarction/perforation (pt on balloon pump), one was considered too old at 89 years of age and one was refused the procedure by the medical director. Thirteen devices were implanted in the 10 patients, 6 of whom were female. Six were carried out in the acute phase, all were on a balloon pump and most on inotropic support and had been turned down by the surgeons; two of these had coronary stent implantation in addition to the VSD closure. Of the remaining 4 patients who had the procedure late after the infarct and who had bypass grafts after the infarct, 2 had had surgical repair of the VSD (one patched and one sutured), 1 had had resection of a left ventricular aneurysm and in the final one the defect was not touched at surgery. A total of 13 devices were implanted in the 10 patients, 1 receiving 2 additional devices and 1 an additional device late after the infarct and having had a device implanted in the acute phase.

All the procedures were carried out under general anaesthesia using fluoroscopy and transoesophageal echocardiography. The approach was from the internal jugular vein using a catheter circuit from the femoral artery. All were sized with a balloon and the device size was based on this. There were no deaths related to the procedure but one patient died 10 days later from persistent sepsis (likely source being the balloon pump catheter) and major metabolic problems due to capillary leak; the rest are alive. Complications were uncommon; transient arrhythmias and hypotension were common usually when the sheath was placed across the VSD. There was one significant complication, namely, a pericardial effusion; although this was small, it was decided to drain it as it was in an acute infarct and anticoagulation was essential for the balloon pump.

Transcatheter closure of post-infarct VSD with the Amplatzer VSD device is feasible and the results are very encouraging even for those carried out during the acute phase. In the latter, some may also benefit from concomitant stent implantation. Although some residual shunts will remain, these are sometimes insignificant or can be closed later with another device or surgery. Timing of intervention is important with some cases benefiting from early closure even if supported with a balloon pump.

0-078

Risk adjusted effect of bypass on mortality and morbidity in CABG

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Introduction: Risk stratification systems such as Parsonnet or UK Bayes have been devised to predict the risk of any individual patient dying after coronary artery bypass surgery (CABG). In certain instances they can be used to predict morbidity.

Traditionally, CABG has been performed using cardiopulmonary bypass. Recently published randomized controlled studies, which have only shown a marginal benefit of 'off pump' (without cardiopulmonary bypass) CABG, have only included patients whose risk of mortality/morbidity after CABG is low. We have used risk-stratified methods to compare mortality and morbidity outcomes in all patients undergoing on pump and off pump CABG.

Methods: Data from 933 patients undergoing CABG by 2 surgeons in 1 centre who practice both on and off pump CABG was used for the analysis. Parsonnet and UK Bayes were the risk stratification systems used. ROC (receiver operator characteristic) was used to determine whether these 2 systems could detect survival/death and 1 night/more than 1 night on ICU. VLAD (variable life adjusted display) curves were constructed to compare a risk stratified balance of events (death and > 1night on ICU) in on pump and off pump patients. Logistic regression analysis using risk factors in Parsonnet and UK Bayes and the use of bypass was used to detect independent risk factors for death or > 1night stay in ICU.

Results: 542 patients underwent on pump CABG and 391, off pump. Crude mortality rates were 3.8% for on pump and 2.8% for off pump. Average parsonnet scores were 6.5 for on pump and 6.4 for off pump. Average Bayes score for both groups was 2.2. 26.5% and 21% of the on pump and off pump groups respectively spent more than 1 night in ICU. ROC analysis demonstrated that both Parsonnet and Bayes systems could predict deaths and >1 stay in ICU. VLAD analysis showed a balance of 6 more deaths in the bypass group after 391 patients whereas 5 fewer patients spent more than 1 night in the ICU in the off pump group. Logistic regression analysis showed that the use of bypass was an independent risk factor for > 1 night stay in ICU.

Conclusion: We have used a novel statistical risk sensitive method to compare outcomes between 2 ways of performing an operation. Off pump coronary bypass may be the procedure of choice in the higher risk coronary patient who requires surgery.

0-079

Smoking cessation in patients undergoing coronary revascularisation

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Various treatments are currently available to smokers to help them overcome nicotine addiction. The success of these methods, including group therapy, nicotine replacement, medication and others, singly or in combination, rarely exceeds 30% at one year follow-up.

We studied 300 consecutive patients who underwent coronary revascularisation 6 to 8 years previously. A questionnaire was followed up with telephone assistance where necessary. 253 patients (84%) responded. Of the 153 patients who smoked pre-operatively (60%: 74% of males and 12% of females), 127 (83%) stopped smoking.

Of the 25 relapsers 14 smoked during the 2 months before their surgery, and a further 7 up to the time of their operation (81% of relapsers smoked to within 2 months of surgery versus 40% of quitters). 19% of relapsers had a smoking spouse versus 11% of quitters.

Smoking cessation was not influenced by gender (85% for males, 60% for females), severity of smoking (31% of relapsers smoked over 30 per day versus 45% of quitters), exposure to passive smoking (58% of relapsers exposed to passive smoking versus 42% of quitters) or the number of attempts at quitting (58% of relapsers attempted more than once versus 53% of quitters). Quitters were not influenced by third parties, claiming health worries or personal determination as the over-riding factor. Spouses were not influenced by the patients' operation.

Responders overwhelmingly believed that smoking is addictive and harmful, and should be banned from public places.

Our policy is to help patients stop smoking before their surgery and for life. Patients requiring urgent surgery are not delayed, but in routine cases time is spent trying to quit smoking. This strategy has proved effective.

0-080

Obesity: not necessarily a disadvantage during routine CABG

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Objective: Obese patients are usually technically challenging. Nonetheless, we noticed that these patients tended to bleed less, an observation that we studied by means of retrospective analysis

Methods: Four hundred and thirteen consecutive patients undergoing routine CABG were classified according to their BMI into three groups. Group 1 had a BMI of 25 to 29.9 (n=192), group 2 a BMI 30 to 34.9 (n=157) and group 3 a BMI of 35 and over (n=64). The exclusion criteria were emergency surgery, beating heart surgery and redo-operations

Results: The three groups had similar baseline characteristics. There was no statistical difference for mean number of grafts and bypass time. The blood loss was 511 ± 216 mls for group 1, 473 ± 154 mls for group 2 and 452 ± 182 mls for group 3. Data analysis using the Anova test showed a marginally significant p-value of 0.049. When comparing group I to group 3 the significance was stronger with a p-value of 0.036 (t-test). The post-operative ventilation and hospital stay were similar for the three groups. There was no clinical difference with respect to complications but no statistical test was attempted in view of the small numbers

Conclusions: Patients with a BMI greater than 35 bleed less than those with a BMI less than 30. The perception that obese patients are more likely to have post operative complications including bleeding was not evident in our study.

0-081

Myocardial perfusion scintigraphy in patients with coronary artery disease

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Coronary artery disease (CAD) is one of the major killers in the Western world today and its incidence is on the increase. This trend is also seen in Malta and the timely diagnosis and subsequent treatment of these patients is essential for a successful outcome.

The functional evaluation of CAD is an important step in choosing the appropriate therapy for the patient. The classical non-invasive test used is exercise stress testing. Adding myocardial perfusion scintigraphy (MPS) to this strategy increases the diagnostic accuracy and also provides important prognostic information.

We review the indications for MPS as well as the choice of radiopharmaceutical for these studies. We also report on the advantages of MPS over exercise stress testing, discuss its role in the diagnostic work-up of patients with known or suspected CAD and finally, discuss the use of MPS in the detection of hibernating or stunned myocardium.

0-082

The prevention of travel related thrombosis: Should we be targeting venous stasis?

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Introduction: While limb deep venous thrombosis is recognized as a complication in hospitalised patients, anecdotal media reports and scientific trials have raised the profile of the same condition in association with prolonged travel. Although probably multifactorial in aetiology, venous stasis is considered an important and correctable risk factor in the pathogenesis of deep venous thrombosis.

Objectives: 1) Literature review on prevention of travel related thrombosis. 2) To assess the effectiveness of exercising the calf muscle blood pump in increasing venous blood flow using a new dynamic alternating inflatable biped device (Lymgym[®] LTD UK) which has been designed to be used by air passengers.

Methods: Doppler ultrasound was used to assess peak flow velocity in the superficial femoral vein in thirty lower limbs of fifteen healthy volunteers with no history of venous disease. Measurements of peak flow velocity were

taken at rest in the seated 'coach position' and during calf muscle pump exercises with the device.

Results: Peak blood flow velocity was 8-fold ($p < 0.0001$, Wilcoxon signed rank test) higher during exercise with the device than at rest.

Conclusions: These results show that use of the dynamic alternating biped device (Lyngym%) effectively reduces venous stasis when used in the seated position as defined by measurements of peak venous blood flow. These results provide the scientific justification for further studies assessing the value of this device in reducing the risk of travel related thrombosis.

0-083

Measurement of prolongation of graft survival in allogeneic vascularised heart transplants in response to controlled alteration of pretreatment donor cell MCH class I and class II antigen and Notch ligand Delta1 expression

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Background: Allogeneic transplantation experiments, in which recipient mice are pretreated intravenously with L-cells bearing recipient MHC class I antigens and donor MHC class I or class II antigens, have shown prolongation of graft survival related to the immunogenicity of the antigens and the load delivered. In recent experiments recipients were pretreated intraperitoneally with these L-cells further transfected with the Notch ligand Delta 1 (Dl1) and EGFP using a bicistronic vector. L-Kb/Dl1 cells bear MHC class I and Dl1 while L-Ab/Dl1 cells bear MHC class II and Dl1. Analysis of graft survival data in three separate transplant groups showed a variation in survival which showed a relationship to levels of MHC class I and class II expression and of Dl1 expression.

Group	Graft Survival mean +/- (SE)	Mean Channel Fluorescence		
		L-Kb/Dl1 cells		
L-Ab/Dl1 cells	days	MHC class I	Dl1	MHC class II
		Dl1		
1 (n=6)	14.3 (1.0) 260	350	280	15
2 (n=6)	41.5 (16.1) 41	262	206	19
3 (n=4)	45 (5.0) 19	60	200	1000

Aim: To investigate how altering the level of expression of Dl1 in the presence of donor MHC class I and class II antigens effects graft survival in allogeneic vascularised heart transplants.

Methods: Expression of donor MHC class I (H-2Kb) and class II (H-2Ab) antigens was measured by flow cytometry using fluorescent antibody labeling while Dl1 expression was similarly estimated from fluorescence histograms. Mean channel fluorescence for all groups was estimated from fluorescence histograms. Cells were sorted by flow cytometry producing 3 groups of L-Kb/Dl1 cells bearing high, medium or low levels of EGFP/Dl1 expression and 2 groups of L-Ab/Dl1 cells bearing high or low levels. Six groups of C3H mice were each pretreated with 5×10^6 L-Kb/Dl1 cells + 1×10^6 L-Ab/Dl1 cells administered intraperitoneally, each group receiving a different combination of L-Kb/Dl1 and L-Ab/Dl1 levels of expression. Another six groups were given the same pretreatment administered intravenously. The mice underwent a vascularised heterotopic cardiac transplant from C57 BL/10 donors on day 14 and were followed up to 100 days post-transplantation. Graft rejection was recorded as the loss of palpable graft contraction.

Results/Conclusions: Data so far show more prolongation of graft survival in transplants pretreated with cells bearing higher levels of Dl1 expression on both L-Ab and L-Kb bearing cells. Intravenous delivery of pretreatment shows only a marginal advantage over intraperitoneal delivery.

0-084

The Malta Experience: Population tools for discovery in Genomics and Genetics

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The completed sequence of the human genome provided a structural framework upon which to base searches for human genes and to link the pathophysiology of disease with sequence divergence in DNA. Populations are essential tools for functional genomics and molecular physiology through correlations between genotype and phenotypes and for gene discovery in general. It now appears that rather than any single type of population being best suited for the discovery of certain types of genes, it may be more important to understand demographics, structure and epidemiology. The discovery of genes with quantitative effects that impact on the "risk" of complex disease compared to the "destiny" of disease from the inheritance of major single gene disorders is of particular interest.

The growth and development of the Maltese population during the second millennium is well documented with alternate genetic models consistent with the difference between the two halves. Preliminary molecular data on Y chromosome DNA indicated survival in contemporary Maltese of much "older" chromosomes (D. Goldstein UC London)

Haemoglobin and haemoglobinopathies provide a model for understanding molecular disease. As in the case of beta-thalassaemia, many hereditary disorders appear to result from abnormalities at the junction between coding and non-coding DNA sequences of the genes. This is also the case in GM1 Gangliosidosis and Dopa Responsive Dystonia; both common conditions in Malta. Other disorders may be connected with trans-heterozygosities in single pathways such as the recycling of tetrahydrobiopterin in phenylketonuria and DRD, or in hemostasis and thrombosis. Interplay between maternal and foetal genotypes is illustrated by MTHFR variants in recurrent miscarriages. Clearly the "pathophysiological distance" between genotype and phenotype influences discovery.

This research provides solid foundations for the development of population testing strategies through integration of DNA sequencing with classical techniques, for further progress in molecular physiology and for the identification of therapeutic alternatives.

0-085

Molecular cytogenetics: a diagnostic and research tool in clinical genetics

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Chromosomal abnormalities are the basis for a substantial proportion of human morbidity and mortality. New developments in molecular cytogenetic technology have been quite rapid over the last decade and these continue to promote this field of medicine as a main contributor to our knowledge of clinical genetics, chromosome structure and function and gene mapping. Molecular cytogenetic techniques based on fluorescence *in situ* hybridisation (FISH) were employed for the elucidation of cryptic chromosome rearrangements not previously detected by conventional cytogenetic techniques. FISH techniques used in the study included chromosome flow-sorting, reverse and forward painting using whole chromosome painting probes, spectral karyotyping (SKY), cross-species colour banding (RxFISH), and conventional comparative genomic hybridisation (CGH). Although none of these techniques showed a resolution higher than that obtained by conventional GTG banding, they did greatly facilitate accurate and unambiguous identification of rearrangements at this resolution. Furthermore FISH using subtelomeric probes detected an Xp deletion which was found to be a polymorphism by further analysis, and a familial semi-cryptic chromosome rearrangement segregating to give a number of live phenotypically abnormal individuals with unbalanced karyotypes. With the rapid advances in the Human Genome Project and the availability of BAC clones, physical mapping at the breakpoints of apparently balanced and unbalanced translocations was made possible. Physical mapping helped in the identification of the genes disrupted at the individual breakpoints

that could be contributing towards the patients' abnormal phenotypes. Furthermore, BAC FISH provided us with new knowledge in understanding the mechanism of how balanced and unbalanced familial translocations are transmitted.

0-086

Genetics and proteomics of the Hb F / F-erythrocyte

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The quantity of foetal haemoglobin (Hb F) in blood is the product of the number of erythroid progenitors clonally committed to the expression of gamma globin genes and the Hb F content of the resulting F-Erythrocytes (or Hb F / F-Erythrocyte). A complete understanding of the molecular mechanisms underlying the Hb F / F-Erythrocyte is of fundamental importance in human biology, and it could also lead to improved therapeutics of human haemoglobinopathies. Yet the genetic determinants of the Hb F / F-Erythrocyte remain largely unknown, although the sequence and the structural organisation of the globin loci are well described and a considerable number of expression constructs in transgenic animals and other experimental platforms have been conducted.

Quantification of the Hb F Mata I together with extensive DNA haplotyping among newborn heterozygotes compared with adult beta thalassaemia homozygotes indicated that upstream regulatory sites, while active in the adult patient were inactive in the newborn during the perinatal transition from gamma to beta globin gene expression.

Using analytical flow cytometry and liquid chromatography (LC), it could be shown that relatively high doses of hydroxyurea (HU) increased Hb F by stimulating the number of F-erythrocytes rather than the Hb F / F-Erythrocyte.

Initial comparative proteomics with sequential two dimensional profiling using (non-denaturing) LC followed by zone capillary electrophoresis showed striking effects of HU on the nuclear protein profile of erythroid progenitors. The molecular diversity may reveal leads or target molecules for further study.

0-087

Screening for subtelomeric rearrangements in patients with idiopathic mental retardation using FISH

E Said, A Cuschieri, S Suleiman, *Department of Anatomy, University of Malta*

Chromosomal abnormalities account for up to ~ 40% of severe and less than 10% of mild cases of mental retardation. Cytogenetic analysis using G-banding cannot detect structural abnormalities that are small (< 4 MB), within G-negative bands and/or involve exchanges of segments with similar G-banded patterns. The involvement of the terminal regions for cryptic chromosomal anomalies in MR is known in several disorders such as Cri du Chat syndrome, ±-Thalassaemia MR, Miller-Dieker, and Wolf-Hirschhorn syndromes. Fragile X syndrome also involves the subtelomeric region of the long arm of the X chromosome. The frequency of terminal deletions as causes of MR have led to the concept that subtelomeric deletions and rearrangements may cause MR. Recent studies have also shown that subtelomeric regions are gene rich and thus rearrangements involving these regions are very likely to have clinical relevance.

Various studies have been carried out using different molecular cytogenetic approaches to screen for subtelomeric abnormalities in mentally retarded individuals. A summary of this data shows that the overall rate of subtelomeric anomalies in MR is known in several disorders such as Cri du Chat syndrome, ±-Thalassaemia MR, Miller-Dieker, and Wolf-Hirschhorn syndromes. Fragile X syndrome also involves the subtelomeric region of the long arm of the X chromosome. The frequency of terminal deletions as causes of MR have led to the concept that subtelomeric deletions and rearrangements may cause MR. Recent studies have also shown that subtelomeric regions are gene rich and thus rearrangements involving these regions are very likely to have clinical relevance.

A review of these studies will be presented together with our initial results in the use of a FISH multiprobe technique for screening for subtelomeric

rearrangements in idiopathic mentally retarded individuals.

0-088

Screening for fragile X syndrome among mentally handicapped males and males with learning disabilities

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Fragile X is an X linked genetic syndrome recognized as the most common form of inherited mental retardation, caused by the absence or deficit of FMR1 protein (FMRP). In this pilot study, we evaluated a newly described immunocytochemical technique to identify patients with fragile X syndrome, based on the detection of FMRP in hair roots by a monoclonal antibody. Prior to testing the patients, several experiments were performed to optimize the technique. 26 males (1 known case of fragile X, 1 normal control, 24 subjects with mental handicap and other learning disabilities of unknown cause) were then tested for presence of FMRP in their hair roots. In order to confirm the validity and reliability of the antibody test, we compared the result to those obtained using the same technique to stain lymphocytes and to results obtained using the PCR technique. 15 hairs were scored for each patient and the percentage expression of FMRP in their hair roots was determined. 23 males showed normal FMRP expression in their hair roots with an average expression of 93.9%. 3 males (1 affected male) showed no FMRP expression. All males (except for the affected control) showed normal FMRP expression in their lymphocytes with an average expression of 93.1% and a normal product using PCR. The FMRP test merits further investigation on a larger sample size before any conclusions can be drawn as to whether it is more feasible and reliable as a screening tool compared to lymphocytes or PCR.

0-089

Molecular diagnosis of adult-onset Muscular Dystrophies

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Molecular diagnostic testing is available for facio-scapulo-humeral dystrophy (FSHD), Becker's Muscular Dystrophy and some of the Limb Girdle Muscular Dystrophies. Indications for testing are based on the clinical picture, family history, EMG confirmation of a myopathy and muscle biopsy findings indicative of dystrophic or myopathic changes. The clinical and immunohistochemical findings in these conditions frequently overlap giving rise to difficulties in diagnosis.

Out of 51 patients with a clinical picture of FSHD that were tested, 29 had a gene rearrangement at 4q35, with a Bln resistant fragment measuring less than 48kb. There was marked variability in the clinical features and muscle histology of FSHD and their correlation with the DNA results. The other 12 did not have a gene rearrangement at 4q35, and in 10 cases the results were doubtful. 7 of the latter cases had a family history of myopathy. Molecular testing for Becker's Muscular Dystrophy in 7 patients only confirmed the diagnosis in 2 patients. Two of the 5 patients who tested negative were also negative for FSHD. The cases with clinical, EMG and muscle biopsy indicative of a myopathy were presumed to be limb girdle muscular dystrophy, which is a large heterogeneous group of muscle disorders. There is a battery of specialised muscle biopsy histochemical tests that can help to differentiate between some of these disorders. There was considerable difficulty in having these tests performed, and most of the results were inconclusive because of histological artefacts caused by prolonged storage of the frozen tissues. We discuss the effectiveness of DNA testing for adult-onset muscular dystrophies from our experience over the past few years.

0-090

Huntington's disease in the Maltese islands and frequencies of trinucleotide repeats

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Huntington's disease is an autosomal dominant progressive neurological condition characterised by involuntary movements and dementia. It is caused by an expansion of trinucleotide repeats (CAG)_n in the Huntington gene. This paper reviews the 123 individuals who had DNA tests for Huntington's disease in the Maltese Islands over the period 1994 to 2003. The number of repeats in the individuals tested ranged from 10 to 64, and their relative frequencies were analysed. Two cases with unusually large expansions of over 60 repeats were juvenile cases, which occurred in boys with onset of symptoms in at puberty or adolescence and characteristic behaviour patterns. The correlation between age of onset of symptoms and the number of (CAG)_n repeats was analysed. The proportion of cases in which the number of repeats increased from one generation to the next in paternally transmitted cases was assessed. Our studies showed that whilst most cases can be traced through a number of generations, some cases with a confirmed negative family history may be the result of new mutations. The mutation in Huntington's disease is an instability of the number of (CAG)_n repeats that does not manifest symptoms for a number of generations while the gene is expanding, and until it exceeds a critical number of (CAG)_n repeats.

0-091

Ophthalmic training in the United Kingdom in an expanded Europe

P Hunter, *Consultant Ophthalmologist,*

King's College, London and Emeritus President,

Royal College of Ophthalmology, UK

This presentation will focus on the current issues relating to career structure and training in the field of Ophthalmology, as viewed by the outgoing President of the Royal College and one who has been closely involved in training developments. Recent changes and, in particular those relating to harmonisation amongst the various European countries, will be highlighted.

0-092

Diabetic Retinopathy:

Past, Present, Future

JG Diamond, *Tulane University Health Sciences Center, New Orleans, Louisiana, USA*

Diabetic Retinopathy has developed into a worldwide problem, causing catastrophic economic impact in the health arena. This comprehensive presentation will highlight the history, treatment and research endeavors that are attempting to thwart this devastating disease in its unrelenting attack on vision. The results of international studies on the success of various treatment modalities will be analyzed. Over thirty years of personal experience in the treatment of Diabetic Retinopathy will be discussed, including the latest, innovative diagnostic techniques, laser and surgical procedures, as well as experimental drugs.

0-093

Glaucoma in the Maltese Public Health Services

J Janula¹, D Mallia, M Francalanza² ¹*Department of Health Information and* ²*Dept of Ophthalmology*

For the period of 2002 to date, a formal glaucoma survey was launched at St. Lukes Hospital, Gozo General Hospital and Five Health Centres. The key objective of this survey is to establish the national prevalence and incidence of different types of glaucoma, to standardise examination and recording process of glaucoma patients and to follow up the outcome of these patients with regards to the various types of treatments offered so as to find a cost-effective way to control the disease. The main data source is the Standard

Glaucoma Form which is in use at all public health facilities which manage Glaucoma. The Standard Glaucoma Form was specifically designed for this survey and records details on visual functions, intraocular pressure, type of treatment in use along with patient identification. In addition, data was collected using the Schedule V database, the Surgical Operations Register and records of examinations of visual functions. Initial findings show that the basic data for all patients were recorded and one third of these patients had a detailed account of their glaucoma registered. There are more the 2500 patients suffering from glaucoma or intraocular hypertension attending public Health services. This paper gives the analysis of all collected data in relation to the grade of damage to visual functions, the use of medical and/or surgical intervention, the effectiveness of management and costs of different types of therapy. Effectives of our management was evaluated and possible improvement suggested.

0-094

Familial pseudoexfoliation in Gozo

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St Luke's Hospital, Malta

Aims: To describe the familial occurrence of pseudoexfoliation in three Gozitan families

Methods: Three families with a high concordance for pseudoexfoliation were identified. All members of the three families who agreed to participate were interviewed and underwent a full ophthalmologic examination. The pseudoexfoliation status was classified as present, absent or unknown.

Results: 53 individuals from three separate family probands were examined. 18 had definite evidence of pseudoexfoliation, 17 of them bilaterally and one showing only unilateral signs. Age was the main risk factor, with 18 out of the 20 individuals who were over the age of 60 years having pseudoexfoliation, while none of the 33 who were below the age of 60 had pseudoexfoliation. The male: female sex ratio was as 5:4. The expression of the disease varied in different families. Family I had a high incidence of both cataract and glaucoma, family II had mainly glaucoma while in family III all individuals had cataract but none had evidence of glaucoma. The first generation in all three of these families were deceased but their hospital and clinic records revealed that in all three families the father was affected and there was no evidence of maternal involvement

Conclusions: In all three families pseudoexfoliation appeared to be genetically transmitted as a late onset autosomal dominant trait of variable expressivity. Maternal transmission could not be confirmed in these families.

0-095

Comparative analysis of indications, per-operative procedures, complications and outcome in pars plana vitrectomy in two periods (Nov1993-Aug1995 and Jan2002-Dec2003)

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Background/Aims: To compare the indications, per-operative procedures, complications and outcome in PPV in two periods. The first period covers the first 103 eyes operated in Malta whilst the second period covers recent surgery on another 103 eyes. The pre-operative and post-operative difference in the visual acuity noted and plotted on scatterplots.

The indications for PPV have not changed between the two periods mentioned above. In fact significant surgery was carried out due to diabetic complications mainly tractional retinal detachment and persistent vitreous haemorrhage. Surgery for complex proliferative vitreoproliferation and rhegmatogenous retinal detachment with large and posterior tears was done. The latter indications were mostly done in the second period. One PPV was done to retrieve an IOL and to fragment a dropped nucleus after complicated phaco cataract extraction. The incidence of surgical procedures for persistent vitreous haemorrhage has dropped in the second period. Notwithstanding this fact, much more complicated cases with massive TRD were operated in the last period than the in the mid-90s. This is also reflected in the higher

rate of silicone oil insertion during the last period. Endophotocoagulation was carried out in every PPV done for TRD. Furthermore, fluid/air exchange rate increased compared to period 1.

With regard to post-operative complications, the incidence of cataracts increased. The incidence of glaucoma in PPV for vitreous haemorrhage was the same but higher in PPV done for TRD.

VA taken days before the operation and 3-4 months after the operation.

Results: The percentage of patients with the same or improved VA post-op compares well with studies done in other institutions.

0-096

A retrospective audit of primary rhegmatogenous retinal reattachment surgery

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Dept. of Ophthalmology, St. Luke's Hospital, Gwardamangia.

Setting: The Department of Ophthalmology, St. Luke's Hospital, Malta.

Purpose: To define the outcome of primary rhegmatogenous retinal detachment repairs and determine possible factors associated with failure.

Methods: The clinical charts of one hundred consecutive patients undergoing surgery for primary rhegmatogenous retinal detachment over a period of two years (June 2000 to May 2003) were retrospectively reviewed.

Results and Conclusions: The number of patients with persisting retinal reattachment after a single procedure was determined, as were causes of failure, operative and post-operative complications and the success of secondary procedures. These results were compared with those of similar published audits carried out in hospitals abroad.

0-097

A practical solution for medical problems associated with international adoptions

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The increasing problem of infertility and the low availability of suitable children for local adoption in Malta, has resulted in a significant demand for adoptions from overseas, amounting to 550 adoptions in 502 families from 1987-2002 (compared with 205 local adoptions in the same time period). Undoubtedly, these international adoptions have resulted in much happiness. However, they have also been associated with significant problems mostly involving legal, bureaucratic, financial and, not least, medical difficulties. The latter have included absence/incomplete/false medical data, erroneous medical examination, diagnosis and investigative reports, some of which have had significant implications for the child, the prospective family and public health at large. Indeed, in 1999, an internal audit confirmed an incidence of hepatitis B in up to 16% of adoptive children from particular countries (including those with HbeAg positivity and chronic active hepatitis on biopsy), as well as relatively high rates of other problems such as pervasive disorders (3%), HIV and others. In most cases prospective parents were completely uninformed and, in some cases misled, as to the implications of the medical problem in question.

Since 2000, the issue of parent education has been addressed in an ongoing

course of instruction based at the Family Welfare Unit (FWU). Concurrently, in an attempt to curtail the high incidence of associated medical problems in this cohort, a custom-designed questionnaire is sent to all international adoption agencies once a prospective child has been identified. This requests basic medical and personal details, as well as details of previous and current health, growth measurements, developmental milestones and immunisation. A list of investigative results including hepatitis B and HIV status (as mandatory) are required. The questionnaire is given legal weighting and the adoption process does not proceed until a satisfactory return is obtained by the FWU. Prospective parents are informed of the results and allowed to decide freely whether to proceed or not, except in those problem cases with public health implications whereby the FWU instructs the Commissioner of Police not to issue an entry visa.

Since its inception, five couples did not wish to proceed in lieu of a neurodisability (2 cases), severe growth retardation (2), and potential metabolic disorder (1) flagged up by the questionnaire. The number of problems decreased significantly from 23 medical and 12 misinformation problems out of 453 cases before the questionnaire, to 1 misinformation issue from 97 cases afterwards ($p=0.021$ for medical problems and $p=0.028$ combined). This exercise has therefore had a significant impact on the prospective families as well as on public health resources, and it is now part of the normal *modus operandi* for all international adoptions to Malta. Its routine acceptance is particularly timely as previous sources of adoptions from former east bloc countries have dried up, and couples are now seeking openings in sub-Saharan Africa where HIV infection is rife.

0-098

Type 1 diabetes mellitus in Maltese children

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A retrospective analysis of hospital records was performed to study the initial presentation of type 1 diabetes mellitus and its outcome in Maltese children over the last 20 years.

A total of 58 children (31 males, 27 females), under the age of 15 years, were identified as having presented with type 1 diabetes mellitus in Malta during the period 1982 – 2002, but data was incomplete for 6 patients. 25 patients were admitted to hospital with diabetic ketoacidosis and were managed by intravenous fluids and insulin. Another 27 patients did not present in ketoacidosis, and of these 19 were admitted to hospital and given intravenous insulin, 3 were admitted to hospital but only given subcutaneous insulin, while 5 were managed in the community with subcutaneous insulin.

Five year summation showed a sharp rise in the number of cases, from 4 cases in 1986 – 1990, to 19 cases in 1991 – 1995, to 32 cases in 1996 – 2001. Analysis by quarter of presentation showed significant seasonality, with a peak in November. 41.1% of patients presented with a concomitant infection, in most cases affecting the upper respiratory tract.

During the whole 20 year period under study, there were no deaths and no serious long-term complications were reported following the presenting episode.

0-099

Amplatzer ASO device closure of secundum atrial septal defects and patent foramen ovale in Malta

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Atrial septal defects (ASD) are congenital deficiencies in the interatrial

septum, and are most commonly found in the fossa ovalis. These lesions comprise 10% of all congenital heart defects. Haemodynamically significant defects cause pulmonary hypertension in later life unless closed surgically or by interventional catheter. Patent foramen ovale (PFO) is found in almost 50% of cryptogenic strokes and transient ischaemic attacks (TIA). In these individuals, the recurrence risk for stroke is 2-4% per annum, and for TIA the risk is 1-2% per annum. Medical treatment is not very efficacious. Interventional catheter closure is now possible, and a recent study with a mean of 15 months of followup has shown that device closure of a PFO in individuals who have sustained a neurological event resulted in no strokes and a 1.7% per annum risk of TIA. In this paper, we document over 35 ASD/PFO local closures using the Amplatzer ASO device and the Gortex Helix device. The technique of closure is described using still pictures and animations taken locally during such a procedure. To date, we have not had any complications.

Braun MU, Fassbender D, Schoen SP, Haass M, Schraeder R, Scholtz W, Strasser RH. Transcatheter closure of patent foramen ovale in patients with cerebral ischemia. *J Am Coll Cardiol* 2002; 39: 2019-2025.

Grech V, Felice H, Fenech A, DeGiovanni JV. Amplatzer ASO device closure of secundum atrial septal defects and patent foramen ovale. *Images Paediatr Cardiol* 2003; 15: 42-66.

0-100

A comparison of clinical paediatric cardiovascular examination with echocardiography

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Objective: To compare the clinical acumen of paediatric cardiovascular examination between various hospital paediatrician grades.

Design: Prospective data collection and comparison of clinical and echocardiography findings on referrals for echocardiography.

Setting and patients: All paediatric patients (birth - 14 years) referred for echocardiography, in a regional hospital catering for the island population of Malta. Three paediatricians with tertiary training in this technique carried out echocardiography.

Main outcome measures: Pre-echocardiography clinical diagnoses were compared with echocardiography results according to grade of referring hospital doctor (ranging from houseman to consultant). Both normal and abnormal hearts at echocardiography were included.

Results: Echocardiographers had the highest clinical accuracy and the highest number of attempts at reaching a clinical diagnosis. Accuracy and attempts at diagnosis decreased with decreasing hospital doctor's grade (from consultant to houseman). Ventricular septal defect was the most easily diagnosed lesion. Atrial septal defect was very easily misdiagnosed as pulmonary stenosis.

Discussion: Echocardiographers examine all children prior to performing an echocardiogram and therefore have the most experience in paediatric cardiovascular examination. This is reflected in more attempts at reaching a clinical diagnosis and a higher accuracy. The next highest degree of experience is at consultant grade, decreasing down to housemen.

0-101

How reliable is axillary temperature measurement?

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Aim: To assess whether axillary temperature measurements reliably reflect oral/rectal temperature measurement methods.

Methods: This observational study compared paired axillary-rectal and axillary oral temperatures in a general paediatric ward with the participation of 225 children aged <4yrs and 112 children aged between 4 and 14yrs. 3329 paired observations in total were made with a mean of 10 for each admission.

Results: Changes in oral-rectal and axillary temperatures correlated significantly ($p < 0.0001$). However, axillary temperature measurements were significantly lower than both oral (mean -0.56°C SD 0.76°C) and rectal temperature measurements (0.38°C SD 0.76°C). Ninety-five percent of axillary measurements fell within a $2.5-3^{\circ}\text{C}$ range around respective paired oral/rectal measurements. The mean difference increased with increasing temperature, and was 0.4°C at low body temperatures, and over 1°C with a fever of 39°C . Neither seasonal fluctuations nor the amount of clothing worn influenced this difference.

Discussion: This is of clinical significance since axillary temperature measurements are often used as alternatives to the core temperature. These findings make it almost impossible to introduce a correction factor. Indeed, several studies have refuted the reliability of the axillary site for temperature measurement.

Conclusion: Axillary temperatures in young children do not reliably reflect the oral-rectal temperature and should thus be interpreted with caution.

References: Falzon A, Grech V, Caruana B, Magro A, Attard-Montalto S. How reliable is axillary temperature measurement? *Acta Paediatr* 2003; 92: 309-13.

0-102

An audit of emergency investigations in children admitted with mild gastroenteritis

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Mild gastroenteritis (5% dehydration) accounts for a significant proportion of all paediatric admissions. To date, these admissions are routinely investigated with blood counts, electrolytes, urea, creatinine and stool cultures. Other, non-routine investigations are carried out as clinically indicated. We retrospectively analysed all investigations carried out on sequential admissions with this diagnosis ($n=45$) over a one month period (July-August 2000). Values outside normal limits were found in 27 (71%) of patients who were investigated. These included minor abnormalities (e.g. marginally elevated white count or low haemoglobin) in 58.8% of blood counts taken, electrolyte dysfunction in 42.1%, a low urea in 2.6% and blood glucose levels just below the normal range in 12.5% of samples. 17.6% of stool cultures were positive for bacterial pathogens and 22.2% were positive for rotavirus. Despite the high percentage of abnormal results, remedial action was only taken in 6 (37.5%) patients with abnormal electrolyte results, specifically, hypokalaemia and/or hyponatraemia, where additional potassium and/or sodium supplements was added to their intravenous rehydration therapy, respectively. All other investigative results had no bearing on patient management and were not followed up. We conclude that in children with mild uncomplicated gastroenteritis, only electrolytes need be taken routinely on admission, a practice that will translate into a cost saving of a considerable amount of Maltese liri per annum.

0-103

Defaulting from the waiting list

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Low priority operations can end up having waiting lists that run into years. In an attempt to reduce the waiting list, patients who had been on waiting list for uncomplicated varicose veins for between eighteen months to three years were sent for to undergo their surgery. Of the 60 patients that were given an appointment, only 29 patients ended up having the operation. Of the remaining patients 4 procedures were cancelled for medical reasons and another 4 had a lesser procedure. The remaining cases, 23 patients (38%), were defaulters. This high incidence of defaulters can falsely inflate the waiting list giving a high mean waiting time. It can also result in unnecessary loss of valuable out patient and waste of operating time. This study looks at the reasons for these defaults and the way the problem can be rectified.

0-104

The application of otoacoustic emissions in detecting carriers of autosomal recessive non-syndromic hearing loss

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Objectives: To determine whether sub-clinical auditory anomalies are present in carriers of autosomal recessive non-syndromic hearing loss (ARNSHL) and whether such changes can be detected using otoacoustic emissions (OAEs), a test of outer hair cell integrity. The possible association of any OAE abnormalities and the presence of mutations in the *GJB2* gene (Cx26) will be explored.

Methods: The study was designed as a case-control study. OAEs were recorded in 10 obligate carrier parents who were positive for mutations of the Cx26 gene and 10 presumed carrier parents from families who satisfied criteria of ARNSHL but did not screen positive for the *GJB2* gene. These were compared to 10 age and sex matched controls. In all subjects OAEs, including transient OAEs (TEOAEs), distortion product OAEs (DPOAEs), and a test of medial olivocochlear (MOCB) efferent suppression, were carried out.

Results: OAEs abnormalities were detected for both carrier groups. TEOAE anomalies were more predominant in those parents that did not carry mutations for the Cx26 gene. Of particular note is the finding of high prevalence of absent TEOAE responses for the mid and high spectral bands for both carrier subgroups. DPOAE data again showed greater significant reductions for the Cx26 -ve carriers especially in the mid and high frequency bands. Finally, the MOCB efferent suppression test detected significant reduced suppressions only for those parents that did not carry mutations in the *GJB2* gene.

Conclusions: The study provides further evidence for the value of OAEs measurements in unveiling sub-clinical cochlear dysfunction in autosomal recessive carriers of hearing loss. The feature of high OAEs absent responses at 2.0 and 4.0 kHz shows susceptibility of the mid and high frequency regions. Further evidence of genetic heterogeneity for those carriers that carried no mutations for the *GJB2* gene, was shown by the finding of reduced MOCB efferent suppression test in these carriers only.

0-105

Hyposmia as a predictive value of nasal polyposis

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Allergic rhinitis that is not responsive to intranasal steroids may progress to nasal polyposis. It is desirable to recognize the presence of polyps as early as possible so as to manage appropriately and prevent progression to gross polyposis with worsening of quality of life. Increasing nasal obstruction, catarrh, recurrent sinusitis and hyposmia are all symptoms of worsening disease.

To elucidate whether hyposmia is an early indicator of nasal polyp formation a prospective observational study of patients presenting to the Otorhinolaryngology clinic was performed. Ninety-one patients with a history of nasal obstruction were included in the study. They were asked to fill in a visual analogue score on their nasal symptoms including hyposmia. They were then examined endoscopically with staging of any polyps present plus identification of nasal septal abnormalities.

Twenty-six patients had nasal polyps 24 (92%) of which had a hyposmia score of 5 or more; 24 patients had mucosal swelling, 14 (58%) having a hyposmia score of 5 or more; 41 patients did not have any mucosal oedema, 19 (46%) having a hyposmia score of 5 or more.

It is proposed that the symptom of hyposmia has a high correlation with polyp formation and is a useful indicator for more aggressive treatment.

The detailed results and conclusions of this study are presented.

0-106

Experience with video-assisted thoracic surgery (VATS) in children

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BACKGROUND: VATS (Video-assisted thoracic surgery) in children may be used as a diagnostic and therapeutic modality. The aim of this study was to identify the patient population in which we performed VATS and determine the efficacy and complications of the procedure with respect to a wide range of diagnoses in order to elucidate any advantages VATS might confer to the overall management.

METHODS: A group of 28 patients consisting of 16 boys and 12 girls with an age range of 14 months-16 years underwent VATS using three ports. This was performed for 11 congenital lesions, 9 tumours, 3 pectus bar insertions, 2 bilateral sympathectomies, excision of a tuberculous cavity, hemidiaphragmatic plication and pleurodesis.

RESULTS: VATS was successful in 24 patients with operating times ranging from 20 to 180 minutes. Four patients required conversion to open thoracotomy because of inadequate lesion identification in 2, difficult dissection of pleural adhesions in one and anaesthetic concerns in another. Intercostal drains were used in 6 patients (25%) and were removed from 1 to 18 days postoperatively. Postoperative analgesic requirements were managed in most patients by a combination of local anaesthetic and oral medication. Five patients were managed by an epidural infusion. There were no immediate postoperative complications and hospital stay ranged from 24 hours to 19 days (median 1 day).

CONCLUSION: In conclusion VATS is a safe and effective procedure. In the vast majority of patients the use of narcotic/epidural analgesia is unnecessary, intercostal drainage is not required and as a result, length of hospital stay is reduced. The procedure also leads to better cosmesis. We feel that VATS may be used as the modality of choice for extralobar sequestrations and selected intralobar lesions, foregut duplication cysts, sympathectomy, tumour biopsy, diaphragmatic eventration and to assist with the insertion of pectus bars. Careful preoperative imaging allows suitable patient selection.

0-107

The role of atopy in Maltese patients with chronic rhinitis

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The global prevalence of allergic rhinitis has been on the increase and recent clinical experience in Malta has shown a similar trend.

The aim of this study was to investigate the role of atopy in 415 patients presenting with rhinitis of at least three months' duration, and to identify the common allergens responsible. Presenting clinical features, past history and family history of seasonal allergic symptoms, exposure to cigarette smoking, pet ownership and occupation were analysed. All patients were skin tested for common allergens.

55% of patients were atopic, the main allergens responsible being house dust mite, cat dander and grass pollen. Rhinorrhoea and sneezing were significantly more common in atopic patients, who were more likely to have a past history and family history of seasonal asthma, eczema or rhinoconjunctivitis. Skin test-negative patients with idiopathic rhinitis were more likely to be female and tended to present a decade later.

Differentiation between atopic and idiopathic chronic rhinitis may be helpful in the clinical setting in order to help predict response to treatment.

0-108

Innovative corrective osteotomy

procedure in Paget's Disease of long bones

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Paget's Disease of Bone can be a cause of severe morbidity amongst the elderly population. Deformity of the long weight-bearing bones can lead to impaired gait and other biomechanical alterations. These result in joint overload and premature Osteoarthritis and ultimately loss of mobility. The literature proposes various procedures advocated to rectify this deformity but few obtain acceptable and reproducible results.

In this study 8 patients were treated with an innovative method involving corrective osteotomies stabilised with intramedullary locking nails. The outcome was assessed utilising the rating system of Neer, Grantham and Shellen. The patients were reviewed over a three-year period and had excellent functional and cosmetic outcomes with satisfactory bone healing.

0-109

Scoliosis: An epidemiological review in Malta

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Our study of adolescent, idiopathic scoliosis in Malta comes as close as possible to a complete epidemiological statistic in any one population.

The aim of the study was to determine the incidence, sex distribution, age of diagnosis, preponderance of curve characteristics and any relationship this may have with handedness.

A total of 611 patients suffering from scoliosis were reviewed. 344 of these had idiopathic curves. We have shown that in 2002, in children aged between 10 and 16 years and having a Bunnell angle of 5° , the incidence of idiopathic scoliosis in females was 0.69% and 0.15% in males. The male to female ratio was 1:5. We also found that the age of diagnosis was earlier in females.

Close to half of the referrals came from school screening, and a quarter were first identified by the immediate family. This raises the issue of importance of school screening and of public awareness of this condition.

The incidence of left handedness in 10-16 year olds was found to be 10%. The handedness of the scoliotic patients studied, as well as the laterality of their curve were noted. The data suggests that handedness does seem to have a bearing on the curve characteristics; left-handed individuals had a higher predisposition to develop a left thoracic or a left thoracolumbar curve.

0-110

Using APACHE II scoring to monitor present and future ITU / HDU performance

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Objective: To carry out a pilot study to observe trends in the management of patients in intensive care and high dependency units with the aim to introduce APACHE II scoring in the units.

Methodology: The study was carried out over two weeks from the 11th to the 26th November, 2002. All patients admitted and discharged between these two dates were included. Data collection was done using a specific form but the actual score was not included in the bedside scoring form. This avoided any influence of the scoring system on decisions regarding management. The data collected was the worst variable for 12 physiological variables over 24 hours.

Using APACHE mortality predication equation, a value for risk of death before discharge from hospital was calculated for each patient. Then, ITU / HDU performance was assessed using the standardised mortality ratio (SMR).

Conclusion: This pilot study demonstrates the feasibility of employing mortality prediction models in ITU / HDU. About half of short term admissions to ITU had an estimated mortality < 10% and so can be safely

admitted to HDU. Clinical assessment of severity of illness correlated well with APACHE II scores. SMR <1 obtained for most patients demonstrates performance better than predicted, but for medical admissions, SMR 1.0471 indicated performance marginally worse than expected. However, the numbers are too small. A larger study is now being undertaken, all patients admitted over a nine month period will be included. This will serve as a baseline estimate of performance against which performance in future years may be measured.

0-111

Recent advances in the management of the critically ill septic patient

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Our Intensive Therapy Unit admits a wide variety of patients with Severe Sepsis leading to end-organ dysfunction including Acute Respiratory Distress Syndrome (ARDS), acute renal failure and bowel dysfunction. The mortality associated with these conditions is still high. Ongoing research has improved our understanding of the pathophysiological pathways in severe sepsis leading to the development of targeted "bullets" directed at specific pathways in the sepsis cascade. However such attempts have not been successful in improving outcome and the care of these patients remains primarily supportive.

Over the last few years several landmark studies relating to the management of the critically ill patient have been published. The PROWESS study¹ describes a targeted therapy for septic patients using activated Protein C. The treatment group had a significant reduction in mortality as compared to the control group.

The other landmark study² relates to the effect of tight control of blood glucose in surgical patients admitted to ITU and outcome. Can this data be extrapolated to the medical ITU patient?

Other recent evidence regarding the use of renal dose dopamine³ and dialysis therapy in critically ill patients with acute renal failure will also be reviewed.

The ARDS network⁴ trial and recent controversies surrounding this landmark study on the best ventilator strategies in ARDS and ALI will be discussed.

Finally a brief overview of statistics relating to our Intensive Therapy Unit will be presented.

Efficacy and Safety of Recombinant Human Activated Protein C for Severe Sepsis

Bernard G. R., et al (PROWESS) Study Group *N Engl J Med* 2001; 344:699-709, Mar 8, 2001.

Intensive Insulin Therapy in Critically Ill Patients

Van den Berghe G., et al *N Engl J Med* 2001; 345:1359-1367, Nov 8, 2001.

Low-dose dopamine in patients with early renal dysfunction: a placebo-controlled randomised trial. Australian and New Zealand Intensive Care Society (ANZICS) Clinical Trials Group.

R Bellomo, et al *Lancet*, Dec 2000; 356: 2139-43.

The Acute Respiratory Distress Syndrome Network. . *N Engl J Med*. 2000;342:1301-1308.

0-112

The development of a first Maltese Pain Questionnaire

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Pain assessment methods based on verbal response have a number of attractive properties. A consideration of the demographics of Malta indicates that a substantial fraction of the population would benefit from the development of a Maltese-Language pain assessment tool. The McGill Pain Questionnaire (MPQ), a widely used pain assessment tool available in several languages, was used as a model.

An inventory of Maltese pain descriptors was identified by a survey

conducted amongst doctors, supplemented by a dictionary translation of the MPQ terms. The proposed descriptors thus identified were then presented to a heterogeneous population to assess them for acceptability as pain descriptors. Those descriptors judged acceptable by a large enough proportion of the population were then categorized into subclasses using the English MPQ as a model. Concurrently, magnitude values for the Maltese pain descriptors were established by direct scaling of the descriptors against a 100mm visual analogue scale.

The vocabulary initially identified and confirmed as acceptable as pain descriptors was similar in size to that observed in several other languages. Some difficulty was encountered in classification of the descriptors into subclasses, perhaps suggesting that the MPQ subclass structure may require some modification for use in a Maltese context, a phenomenon also reported in some other languages. Differences were also noted in magnitude scores given by pain patients and laypersons, with possible implications on the most appropriate scale values to use.

Criteria for selecting descriptors to retain in each MPQ class were established, resulting in a parsimonious set of descriptors while avoiding the difficulties of different magnitude estimates by different assessors. Several MPQ classes are reduced to a single descriptor by this procedure which may result in decreased sensitivity of a classical form MPQ. An alternative form, partly based on the Short-Form MPQ is proposed which avoids a number of these difficulties.

0-113

Sedation for endoscopic procedures

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The increasing amount of various endoscopic procedures in recent years raises concerns about the adequacy and safety of current sedation techniques.

Many procedures can be done without any sedation. However many people would avoid endoscopy especially repeat procedures if sedation is not offered. When patients move, gag or become unduly agitated they render the procedure dangerous to themselves, the operators and expensive equipment. Prolonged attempts even if rewarded with success do not make for a smooth running of the session. Proper sedation minimises cardiovascular and respiratory disturbances by subduing anxiety and pain.

With current cost consciousness, the services of anaesthesiologists are perceived to be unacceptably expensive. This gives rise to situations where the endoscopist is also the same physician which gives the sedation. Formal physician training in sedation techniques is unfortunately non-existent.

The target for sedation is a still conscious cooperative patient with minimal anxiety, minimal pain and discomfort and amnesia for the event. As the endoscopy proceeds the patient's sedation may 1) either deepen to dangerous levels giving rise to hypoxia and hypotension or 2) lighten to give a restless uncomfortable patient.

Full patient monitoring with a highly trained person to react to changes in the patient's condition must be at hand with adequate equipment to preempt dangerous situations.

The situation is similar in many ways with the experiences of Sedation in Dentistry, from which lessons should be learnt to avoid repeating the same mistakes.

Ref: Safe Sedation Practices for Health Care procedures in Adults. (A report of an Intercollegiate Working Party chaired by the Royal College of Anaesthetists (2000).

0-114

Cardiovascular optimisation for non-cardiac surgery

E Melillo, Department of Anaesthesia, Malta

Despite the trend towards more aggressive surgery in sicker patients there is still considerable debate about how to manage these patients. The American College of Cardiology and the American Heart Association Task Force updated their guidelines in 2002. Patients and procedures are stratified according to risk and, depending on functional capacity, a comprehensive

algorithm has been devised to help clinicians in the preoperative work up. The indications for pre-operative non-invasive and invasive testing are discussed. There is mounting evidence that perioperative β -blockade, more than any other of the proposed pharmacological therapies, affords protection against myocardial ischaemia resulting in reduced mortality. In spite of this seemingly overwhelming evidence, β -adrenergic antagonists are still underused in current clinical practice, even though the proof of the concept of β -blockers in cardioprotection is now also established in patients with co-existing disease states that were traditionally considered as contraindications. The indications for perioperative β -blockade and a possible new role in these guidelines are presented.

0-115

The Paediatric Advanced Life Support (PALS) Provider Course in Malta 1999-2003

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The idea to set up a Paediatric Advanced Life Support (PALS) Provider Course in Malta originated in early 1999 as a result of contacts with Dr Bob Bingham, then Chairman, Resuscitation Council, UK and Ms Sheila Simpson, Resuscitation Services Manager at Great Ormond Street Hospital for Sick Children, London, UK. Both were very keen on bringing over to Malta a faculty of instructors to teach on a PALS course.

The plans were discussed with Dr Tanya Esposito, FRCA and a certified PALS instructor and Dr Simon Attard Montalto, Director of Paediatrics who both agreed to form the PALS-SLH Organising Committee. Further enquiries with the Director of Anaesthesia and the Director of Institutional Health secured the availability of certain equipment and funding to pay for airfares and accommodation for the visiting instructors.

The next important decisions were the selection of the course venue and the setting of the Registration fee. Once the call for applications was launched the biggest problem became the candidates' selection process. We agreed a strategy whereby we planned to train the more senior personnel first so that from among them we would eventually build a pool of instructors.

The course has been run four times so far producing almost a hundred PALS providers. All the courses have been overwhelmingly over subscribed. Our success rate is among the highest, compared with the UK and we have a good Instructor Potential output. Out of the latter, five have now got instructor status and one is an Instructor candidate. Hence our long term strategy of eventually becoming self-sufficient in terms of instructors is on track.

We attribute our success to three main factors 1. The qualification awarded is the internationally recognised PALS provider certificate as awarded by the UK resuscitation Council under licence from the American Heart Association; 2. The good reputation the course has earned over the years as a result of the scrupulous observation of the PALS course rules and attention to detail; and 3. The relatively cheap price at which it is offered to Maltese candidates.

0-116

Treating Rheumatoid Arthritis yesterday and today: local experience with biological therapy

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Rheumatoid arthritis is a chronic, systemic, autoimmune disease that is characterised by progressive destruction of joints and by impairment of functional capacity, together with a significant increase in morbidity and mortality. Treating patients with the traditional pyramid-based approach did not have any appreciable impact on the disease: within 20 years 50% of the patients were either dead or severely disabled¹. Over the past few decades there has been a better understanding of the pathophysiology of inflammation in general and of rheumatoid arthritis in particular. As a result, treatment of rheumatoid arthritis has evolved to early and aggressive

use of traditional disease-modifying drugs. Besides, the discovery that that pro-inflammatory cytokine tumour necrosis factor alpha (TNF- α) is a key mediator in a number of inflammatory disease, including rheumatoid arthritis², has led to research which culminated in the development of antagonists to this mediator. TNF- α inhibitors have now been licensed for use in rheumatoid arthritis for the past five years, and their use has been extended to a number of other chronic inflammatory disorders. This paper describes the evolution of treatment of rheumatoid arthritis leading to the development of biological therapies as well as the local experience gained in the use of one of these agents.

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2. Maini RN. The Role of Cytokines in Rheumatoid Arthritis. *J R Coll Physicians Lond*. 1996. 30(3):344.

0-117

A Survey of patients with systemic sclerosis in a Maltese population

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Systemic sclerosis is a connective tissue disorder where the skin undergoes thickening and induration to a varying degree and extent. Unfortunately, the disease is not only skin deep and is characterised by diverse internal organ involvement that largely determines the morbidity and mortality associated with this condition.

A survey has been conducted on patients with systemic sclerosis attending our unit at the Rheumatology Clinic/St Luke's Hospital. The patients' characteristics including demographic data, autoantibody profile and various clinical manifestations have been analysed. An attempt has been made to correlate certain characteristics and clinical manifestations with particular disease subsets and specific antibody profiles.

A total of 32 patients have been analysed. The male/female ratio of this group of patients is 1: 9.6. The average age at diagnosis was 45.7 years, 48.6 years for males and 45.4 years for females.

Of the 2 major disease subtypes of systemic sclerosis, 27 patients (84%) suffered from the limited form whilst 5 patients (15.6%) showed features of the diffuse form of this disease.

Regarding the autoantibody profile of this population of scleroderma patients, antinuclear antibody was positive in 84.4%, anticentromere antibody in 31.2%, antiScl 70 in 25%, anti Ro +/- anti La in 12.5% and the rheumatoid factor in 6.25%. The anticentromere antibody was present exclusively in patients with the limited form of the disease.

The major symptoms were Raynaud's phenomenon 97%, heartburn 77%, dysphagia 35%, dyspnoea 29%, arthralgias 67% and dry mouth 50%. Prominent clinical signs included skin sclerosis 100%, telangiectasia 84%, digital pitting scars 52% and bibasilar pulmonary inspiratory crackles 39%.

0-118

A novel classification of immune myasthenia based on mechanism of disease

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Biochemical defects at the neuromuscular junction may result in myasthenia characterized clinically by weakness with fatiguability. A number of molecules may be targeted by genetic, toxic as well as immune attack resulting in distinct forms of myasthenia. Immune-mediated myasthenia (IM), in turn, demonstrates heterogeneity in the mechanisms of disease in individual patients. Whereas, in most individuals with IM, the main target is the acetylcholine receptor (AChR), this does not represent the only potential target to the immune system. Striated muscle antibodies (Abs), which include Abs to titin, also appear to be important pathogenically in a subgroup of AChR Ab-positive patients. In addition, approximately 15% of patients do not have detectable AChR Ab. In 1980 Compston *et al* discussed

the heterogeneity of IM and proposed a classification based on age of onset and thymic pathology that subdivided patients into three groups, those with early onset those with late onset and those with thymoma. A current working classification of IM, demonstrating considerable heterogeneity of subgroups, includes two additional subgroups: those patients with purely ocular IM and those with AChR Ab-negative IM. We have developed a simplified classification of IM based on the mechanism of disease as identified by targets of the Abs detected. The types of immune myasthenia presently characterized by known Ab targets segregate into three groups. These include Type 1, in which the muscle target is the AChR only, Type 2 in which titin Abs are present in addition to AChR Abs, and Type 3 in which muscle specific kinase Abs are present in the absence of AChR Abs. A fourth group, Type 4, includes patients in whom the immune target(s) is unknown. This classification facilitates the institution of specific treatments by identifying subgroups of patients with distinct etiologies, mechanisms of disease, and prognoses.

0-119

Maltese physicians' knowledge and attitudes towards the use of morphine in cancer pain: a descriptive study to identify possible barriers to better cancer pain relief in Malta

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Globally, Cancer Pain is an ever-growing problem whilst its undertreatment remains an issue that instigates challenging research worldwide. In Malta the magnitude of the situation and contributing factors has only started to be exposed. This study was performed to identify barriers to cancer pain relief and to describe physicians' knowledge and attitudes in the use of morphine. A questionnaire was sent to a cross-sectional sample of Maltese physicians. Responses from 103 physicians were analysed. Statistically significant correlation between the two main variables (knowledge and attitude) and other factors were extracted. Maltese physicians have high expectations of pain relief whilst acknowledging that the actual situation is distant from such expectations. The lack of pain specialist services was identified as the commonest barrier to cancer pain relief. Attitude towards the use of morphine was found to be predominantly positive whilst knowledge was found to be average in 63% of respondents and good in 18.4%. Knowledge was found to be highest in those with more than ten years in clinical practice. Those between 30 and 39 years of age were found to possess the highest scores in knowledge and attitude. Attitude was found to influence prescribing practice, which is affected by the impact of procedures regulating morphine prescribing. Overall attitude is positive in all specialities although further analysis showed that the majority of those having negative and low average attitude scores are in general practice. Knowledge too was found to be predominantly low or average in this speciality. Postgraduate activities positively influence the maintenance of good knowledge. Use of morphine in cancer pain and morphine side effects are the categories wherein most respondents (>52%) showed high knowledge scores. Knowledge within these two categories was found to have a significant influence on attitude. This study has exposed the current situation and suggests that there are problems in the field of cancer pain relief and morphine use on the Maltese Islands. These difficulties can be specifically targeted through educational and services initiatives.

0-120

Parathyroid scintigraphy in the localisation of parathyroid adenomas – 4 year experience in St Luke's Hospital

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Hyperparathyroidism is a relatively common clinical entity that may present in a variety of ways, often subtle and non-specific. A retrospective analysis of twenty-four patients who underwent parathyroid surgery following

preoperative imaging (nuclear medicine, ultrasound but also cross-sectional imaging in a minority of cases) between December 1999 and July 2003 was performed. Intraoperative surgical and histological findings were compared to the results obtained after nuclear parathyroid imaging (using Tc99m SESTAMIBI) and conventional ultrasonography of the neck. Tc99m-MIBI scans were found to be much more sensitive than ultrasound at picking up parathyroid adenomas (83% vs 40%). It is a particularly accurate method in the presence of retrosternal / ectopic glands. The rates of false-positive and false-negative information were comparable, but still better for nuclear parathyroid scanning. Besides, ultrasonography led to a greater number of equivocal results. Cross-sectional imaging was very poor at picking up abnormal parathyroid tissue.

In conclusion, nuclear medicine should be the modality of choice in the localisation of parathyroid adenomas. Other imaging modalities should be used in specific circumstances only, not for primary diagnostic purposes. There is a concern that the local service is still under-utilised, especially if one looks at the current prevalence rates of hyperparathyroidism abroad.

0-121

Age related incidence and other epidemiological aspects of myelodysplastic syndromes in Malta: a 13 year study (1990 – 2002)

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Introduction: The myelodysplastic syndrome (MDS) includes a diverse group of clonal and potentially malignant bone marrow disorders characterised by impaired maturation of haemopoietic cell lineage. The morphology of the cell lines is characterised by dysplastic features in all or some lines. There exists a great diversity in presentation of this syndrome, manifesting from isolated but persistent mild anaemia to a more progressive and aggressive anaemia state that accumulates excess blasts in the marrow and leads to a fatal AML. Although most haematologist perceive a raising prevalence and incidence of MDS, reliable data on these disorders are largely lacking. Nevertheless, it became clear that MDS is at least as common as acute myelogenous leukaemia (AML).

Aims: Establishing the age related incidence and other epidemiological aspects of MDS in Malta from year 1990 to 2002.

Study: Cases of MDS diagnosed at Haematology Department of St. Luke's Hospital between 1990 and 2002 to assess incidence rate and other epidemiological aspects in comparison with incidence rate of AML diagnosed at the same period of time.

References: Haematologica 1998; vol. 83, no1, J Haematology 1994; 87:743-5, Seminars in Hematology July 2002; vol39, no 3, Blood Journal, Cancer Control 8(1): 79-102, 2001, Web pages: www.medscape.com MDS epidemiology – incidence Geriatric&Aging, Statistics, National Cancer Institute, Division of Cancer Epidemiology, The Myelodysplastic Syndromes G.J. Mufti & D.A.G. Galton & others.

0-122

Effects of raised ambient pressures on erythrocyte deformability

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It is known that absorption of nitrogen at high partial pressures into the phospholipid bilayer membranes of cells causes these membranes to become thickened. Thus, it can be hypothesised that these thickened membranes are less flexible and cause the cell to be less easily deformed.

For most cells, deformability is not important to their correct functioning. However, RBCs must be able to pass through the smallest capillaries in the body, which are of a smaller diameter than that of the RBC itself. They must therefore be able to bend and elongate to pass through, and thus a change in deformability may have a profound effect on the perfusion of the tissues involved.

The purpose of this study is to demonstrate that there is a significant

difference between the deformability of erythrocytes in subjects breathing air at 1 Atmosphere and those breathing air at 5 Atmospheres. The pressure of 5ata was chosen as it gives a sufficiently high partial pressure of nitrogen, to produce a significant effect on the RBC.

The deformability of the RBCs was compared using the 'Index of Filterability' method (Pimlott and Cross). This index is calculated by dividing the average time taken for a known volume of a standard blood suspension to pass through a 3mm polycarbonate membrane filter, by the time taken for the same volume of phosphate buffered saline. The original equipment design for measurement of red cell deformability was developed at Sheffield University, and modified for use in a recompression chamber by the author.

12 subjects had their RBC deformability measured at atmospheric pressure and again during a chamber exposure at 5ata. The results showed that the erythrocytes become more deformable at pressure. It seems likely that this increase in deformability is due to as yet unidentified changes in the cell membrane.

0-123

Geographical differences in male: female ratios at birth

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Demographics in several industrialised countries have shown a decline in male births in the latter half of the 20th century from the expected ratio of 0.515 (M/F=males/total births-live). We analysed trends in M/F over the period 1890-1995 in Malta, and Western European countries for the period 1990-1995. There was no decline in Malta over the period 1916-1995. The ratio was higher than expected (n=151766, ratio=0.517). Moreover, during the period 1890-1899, the ratio was even higher (0.523 p=0.004). European births showed a much higher ratio of male births in southern Europe than in the north (p<0.0001)¹. We then analysed a WHO dataset for the 2nd half of the 20th century (n=558,103,145) and this gradient was confirmed for Europe but reversed in North America, i.e. significantly more males were born in southern latitudes in Europe, than in northern latitudes while the converse was found in the North American continent (both p<0.0001). Less males were born than expected in both continents (total male birth deficit 1,193,407 live births)². There was a significant overall decline in M/F in both continents except for Mediterranean countries, where overall, M/F rose³. No reasonable explanation/s for the observed trends have been identified.

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Grech V, Vassallo-Agius P, Savona-Ventura C. Sex ratio at birth exhibits large variations with latitude, with different gradient directions in Europe and North America. BMJ 2002;324:1010-1011

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0-124

Current breastfeeding trends in Malta

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Although the scientific and economic benefit in support of breastfeeding over formula feeds is overwhelming, Malta retains one of the lowest rates for breastfeeding in almost all developed and several under-developed countries. Encouragingly, the percentage of infants given a breast feed within 30 minutes of birth has increased steadily from 28% in 1999 to 49%

in 2003. In addition, the rate of breastfed infants at the time of discharge from St. Luke's Hospital has also improved: from just 45% of Maltese mothers breastfeeding (exclusively or mixed feeding) in 1995, to 64% in 2000. Nevertheless, this improvement was not sustained and only 18% of mothers who gave birth in Malta were still exclusively or part-breastfeeding 9 months after delivery in 2000. Of greater concern is the apparent slowing of this improving trend with a decrease to 61, 59 and 63.5% total/partial breastfeeding at discharge from hospital in 2001, 2002 and the first half of 2003. Although the percentage of mothers who have opted for bottle feeding from the moment of birth until discharge has not altered from 34.4-39.9% between 1999-2003, there has been a shift from those opting for mixed bottle/breast feeding to exclusive breastfeeding from 49 to 55% in the same time period. Finally, when reviewed by geographical area over the period 2000-2003, the lowest rates of breastfeeding at discharge of were observed in Gozo (mean 41%) and around the Southern Grand Harbour districts (mean 43% with, for example, Birgu 9% and Senglea 13%). These compare with mean breastfeeding rates of 57% and 56% for the northern and western regions with, for example, rates in excess of 80% in Swieqi, Ibragg, Mellieha and Mgarr. This presentation reviews the reasons for these low rates and discusses the efforts being made to improve the situation.

0-125

Quality of life at six years of survivors treated on the Neonatal Unit in Malta

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Aim: This study determined Quality of life (QOL) at 6 years of age of children who required treatment in the national neonatal intensive care unit (NICU) during the first week of life.

Method: QOL was assessed using a standardised questionnaire employing a multi-attribute scoring system including the functions: hearing, vision, speech, mobility, emotion, learning, self care and pain. After excluding those with congenital neurodevelopmental disorders, questionnaire returns were analysed from 177 children treated on NICU in 1990 and a comparative age-matched group of 230 children who did not require neonatal care. Of these, returns were obtained from 143 (81%) cases and 171 (74%) of the non-treated group.

Results: There was no difference in overall ability between the two groups with 95 (68%) of cases and 126 (75%) of the comparison group reporting normal scores in all functions. Children treated on NICU had decreased scores in individual functions including speech ($p=0.04$), mobility ($p=0.009$) and self care ($p=0.006$). For the study population, males had decreased function in speech ($p=0.04$) and learning ($p=0.001$), with significantly worse function overall ($p=0.02$) when compared with female cases. When compared with same-gender children who did not require NICU care, overall function was also significantly worse for male but not female cases ($p=0.0002$), and this was largely contributed to by impairment in speech ($p=0.03$), mobility ($p=0.04$), learning abilities ($p=0.02$) and self care ($p=0.03$). Eleven (7.5%) of cases compared with just 2 (1.2%) children who were not treated on NICU required assistance at school ($p=0.009$). No difference was observed when QOL was assessed according to gestational age and birth weight.

Conclusion: Using a simple scoring system this study has shown that, for survivors who required early neonatal intensive care, the QOL at 6 years compares favourably with children not treated on NICU, especially for girls.

0-126

Risk factors for wheezing in 8-10 year old children attending Paediatric Outpatients

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Wheezing in young children is a common disorder. Very often children will experience at least one wheezing episode associated to viral respiratory infections in their early days. In a retrospective study, 704 children aged

8-10 years participated. The study was based at Children's Outpatients, St. Luke's Hospital. ISAAC Phase 2 standardized questionnaires were filled in by parents accompanying children. A total of 89 children were early transient wheezers, 230 persistent wheezers, 61 late onset wheezers and 324 never wheezers (control group). This study investigated the association between different wheezing phenotypes and family history of asthma and allergy, history of immunizations and infections and pre-, peri- and postnatal risk factors. Maternal asthma ($p=0.038$) and hay fever ($p<0.001$), paternal asthma ($p=0.021$) and hay fever ($p=0.049$), low birth weight ($p=0.039$) and prematurity ($p=0.007$) were risk factors more significantly associated to persistent wheezing than late-onset or early transient wheezing. Croup predisposed to persistent wheezing ($p<0.001$) whereas late-onset wheezers were more likely to have contracted whooping cough. Non-wheezers were more likely to have been infected with measles ($p = 0.030$) than early transient, late-onset and persistent wheezing suggesting a possible protective effect against wheezing. Males are more likely to persist in wheezing ($p=0.002$) as compared to females. Children who persisted in wheezing were also more likely to have a history of asthma ($p<0.001$), hay fever ($p<0.001$) and eczema ($p<0.001$). This study suggests that amongst Maltese children attending children's outpatients, various risk factors contribute to different wheezing phenotypes.

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0-127

Paediatric Oncology Services in Malta

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The presentation highlights how paediatric cancer differs from adult cancer and how these differences underpinned the necessity to create a dedicated paediatric oncology unit in Malta. It also looks at the way the unit is set up and discusses the reasons behind its success.

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0-128

A review of the Maltese and European prevalence of Edward's syndrome

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Edward's syndrome (trisomy 18) is a rare condition and 95% of conceptuses are spontaneously aborted. Only 5% of live births with this condition survive beyond 1 year of age and this high mortality is due to cardiac and renal malformations, feeding difficulties, sepsis, and apnea caused by central nervous system defects. We investigated the prevalence of Edward's syndrome in Malta for the period 1991-2002 and compared it with EUROCAT data from 1997-2001. The Maltese prevalence was 0.41/1000 (95% CL 0.27-0.62)*, higher than the reported overall rate of 0.33/1000 (95% CL 0.32-0.35). Due to the small local numbers (n=24 for the available period), this rate was not significantly different. A longer study period will confirm or exclude a higher local rate of Edward's syndrome.

*Rates are combined live births, stillbirths and terminations.

0-129

Alzheimer's Disease: facing the challenge

N Graham, Emeritus Consultant in Old Age Psychiatry, Royal

Free Hospital, London Vice president of Alzheimer's Disease International

Alzheimer's Disease is the commonest cause of dementia. The other common cause is vascular dementia. These 2 types of dementia have been clearly distinguished from the normal ageing process. They present a challenging problem in developed countries, but a massive problem in developing countries where the ageing population will explode over the next 30 years. I shall discuss the genetic aetiology of the dementias, and the ways in which people with dementia and their carers can be supported. What are the prospects for prevention and cure? These are quite uncertain and national governments throughout the world would do well to assume that their countries will be faced with considerable humanitarian challenges posed by dementia over the coming decades.

0-130

Placement in a long-stay institution - an outcome measure of a geriatrics unit

A Fiorini, Zammit Clapp Hospital, St Julian's.

Introduction: The primary clinical objective of Zammit Clapp Hospital (ZCH), an assessment/rehabilitation unit, is to enable the frail elderly to continue living in the community. The percentage of inpatient discharges to long-stay institutions has been described as an outcome measure. This retrospective study quantifies this outcome parameter and identifies trends and associations.

Methodology:

1. From ZCH records, data was calculated on:
 - a) Yearly percentage discharges to, and
 - b) Admissions already in long-stay institutions (1993 to 2002).
 - c) Mean discharge Barthel Activities of Daily Living Index (1995 and 2002).
2. For 1992 and 2003, data for the Maltese islands was obtained on:
 - a) Number of long-stay places
 - b) Number of recipients of home help services
 - c) Percentage population aged 75 years and over (75+).

Results	(1992-1995)	(2002-2003)
1a) Discharges to long-stay	11.7%	23.0% (p < 0.01)
1b) Admissions in long-stay	7.1%	12.7% (p < 0.01)
1c) Mean Barthel index	11.9	10.4 (p < 0.01)
2a) Places in long-stay	1856	3085 (+ 1229)
(% pop. aged 75 years + catered for)	13.0%	15.0% (+ 2%)
2b) Community home help recipients	2066	3446 (+ 1380)
(% pop. aged 75 years + catered for)	14.6%	17.0% (+ 2.4%)

Conclusion: The number of elderly discharged to long-stay institutions shows a significant increase, mainly explained by the availability of places. Community services have increased *pari passu* with, but have not taken precedence over, chronic institutionalization. The mean Barthel Index, a measure of functional abilities, shows that ZCH is dealing with more dependent clients who require intensive support services, at present lacking, if they are to return home. The need for appropriate clinical and social community support services has to be tackled.

0-131

Anti-coagulation for elderly patients with atrial fibrillation

Dr Stephen Abela, Zammit Clapp Hospital, Malta

Introduction: Over the last decade, anticoagulation with warfarin for patients with atrial fibrillation (AF) has become widely accepted to reduce the risk of developing stroke. Each year, 4 % of patients with AF develop a stroke, and this could be reduced by two thirds if anticoagulation with warfarin is instituted. Further studies have shown that certain categories of patients with AF, have a higher than average risk of stroke (5 - 15%). Despite this evidence, doctors remain cautious about prescribing warfarin in this clinical setting. A study was conducted at Zammit Clapp Hospital (ZCH) to address this issue.

Methodology: A prospective observational study on all patients admitted

from St. Lukes' Hospital to ZCH with acute stroke during the period 1 May 1998 to 31 April 1999. A diagnosis of stroke according to WHO criteria within the previous 48 hours of admission to the acute hospital was required for inclusion. Data was collected by assessment of patients using the Royal College of Physicians stroke clerking proforma.

Results: There were 107 acute stroke admissions (11.27%) out of 1003 total ZCH admissions during the one-year study period. There were 68 females and 39 males (ratio 1.74:1). The cause for stroke as determined in the 98 patients who had a CT brain scan, was ischaemia in 48.6%, haemorrhage in 12.1%, while in 30.8% of cases no acute lesion was identified. AF was identified in 22 (20.54% of the study group), 7 of whom were discharged on warfarin (31% of AF patients).

Conclusions: Patients with AF following a stroke are not started on anticoagulation as frequently enough as recommended in the literature. More awareness of the benefits of anticoagulation of elderly patients with AF is needed to prevent stroke events in such circumstances.

0-132

Co-morbidity in older adults with Parkinson's disease in a long-term residence

M Abela, St. Vincent de Paule Residence, Malta

Introduction: Despite the high prevalence of Parkinson's Disease (PD) in elderly persons, little information is available regarding the clinical characteristics of the disease in residents within long-term care facilities. This study aimed to determine whether residents with PD in St. Vincent de Paule Residence (SVPR), which is the largest long-term facility in Malta, had a higher incidence of morbidity than residents who did not have the condition.

Methodology: The study was a prospective, case-controlled one, with residents on anti-parkinsonian treatment being the subjects of the study, and the controls being elderly residents who did not have PD and who were matched for age, gender, ward and duration of stay within the residence.

Results: There were 78 residents with PD (7.7%) amongst the 1011 residents at the time of the study, 33 males and 45 females. One major finding of the study was the fact that in 38% of the residents with PD, the disease could have been drug induced. Another important observation was that the occurrence of orthostatic hypotension was higher in residents with PD (42.3%), which in turn could lead to the higher incidence of falls (46.2%) noted in this population.

CONCLUSIONS: The use of psychoactive medication and the increased occurrence of orthostatic hypotension and falls in elderly residents with PD within SVPR need to be targeted for better quality of care to this population.

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0-133

Abuse within a chronic care institutional setting for older persons in Malta

MA Fenech, A Fiorini, Department for the Elderly and Community Services, Malta

Interviews were conducted with older persons living within St Vincent de Paul Residence for the Elderly, (SVPR), in order to gain awareness of

their perceptions regarding abuse and abusive practices and behaviours within SVPR.

A phenomenological type of approach developed by Coleazzi in 1978 was employed.

The older persons highlighted key elements, which potentially constituted or led to abusive acts. These included relocation with subsequent dependency and helplessness. Staff burnout and its consequential product of negative attributes towards the older persons were also associated with abuse. Furthermore, older persons also indicated the lack of and the inability to build solid relationships with staff members as constituting abusive acts. The inability to reminisce about past experiences and to prepare for death was also associated with abusive practices.

The results suggested that institutional care needs to be restructured to move away from the institutional medical model and embrace the principles of aging and rehabilitation. The term *care giving home* depicts a more humanistic, growth-facilitating environment where older persons and staff members can mutually build healthy relationships whilst sharing a common environment.

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0-134

Seating arrangements for older persons at St Vincent de Paul Residence

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Geriatric seating facilities are a critical requirement within any long-term care facility for older persons and should be specifically tailored in order to maximise independence of the older person. This study aimed to compare the present armchair specifications within St Vincent de Paul Residence (SVPR) to a model seating arrangement, which fitted defined criteria for a functional geriatric armchair. Factors taken into consideration included the height of the seat, width and depth of the seating surface as well as the position of the armrests. A proportional stratified sample of older persons ($n=30$) was selected for the study. Sitting posture, forward posture, shifting to the edge of the chair, positioning of the feet, lifting off to standing and stability on standing, were compared using each seating arrangement for all of the older persons.

The results suggested an overall improved function and overall increased independence of the older persons when using the model seating arrangement.

Purchase of geriatric armchairs for SVPR is a very expensive procedure and serious planning should be made in order to promote the furnishing of this residence with functional, cost-effective seating arrangements.

0-135

The feasibility of introducing user charges at Zammit Clapp Hospital

V Massalha, Zammit Clapp Hospital, Malta

Economic, demographic and technological pressures have led to increased demands upon health services and the need to contain spending on healthcare. Like other developed countries, Malta is facing pressures of sustaining escalating healthcare costs. The purpose of this study was to explore the perspectives of stakeholders regarding the concept of charging users for public healthcare services and the feasibility of introducing user charges at Zammit Clapp Hospital (ZCH).

Qualitative interviews were carried out with seven key informants from the fields of health policy, social services, finance, economics, hospital management and a non-governmental organisation. 106 patients ($n=139$) and 101 of their informal carers were recruited over a one-month period on informed consent and set inclusion criteria. Participants were surveyed on charging users for public healthcare services; the willingness to pay

part of the cost incurred by ZCH to provide services; and knowledge of the daily cost of care.

67% of patients, 58% of carers and all key informants agreed with the concept of paying user charges for public healthcare services. Although >75% of patients and carers were *willing* to pay part of the cost of services provided at ZCH, a much lower *ability* to pay resulted. More than 92% of patients and carers lacked knowledge of the daily cost of inpatient care. Interviewees considered income-related charges acceptable for most healthcare services. Among options of user charges considered, introducing a charge per bed night for the package of care provided at ZCH was recommended as the most feasible to implement because of its potential of generating revenue. Preserving social solidarity in terms of equity of access was considered fundamental to the reform process that would introduce user charges for public healthcare services in Malta.

0-136

Teamwork in health care delivery – a case study of a Maltese geriatric hospital

S Buttigieg, Director, Institute of Health Care, University of Malta

The collaborative approach in the multi-dimensional nature of health care needs of older people offers an example of demonstrating team working. This study investigates by means of the case study approach, the concept of interdisciplinary teamwork in health care delivery in Malta. It seeks to establish the extent at which this is practised at the 60-bed geriatric rehabilitative Zammit Clapp Hospital (Z.C.H.), by focusing on its two clinical interdisciplinary teams. The study takes a broad perspective of teamwork, to capture the multi-faceted dimensions, which are expected from a managerial viewpoint.

The study utilises both theoretical and methodological triangulation and the model developed, shows the interaction between the organisation, the team and the patient/carers through pathways of communication. The core members of the geriatric interdisciplinary team include various disciplines, which may vary depending on the patient's condition. The benefits of team working are several and discussed. On the other hand, barriers to effective team working are well recognised and the team approach necessitates continuous commitment and hard work.

The implications of this study are those of raising the consciousness and conscientiousness towards interdisciplinary team working in hospitals. Additionally, Z.C.H. may also provide a model of best practice in health care on two grounds, one being its adoption of the interdisciplinary team concept and two its attitude of managing the older persons with dignity and respect, despite their frail condition and old age. From this study, a series of recommendations are suggested addressed to management, clinical practice, education and research.

0-137

Hormonal therapy for carcinoma prostate (CaP): Collaborative research between the European Organisation For Research in Cancer (EORTC) and the Department of Urology, Malta

CL Cutajar, The Medical School and Department of Urology, St. Luke's Hospital, Malta

Since Huggins (1941) conclusively demonstrated that cancer of the prostate is androgen dependent and responds to androgen deprivation, hormonal therapy has been the mainstay of treatment of locally advanced or metastatic carcinoma of the prostate. In recent years there have been several controversial issues regarding anti-androgen therapy e.g. early vs delayed therapy, intermittent vs. continual therapy, mono therapy vs. combined (maximal androgen blockade), adjuvant or/and neo-adjuvant hormone therapy. Several EORTC research protocols and trials have addressed these issues. This paper presents the available evidence from published or on-going EORTC prostate cancer trials in which the Department of Urology, St. Luke's Hospital, has taken part since 1991.

A secondary consideration of this paper is the feasibility of collaborative

research between small clinical units and larger international entities.

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0-138

Osmolysis as a modality for treatment of transitional cell carcinoma of the urinary bladder – A pilot study

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Summary: The currently used modalities for treatment of TCC of urinary bladder include various surgical, physical, chemical, and immunological methods. The aim of this study is to explore one physical force i.e osmosis, which has not been exploited at all in current methods of treatment. This is a prospective therapeutic primary study using a within-subject design:

Phase 1 - In vitro study: The histological effects of osmosis on TCC cells from a specific tumour, exposed to distilled water for increasing time intervals, were recorded. This procedure was repeated with different tumour specimens obtained from six patients suffering from TCC of urinary bladder.

Phase 2 - In vivo study: This involved the exposure of the TCC of the bladder to distilled water circulated rapidly in the urinary bladder utilising a head of pressure of 10cms of water for a period of 48 hrs. The histological appearance of the tumour removed at TUR(B) a few days after the above procedure was then compared with that of the original diagnostic specimen from the same tumour before osmolysis.

Results: The in vitro study showed that TCC cells start showing histological apoptotic changes after 2 hours of exposure and complete lysis by 6 hrs. The in vivo study using an arbitrary exposure of 48 hrs showed that only very small T₁ ANIS tumours are lysed completely. Larger tumours are either debulked (reduced size) or show no significant macroscopic change, though surface histological changes similar to those observed in the in-vitro study were observed.

Comments: It is justifiable to further this study varying the method and using larger volumes.

0-139

The difficult urethral catheterisation – use of a hydrophilic guidewire

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A novel method is described making use of a hydrophilic guidewire to help with urethral catheterisation in the difficult case. The technique is suitable for ward patients (by their bedside) or for patients attending the casualty department in acute urinary retention. The technique described increases the likelihood of urethral (rather than suprapubic) catheter placement and consequently patients will not usually require emergency surgery and hospital admission.

Method: After failure of an initial attempt at placement of a 16F urethral catheter, a hydrophilic guidewire is lubricated with sterile water and inserted into the urethra. It usually finds its way into the bladder slipping over a high bladder neck or passing through even the smallest of strictures in an atraumatic fashion.

An attempt is then made to insert a 16F urethral catheter using a rail-road technique. If the catheter passes into the bladder, the urinary retention is relieved. If there are difficulties, there is a strong possibility of a urethral stricture. In this case, the urologist (rather than the casualty officer) is in a position to attempt safe urethral dilatation using a graduated semi-rigid ureteric dilator (6F – 12F). After the dilatation, it is now usually possible to insert a urethral catheter (12F) over the guidewire and to drain the bladder.

Further management by dilatation (using clutton or filiform dilators) or by optical urethrotomy can then usually be done electively.

Discussion: The technique requires items that are readily available in every urology department and usually enables successful urethral catheterization at the bedside. It is well tolerated and significantly reduces the possibility of iatrogenic urethral trauma. Successful urethral catheterization will also reduce the need of emergency hospital admission. We recommend equipping the casualty department and the urology ward with the necessary items so that this technique can be used when encountering difficulties with urethral catheterisation.

0-140

Endourethral Macroplastique® injection for the treatment of female genuine stress incontinence

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Objectives: Macroplastique® (Uroplasty BV, Geleen, The Netherlands) is an injectable soft tissue bulking agent made of a silicon polymer. Since its introduction in 1991, well over 20000 patients have been injected for the treatment of Stress Urinary Incontinence, Vesico-Ureteric Reflux and Post Prostatic Surgery Incontinence. Here we present our experience of Macroplastique injection in the treatment of Genuine Stress Incontinence (GSI).

Methods: A total of 10 Patients with GSI and a fixed urethra (Type III incontinence) on videourodynamic studies were included. All patients were assessed clinically and a flexible cystoscopy was performed. Macroplastique injections were performed at 3 different points at the level of the mid urethra using Macroplastique® Implantation Device. All procedures took place under general anaesthesia with the patient in the lithotomy position. The patients were kept for an overnight stay after the procedure. Follow up was performed at 6 to 8 weeks and outcomes were assessed subjectively and by pad usage.

Results: All patients reported amelioration of their symptoms. Their subjective impression was validated by a decrease in pad usage. No significant side effects were reported.

Conclusion: Macroplastique® injection using the Macroplastique® Implantation System is a safe and minimally invasive procedure for treating GSI. It is most useful for patients desiring less invasive procedures, when more invasive procedures are medically contraindicated and in Type III incontinence were a high failure rate with Burch Colposuspension has been reported.

Key references: Incontinence, 2nd edition 2002, Paul Abrams, Lynda Cardozo, Saad Khoury, Alan Wein. Plymbridge Distributors Ltd.

Dmochowski RR, Appell RA. Injectable agents in the treatment of stress urinary incontinence in women: where are we now? *Urology.* 2000 Dec 4; 56(6 Suppl 1): 32-40.

0-141

Parathyroid Surgery in a surgical unit with a small catchment population

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Background: Indications for parathyroid surgery include primary hyperparathyroidism and tertiary hyperparathyroidism in renal failure patients. Despite a number of imaging modalities available, parathyroid localization still remains a problem especially in patients with tertiary hyperparathyroidism. It has been recommended that parathyroid surgery should be performed by surgeons with extensive experience in this field and therefore by definition, with a large catchment population.

Aim: To assess feasibility of parathyroid surgery in a small population by analyzing our results.

Patients and methods: We present a single surgeon's experience in parathyroid surgery performed at St.Luke's Hospital, over 5 years between January 1998 and June 2003. This unit serves a small population of about

380,000. Patients undergoing parathyroid surgery were identified from the pathology database and operating theatre records. The case notes of these patients were reviewed.

Results: During this period 52 parathyroidectomies were performed in this centre. More than half of the case load (29 operations) was performed by our team. In this series 7 were for primary adenomas and 22 were for tertiary hyperparathyroidism. Preoperative localisation was accurately carried out in 4 out of 7 cases of primary hyperparathyroidism. However none of the parathyroids were accurately identified in the tertiary group. All patients underwent parathyroidectomy under GA and in our hands all glands were identified. Since the year 2000 parathyroid re-implantation was not performed and persistent postoperative hypocalcaemia was not observed. No significant complications were reported and in particular there was no permanent damage to the recurrent laryngeal nerve. The average post-operative stay was 4 days.

Conclusions: Our results show that:-

parathyroid surgery is feasible in a surgical unit serving a small population especially in patients with tertiary hyperparathyroidism where preoperative localisation is not helpful.

parathyroid re-implantation is not required.

Key words: parathyroidectomy – hyperparathyroidism – renal failure.

0-142

Breast cancer in a high risk cohort – Nuns in Malta

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Breast cancer is the commonest cancer in Maltese women and is also the leading cause of female cancer deaths.

The main risk factors for breast cancer are sex and age. Some 99% of breast cancers occur in women and the incidence rises exponentially with age. Other significant risk factors are family history and hormonal history. It is commoner in nulliparous women and those who have children late in life and those who do not breast-feed. The risk of breast cancer in nuns should be greater than that of the normal population because of nulliparity. Nuns were studied because they are a large cohort of nulliparous women who can be readily identified.

A database of all nuns living in Malta during the years 1993 – 2002 was set up. This included demographic details, which were used to search the cancer registry and mortality registry to identify all those nuns diagnosed with breast cancer or certified to have died from the disease.

The incidence and mortality rate of breast cancer in Maltese nuns was compared to that of the rest of the female population, after correcting for age bias.

0-143

Microvascular reconstruction with free tissue transfer in Malta

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A microvascular transplant, also known as a “free flap” or “free tissue transfer”, involves transplanting non-essential donor tissue from one part of the body to another to restore form or function. The transplanted tissue must have a single blood supply with an artery and draining vein that are both adequate to sustain circulation and life in the transplant. A free flap is essentially an auto-transplant.

As microsurgical repair of digital arteries and digital replantation began in the 1960's, microsurgical composite tissue transplantation began in the 1970's. In the 1980's microsurgeons expanded their efforts from achieving tissue survival to the improvement of function and appearance. In the new millennium, free-tissue transfer using microsurgical techniques is now routine for the reconstruction of complex wounds, reconstruction after trauma or tumour resection, and reconstruction of congenital deficiencies or of chronic wounds.

The first successful free tissue transfer operation in Malta was performed in 2000 when the rectus abdominis myocutaneous free flap was used to reconstruct the face and cranial vault of a 78-year-old man following ablation of an extensive invasive basal cell carcinoma.

A number of cases are presented, illustrating the use of a diversity of donor free flaps for reconstruction following head and neck cancer surgery, and upper and lower limb trauma.

Key References: Free flaps, microsurgery, free tissue transfer, head and neck cancers, lower limb reconstruction.

0-144

Intervertebral disc height is higher in hormonally treated menopausal women and in menstrual women compared to non-hormonally treated menopausal women and untreated postmenopausal women

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Objective: To assess whether there were any demonstrable differences in intervertebral height between menstrual and oestrogen treated and untreated postmenopausal women.

Methods: One hundred and twenty-five women were collected randomly from a large directory in a database of a bone density unit. Every fifth woman in the directory was recruited from the DEXA directory. In cases where the selected woman had an endocrinopathy, or was on corticosteroid therapy or had any metabolic disease that could affect bone density, the following woman (i.e. the sixth) was recruited instead.

The image of the vertebral spine on the computer screen was sought for the women recruited. The adjustment mode was then employed allowing the horizontal cursors to be placed at the edges of the vertebral discs between the tenth thoracic vertebra, till the third lumbar vertebra (D1-D3) measuring the distance between the vertebrae.

Results: The 125 women were divided into five groups according to the menstrual status and the treatment given for osteoporosis. Forty-four (44) menopausal women were on HRT, 34 women were untreated menopausal women, 15 women were on calcium supplements and another ten women were on bisphosphonates.

Significant differences were noted in disc thickness between the HRT and menstrual groups when compared to the other menopausal groups. The combined disc height (D1-D3) in the HRT group was 2.18 +/- 0.26 cm and the disc thickness in the Menstrual group was 2.14 +/- 0.22 cm. The disc height of the other three groups was Calcium supplement group (1.94 +/- 0.31 cm), Untreated menopausal group 1.96 +/- 0.31 cm and 1.92 +/- 0.2 cm in the bisphosphonate group.

Conclusion: Hormone treated postmenopausal women and menstrual women have significantly longer intervertebral discs compared to nonhormonally treated menopausal women. These differences may be due to the significant changes occurring to the connective tissue of the intervertebral discs during the menopause.

0-145

The effect of a marine alga on postmenopausal osteoporosis

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Introduction and Objectives: A marine alga, *Padina Pavonica*, classified as a food supplement, has been shown to have a group of oestrogen-like molecules with a positive effect on bone formation in cell line cultures. The aim of this study was to assess the possible effects of this alga on bone

metabolism in postmenopausal women.

Design and methods: Forty postmenopausal women were randomised into of four groups each having a different dose. Group A acted as controls, while Group B, Group C, and Group D had 200mg, 400mg and 600mg of the lyophilized alga respectively. Bone density was measured at the lumbar spine and at the hip region using a bone densitometer [DEXA-Norland 386] over one year.

Results: The bone density increased significantly at the lumbar spine [Grp B=2.5%] [Grp C=4.6%] [Grp D=0.4%] and at the femur [Grp B=5.3%] [Grp C=8.1%] [Grp D=0.3%] over the study period. No effect was noted on either the endometrial thickness or the maturation index of vaginal cytology.

Conclusions: The results show an increase in bone density with no visible effect on either the endometrium or the vaginal cells. This marine alga probably contains potent phytoestrogens with similar results as oestrogen on the bone metabolism. Like Selective Estrogen Receptor Modulators (SERMs) they do not seem to be effecting other oestrogen sensitive organs such as the endometrium. This appears to be promising in that it contains the attraction of phytoestrogens with the potency of a SERM like molecule.

0-146

Influences of the vitamin D and oestrogen receptor genes on bone mineral density in postmenopausal women in Malta

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Polymorphisms in the vitamin D (VDR) and oestrogen receptor (ER) genes have been associated with bone mineral density (BMD) and an increased risk of osteoporosis. In this study a start codon polymorphism (FokI) and polymorphisms at the 3' end (BsmI, ApaI, TaqI) of the VDR gene, together with two polymorphisms in intron 1 of the ER gene (PvuII, XbaI) and their interactions were analysed in postmenopausal women in Malta.

108 postmenopausal Maltese women (55.1 ± 6.9 years) were recruited for this study. Polymorphisms in the VDR and ER genes were analysed by PCR restriction fragment length polymorphism (RFLP) while BMD at the lumbar spine and femur was measured by DEXA.

Allele frequencies for VDR RFLPs observed were as follows: F 75.7%, f 24.3%, B 42.3%, b 57.7%, A 58.4%, a 41.6%, T 58.6%, t 41.4%; and for ER RFLPs were: P 42.1%, p 57.9%, X 37.5%, x 62.5%, and all were in Hardy-Weinberg equilibrium. Polymorphisms at the 3' end of the VDR gene were found to be in strong linkage disequilibrium with each other when tested by chi-squared test (p < 0.001) but were in equilibrium with the start codon polymorphism (p > 0.05). Intron 1 polymorphisms of the ER gene were also in strong linkage disequilibrium (p < 0.001) with each other. The highest BMD at both anatomical sites was observed in FF homozygotes and PP homozygotes although no statistical significance was reached (ANOVA FokI: Lumbar p = 0.375, Femoral p = 0.405; PvuII: Lumbar p = 0.769, Femoral p = 0.803) even after adjustment for age, BMI and years since menopause. The most frequent genotypes for the VDR gene were BbTtAa 33.3%, BbttAA 17.6%, bbTTaa 16.7%, BbTtAA 14.7%; while for the ER were PpXx 41.7% and ppXX 32.4%. These genotypes were distributed similarly in normal, osteopenic and osteoporotic women (Chi-squared: VDR gene: p = 0.933; ER gene: p = 0.932). No statistically significant difference was reached for BMD between individuals of different genotypes even after combining genotypes within the same gene and between the two genes. In conclusion, VDR and ER genes do not seem to have any effects on BMD in postmenopausal women in Malta.

0-147

The value of sonohysterography (SH) in a one-stop menstrual disorder clinic: one-year audit

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Background: SH is an effective diagnostic tool in the investigation of abnormal uterine bleeding (AUB). The aim of this audit was to evaluate its cost-effectiveness in the investigation of AUB without recourse to a diagnostic hysteroscopy.

Methods: 184 women were referred over a one-year period. 141(77%) were premenopausal and 43 (23%) were postmenopausal. All women had transvaginal ultrasound (TVS) and managed according to Endometrial Thickness (ET). A normal TVS was defined as ET

£ 5mm in premenopausal and ET £ 4mm for post menopausal women. Abnormal TVS was ET above specified cut-offs or if the endometrium was irregular in outline.

Findings: 75 (41%) had a normal TVS and no further investigation was instituted. 109(59%) had an abnormal TVS and had SH at the same visit. 68 women (37%) had no focal pathology and endometrial biopsy was normal. Endometrial polyps/submucous fibroids were detected 23 (13%) and 17 women (9%) had a failed SH. These 40 women (22%) were admitted for an inpatient diagnostic or operative hysteroscopy. There were no false positive results and the sensitivity and specificity of SH to pick up focal pathology was 100%. The need for diagnostic hysteroscopy was avoided in 62 % of cases (68 out 109 women). The total cost saving by the introduction of SH was estimated at £28 000 over a one-year period.

Conclusion: SH is an effective diagnostic tool in the triaging of women with abnormal uterine bleeding. It can be incorporated into a one-stop set up with major cost-savings.

0-148

Reduction in hysterectomy rate following establishment of minimal access surgery

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Objective: To evaluate the outcome of setting up a Menstrual Disorder Clinic (MDC), and introducing out-patient hysteroscopy, and TCRE, and their effect on reducing hysterectomy rates.

Subjects and Methods: A manual retrospective review of the records of all patients attending the MDC at Queen's Medical Centre, Nottingham, UK in the first four years since its set up on 14th September 1993 was carried out. The follow-up period ranged 2-6 years.

Results: 1062 new patients attended the clinic and 1052 (99.06%) records were traced and assessed manually. Their average age was 46.2 (± 13.32) years. The main reasons for referral to the clinic were: menorrhagia (41.1%), irregular vaginal bleeding (27.2%) and PMB (19.8%). Some patients were referred from other specialised clinics (e.g. Haematology and Infertility units) for assessment. 61.5% (647/1052) of patients had a successful hysteroscopy on their first visit, while in 25.4% (267/1052), this was not indicated. 94 patients (8.9%) had a hysterectomy; of these 16 were for endometrial cancer or hyperplasia, and 17 were as secondary (previous TCRE) procedures. The hysterectomy rate goes down further to 6.5% if the cancer/precancer cases are excluded. 25% (263/1052) of patients attending the MDC were discharged after the first visit while the rest had an average of 1.4 (range: 1-8) follow-up visits each.

Conclusion: The set-up of a Menstrual Disorder Clinic is an efficient and safe way of assessing patients' menstrual problems, where unnecessary attendance and surgical interventions were greatly reduced. When surgery was necessary, minimal access surgery was resorted to and hysterectomy kept as a last resort, so that the hysterectomy rate was less than half of the estimated rate in the UK.

0-149

A comparative study between oestrogen replacement therapy, anticholinergic treatment and a combination of both

in the management of detrusor instability in postmenopausal women

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Aim: To assess subjective and objective improvement of proven detrusor instability on cystometry in postmenopausal women treated with either anticholinergics, oestrogen therapy or both, over a six month period.

Materials and Method: Eighty women are being currently recruited in a randomised controlled single blind trial at the Department of Obstetrics and Gynaecology of St.Luke's Hospital, Malta. Patients with urge symptoms are usually referred from the outpatients clinic to the Urodynamics Unit. The eligible criteria for inclusion in the study are: 1) postmenopausal women; 2) symptoms of detrusor instability mainly frequency, urge and nocturia; 3) positive cystometry, that is a rise of detrusor pressure of more than 10 cm of water and an early first urge; 4) no contraindications to oestrogen/anticholinergic treatment. If the woman satisfies the criteria, a fluid diary is kept for 6 days.

A detailed history is taken at the first interview. This is in the form of a questionnaire, which is based on severity of the condition (a score system), frequency, nocturia and incontinence. It also includes a full obstetric and gynaecological history and any exacerbating conditions or disease. It also helps in screening of patients with any possible contra-indications to the proposed treatment.

The eighty participants are allocated to 4 groups by a simple randomisation list. One group will receive tolterodine 2mg twice daily. The second group will be given hormone replacement therapy containing oestradiol 2mg (and norethisterone acetate 1mg if applicable) in the form of one tablet daily. The third group will be having both drugs and the control arm will be given a placebo. Follow up is to be carried out monthly where the questionnaire is re-applied to check for any improvement in symptoms and lifestyle. The periodic meeting will also help in maintaining compliance. The urodynamic studies are to be repeated at the end of 6 months. The values to be looked for are volume at first urge, a reduction in detrusor rise and absence of detrusor systolic contractions.

Conclusion: The study is currently in progress. The aim of the study is to help in the management of detrusor instability in postmenopausal women.

0-150

Psychiatrist in the Obstetric Unit

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Background: The increased risk of mental illness in newly delivered mothers has been recognized since Esquirol's (1845) description of postpartum psychosis. For every 1000 live births, 100-150 women will suffer from a depressive illness and one to two women will develop a puerperal psychosis. Antenatal depression is as prevalent as postnatal depression, and for some, but by no means all, it may continue into the postnatal period. Although 10% of pregnant women fulfill the criteria for major and minor depression (O'Hara et al 1990) antenatal depression often remains undiagnosed because the symptoms are similar to the somatic complaints of pregnancy. Furthermore, mental illness is a significant factor in maternity mortality. The UK Confidential Enquiry into maternal deaths reports that psychiatric disorders contributed to 12% of all maternal deaths. Suicide is

the second cause of maternal deaths.

Aims: The principle aim was to have the presence of the psychiatrist in an obstetric clinic to facilitate referrals from the relevant professionals and be accessible to women attending the Obstetric Department. This paper describes and evaluates this new service for women suffering from mental illness during the perinatal period. Data about referrals, treatment method and outcome were analyzed for the first three years of its service.

Method: Obstetric medical and nursing staff were asked to refer women, who on routine formal screening were found to be emotional unwell and reported a past history of depression and who agreed to be assessed. Retrospective analysis of the 142 cases referred during the antenatal and postnatal period was performed.

Results: Referrals: 33% were referred by midwives from the antenatal clinic, 14% were referred by midwives from the postnatal ward, 43% were referred by obstetrician and gynaecologist and 10% were referred by the psychiatrist. Eighty three per cent of the women were married, 12% women were single and 5% were separated. Antenatal depression was the most common diagnosis (34%) and postnatal depression occurred in 26% of the sample. Many of the referral are mentally unwell and require specialised treatment. It is likely that many would have been seen by none if the service was not available.

Conclusions: The psychiatric complications of pregnancy are common, distressing and potentially serious. Only a properly resourced service can evaluate and improve its method and management towards both efficient predictions of risk and more effective treatment.

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0-151

Prevalence rate of Hepatitis B in Malta

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The aim of the study was to determine the prevalence rate of Hepatitis B in Malta and to implement appropriate viral hepatitis measures.

The study population consisted of 741 persons of different age groups. This estimation was analysed using Epidemiology Information software. The sample estimation was based on; the population of Malta and Gozo being 380,000, the age profile is the same as the end of 1996, the seroprevalence is 1% (with 95% class limits of 0.25% - 1.75%), the power to select significant difference is 80%, prevalence of positive serum is the same through out all age groups, there is no sex difference and non-response is the same through out and is random.

To avoid biased results, the samples were collected randomly from different parts of Malta & Gozo and immunocompromised patients and those who had recent transfusion were not included in the study. Analysis of the sera was performed by Imx system, a fully automated immunoassay analyser designed to run assays using Enzyme immunoassay.

According to the statistics carried out on the samples, it was concluded that the prevalent rate of Hepatitis B in Malta is between 1-2%. Highest rate of positivity was between 25 and 50 years. This could be due to; high sexual activity, transmission from mother to foetus 25 years ago and intravenous drug abusers are commoner in this age group. The prevalent rate of Hepatitis B in younger age groups i.e. between 0-9 years is low compared to older age groups. This could be due to the use of vaccines at an earlier age.

Keywords: Hepatitis B, Prevalence, Maltese Islands.

0-152

Chronic hepatitis C viraemia: who and when to treat? The Malta experience

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Treatment with Standard Interferon Alpha 2B 3MU subcutaneously thrice weekly for 48 weeks for chronic hepatitis C viraemia (HCV) confirmed by

polymerase chain reaction was considered in 54 patients aged 34 ± 14 years attending the Liver Clinic at St. Luke's Hospital between 1996 and 2002. HCV was associated with intravenous drug abuse in 34 patients and post-transfusion hepatitis in 4 patients. Maximum serum alanine transaminase (ALT max) (123 ± 126 IU/L) was unreliable in predicting necroinflammation by the Histologic Activity Index Grade (G) and the METAVIR fibrosis Stage (S) in 23 liver biopsies (< GISI in 13 patients and > GISI in 10 patients). Six patients with liver histology above GISI were eligible for standard interferon therapy according to the criteria of the local Drugs and Therapeutics Committee. One patient accepted standard Interferon therapy which led to sustained viral clearance. Five patients opted to wait for more efficacious anti-viral regimens. The role of liver biopsy, genotype analysis, estimated duration of viraemia and readily available parameters such as age and sex on the selection of patients for treatment with a regimen that combines a once-weekly dose of pegylated interferon with daily oral ribavirin for a period of 24 or 48 weeks in a sample of the Maltese population is discussed.

0-153

Testing for haemochromatosis genotype in Malta

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Background: Hereditary haemochromatosis (HH) is an autosomal recessive disorder of iron metabolism. The principle gene responsible for HH, designated HFE is located on chromosome 6 in the HLA region. Most HH patients are homozygous for a single base transition, resulting in the substitution of a tyrosine for cysteine at position 282 (C282Y). A second mutation resulting in the substitution of an aspartic acid for histidine at position 63 (H63D) was found in a number of patients who carried only one copy of the C282Y mutation. The C282Y mutation is common only in populations of Celtic origin whereas the H63D mutation is more ancient as demonstrated by its ubiquitous distribution.

Aim: To determine which of the two genotypes is prevalent in Malta.

Method: A serum ferritin is routinely requested in the diagnostic work up of cirrhosis as well as in patients with elevated liver enzyme concentrations in serum (LFTs). People underwent HH genotyping if they had an elevated serum ferritin after appropriate counselling.

Results: Over the past 2 years 10 patients were diagnosed as being heterozygous and 2 patients as being homozygous for the H63D genotype respectively. Only 1 patient was heterozygous for the C282Y genotype. (p=0.002).

Conclusion: The H63D mutation is commoner than the C282Y mutation in Maltese patients with deranged LFTs and an elevated serum ferritin.

Discussion: The diagnosis of HH depends on a careful assessment of iron status and the phenotypic expression of the disease as well as HFE genotyping. Although HH was not diagnosed in any of the patients studied, given the above result, we hypothesize that HFE genotyping to diagnose HH in Malta is less useful than when carried out in populations of Celtic origin.

0-154

A study of deaths due to drowning in Maltese waters over a ten-year period

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Introduction: Death by drowning in sea water occurs repeatedly in Malta and both the locals and non residents are at risk.

Aims: This study aims to establish the incidence of drowning in Maltese

waters and to assess the factors contributing to such deaths.

Method: This is a review of all deaths due to drowning, over the ten year period, 1993 to 2002. Data is obtained from mortality statistics from the Department of Health Information and from forensic post-mortem reports from the archives of the Department of Pathology. Information documented includes demographic details of the victims and the circumstances surrounding the death, including the geographical location of the incident. Factors contributing to death, such as injuries, chronic disease, and alcohol/drug intoxication are documented and the manner of death is assessed.

References: Archives, Pathology Department, St. Luke's Hospital, G'Mangia Department of Health, Public Health Records, Malta.

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0-155

Comparison of the post-mortem diagnosis to the clinical diagnosis

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Objective: Hospital Post-Mortem Examinations are often requested so the cause of death be ascertained or established. In this study, Post-Mortem findings confirm the clinical diagnosis in 36% of cases, with additional diagnosis in 25% of these.

Method: The final reports of 210 Hospital Post-Mortems between 1997 and 2001 performed by the Department of Pathology (204 in St Luke's Hospital and 6 in Gozo General Hospital) were studied.

Gross pathological changes, histopathological findings and microbiological/viral diagnosis establish the Post-Mortem diagnosis.

Results: Around 50 Hospital Post-Mortems were carried out on average per year: 56% Male; 90% Maltese citizens (4% Gozitans); 53% adults (33% aged 50 to 80 years); 32% stillbirth foetuses.

36.6% passed away in Labour Ward; 18% in I.T.U.; 7% in S.C.B.U.

Out of 76 intrauterine deaths, clinicians recognised 8 external congenital abnormalities out of 15; 3 out of 4 hydrops fetalis; 2 placental abruptions out of 9 placental causes of death. 7 intra-ventricular haemorrhages; 5 congenital heart abnormalities and 6 meconium aspiration causes were not clinically mentioned.

Out of 19 infants born alive, Post-mortem diagnosis that were not mentioned clinically include: 3 cases of bronchopneumonia (2 intrauterine); 1 intrauterine anaemia; 2 pericardial haemorrhages; 1 post-op myocardial infarct with pulmonary hypertension for great vessel transposition; 1 prematurity intra-cerebral haemorrhage.

39% of all adult post-mortems had coronary artery disease (22% clinically unknown).

14% of the sudden adult deaths were clinically unsuspected acute myocardial infarcts and only another 3% were suspected.

27.6% had myocardial fibrosis and hypertrophy (only one third clinically mentioned).

28.6% had bronchopneumonia, 18.7% congestive heart failure; 10% septicaemia (only half were treated for clinically).

Remarkably unmentioned clinically were 19.6% with nephrosclerosis/glomerulosclerosis; 9% with pulmonary emphysema/fibrosis; 7% with chronic hepatitis/cirrhosis; 2.6% with chronic pancreatitis; all diagnosed at Post-Mortem histology.

Undiagnosed were 6 out of 8 acute pulmonary embolus; 4 out of 5 acute peritonitis; all 5 acute bowel ischaemia; one third of acute gastrointestinal bleeds and one third of ruptured aortic aneurysm cases.

Other pathology of thyroid, parathyroids, spleen, pituitary, lymphomas, myeloproliferative disease, diverticular and coeliac disease were incidental Post-Mortem findings.

0-156

The evaluation of early signs of complications of thalassaemia and its treatment by magnetic resonance imaging

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and Thalassaemia clinic, Biomedical Sciences Department of the University of Malta

The aim of this study is to evaluate whether magnetic resonance imaging studies can detect or quantify the changes of Thalassaemia complications, resulting either from the disease itself or its treatment, to the liver.

Patients with a diagnosis of Thalassaemia of mild or moderate severity regularly attending the Thalassaemia clinic were approached, voluntary consent was obtained. Patients requiring any of intervention during the procedure, including sedation, were excluded.

A 1.5T magnetic resonance unit was obtained. T1 gradient echo and T2 weighted spin echo sequences were obtained in the axial plane through the liver, gall bladder, pancreas and spleen, signal intensities were measured by placing standard operator defined regions of interest in the random areas of the liver and the paraspinous muscles.

Signal intensity ratios (SIR) were obtained by taking the ratio of the SI of the organ to the average signal intensity of the paraspinous muscles.

The images produced were separately reported by two radiologists that were blind

to each other's report. The clinical data sheet was completed by Thalassaemia clinic personnel. The radiologist had to assess the size and texture of the liver, the presence of spleen and gallstones, as well as provide a qualitative and quantitative assessment of iron overload for the liver.

There is very good correlation of qualitative and quantitative methods of estimating liver iron overload.

The correlation of the quantitative MRI assessment of liver iron with the serum ferritin, the conventional way of measuring the body iron stores, is poor.

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p-001

Sex differences in treatment strategies and outcomes of acute ST segment elevation myocardial infarctions

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Aim: To investigate the differences between males and females admitted with acute ST segment elevation myocardial infarctions (STEMI) in terms of treatment and outcome.

Method: All patients (pts) admitted to the Coronary Care Unit (CCU) are registered. Data of pts with STEMI was derived from review of case notes. Pts were studied during the period January 1, 2001 to January 1, 2002 for events and deaths up to 1 year after admission.

Results: Of the 364 admissions noted as MI on the CCU register, 283 (77.7%) of the files were traced, of which 210 (74.2%) were "true" STEMI. There were 148 (70.8%) males (M) and 62 (29.5%) females (F). Mean age 59.7 years +/- SD11.4 M and 71.3 years +/- SD11.6 F. Time between MI and hospital admission was 2.6 hours +/- SD2.4 M and 2.3 hours +/- SD1.6 F (p=0.461). Anterior MI was present in 43.2% M and 37.1% F (p=0.445). 20.9% M and 6.5% F underwent primary percutaneous coronary intervention (PCI) (p=0.009). 23.6% M and 51.6% F received neither thrombolysis nor PCI (p=0.0002). A statin, Angiotensin Converting Enzyme Inhibitor/Angiotensin Receptor Blocker, a β -Blocker and aspirin were prescribed on discharge to 31.1% M vs 11.3% F (p=0.003), 67.6% M vs 45.2% F (p=0.003), 48.6% M vs 30.6% F (p=0.022), and 88.5% M vs 80.6% F (p=0.187), respectively. 21.6% M and 4.8% F underwent elective PCI within 1 year after admission (p=0.006).

Unadjusted in-hospital and 1-year mortality was 3.4% M vs 19.4% F, p=0.0003 and 0.7% M vs 6.5% F, p=0.021, respectively.

Conclusion: Female pts with acute STEMI received significantly less reperfusion and medical treatment, and had a higher mortality, than male pts. This may be partly explained by their more advanced age at presentation.

p-002

Differences in treatment strategies and outcomes of acute ST segment elevation myocardial infarctions between tourists and Maltese residents

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Aim: To investigate the differences between tourists and residents admitted with acute ST segment elevation myocardial infarctions (STEMI) in terms of treatment and outcomes.

Method: All patients (pts) admitted to the Coronary Care Unit (CCU) are registered. Data of pts with STEMI was derived from review of case notes. Pts were studied during the period January 1, 2001 to January 1, 2002 for events and deaths up to 1 year after admission.

Results: Of the 364 admissions noted as MI on the CCU register, 283 (77.7%) of the files were traced, of which 210 (74.2%) were "true" STEMI. Of the admissions, there were 15 (7.1%) tourists (T) and 195 (92.9%) Maltese residents (R). Mean age was 62.0 years +/- SD13.1 T and 63.3 years +/- SD12.6 R (p=0.701). There were no significant differences between baseline characteristics in terms of diabetes mellitus, hypertension, history of smoking, history of coronary heart disease, site of MI, and in time between onset of MI and hospital admission. 66.7% T and 51.3% R received a thrombolytic on admission (p=0.292). 30 R (15.4%) and no T underwent primary PCI (estimated p=0.136). Approximately equal numbers of both study groups received statins, ACE-inhibitors, β -blockers and aspirin on discharge. Unadjusted in-hospital mortality was 1 (6.7%) T and 18 (9.2%) R (p=1).

Conclusion: Tourists made up only a very small percentage of admissions with STEMI. Tourists and residents received similar treatment strategies and have a similar in-hospital outcome.

p-003

Significance of persistent V/Q mismatch in a young female patient with extensive pulmonary embolism

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Pulmonary perfusion and ventilation scintigraphy (V/Q scan) is an invaluable tool in the diagnosis of acute pulmonary embolism (PE) and is routinely used in the diagnostic work-up of patients presenting with dyspnoea and chest pain. The classical findings in acute PE are mismatched areas of perfusion and ventilation, with embolised lung segments showing no perfusion (Q) but preserved ventilation (V).

We report on a case of extensive acute PE in a young British female patient who was treated and discharged from hospital. She subsequently presented one year later with haemoptysis. Repeat V/Q scanning at this point showed the same findings as one year previously, that is extensive V/Q mismatch in exactly the same segments. No evidence of pulmonary infarction was noted on chest X-ray.

The findings on her second admission are not to be interpreted as acute PE. The bronchial circulation takes over in these cases and prevents the embolised lung segments from infarcting. What is rather unusual in this young patient is that there was no recanalisation of the pulmonary circulation whatsoever after the initial event.

p-004

Cost comparison in off-pump and conventional CABG in a small unit

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Objective: To compare the cost of off-pump coronary artery bypass (OPCAB) and conventional coronary artery bypass grafting (CABG) performed during our first year's experience with OPCAB (30 OPCAB and 243 conventional).

Methods: A prospective study of the first 30 OPCAB patients and a control group (30 patients) undergoing conventional CABG. Patients requiring only anterior revascularisation were selected for OPCAB. Patients were matched for surgeon, demographics and Parsonnet risk stratification. OPCAB group age 62 \pm 9, females 8, Parsonnet 6 \pm 4; conventional CABG group age 63 \pm 8, females 9, Parsonnet 6 \pm 4.

Results: There was no mortality or significant morbidity in either group. In the OPCAB group there were 2 incidences of atrial fibrillation, 5 incidences of post-operative inotrope dependence >24hrs, 1 transient ischaemic attack and 1 gastrointestinal haemorrhage. In the conventional CABG group there was 1 incidence of atrial fibrillation, 2 incidences of post-operative inotrope dependence and 1 gastrointestinal haemorrhage. The package cost of OPCAB was significantly cheaper: 2409 \pm 188 SD Euro for OPCAB and 2679 \pm 85 SD Euro for conventional CABG (p<0.001). Complete revascularisation was performed: OPCAB 2.1 \pm 0.8 grafts (theatre time 120 \pm 29min) and CABG 3.5 \pm 0.9 grafts (153 \pm 39min). 9/30 OPCAB patients spent the first post-operative night on the ward whereas all conventional CABG patients spent 1 night on intensive care. Post-operative ward stay was not significantly different (OPCAB 3.6 \pm 1.7 days versus CABG 3.4 \pm 1.4 days). Blood transfusion requirements were also similar (OPCAB 0.7 \pm 1.2 units versus CABG 0.9 \pm 0.96 units)

Conclusions: Our initial results show a statistically significant economic advantage with OPCAB. However clinical outcome in the two groups was comparable and considerations other than economic should take precedence. Both revascularisation methods were cost-effective. Wider experience with OPCAB may result in further cost benefits.

p-005

Empyema thoracis caused by a foreign body inhaled 30 years previously

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We present the case of a 73 year old Caucasian male who developed a left sided pneumonia and empyema secondary to a foreign body inhalation.

In 1970 he aspirated a bone while drinking soup. Bronchoscopy at that time was unsuccessful and the patient was discharged home without further treatment.

He remained well for thirty years until he developed an empyema. He was admitted and treated with chest drainage and antibiotics. His condition did not resolve and further investigation revealed a foreign body in the left main bronchus. This could not be dislodged endoscopically and he underwent surgery. A fragment of cortical long bone was retrieved via bronchotomy distal to the bifurcation of the left main bronchus. No lung resection was undertaken.

The patient experienced a swift recovery and was well at follow-up 6 months later with complete resolution of the lung changes.

p-006

Age differences in treatment strategies of acute ST segment elevation myocardial infarction

MA Sammut, A Borg, M Xuereb, R Xuereb, *St. Luke's Hospital, Guardamangia, Malta*

Aim: To evaluate whether age differences in patients admitted with acute ST segment elevation myocardial infarction (STEMI) determine treatment strategies.

Method: All patients admitted to the Coronary Care Unit (CCU) are registered. Data of patients with STEMI was derived from review of case notes. Patients were studied during the period January 1, 2001 to January 1, 2002 for events and deaths up to 1 year after admission.

Results: Of the 364 admissions noted as MI on the CCU register, 283 (77.7%) of the files were traced, of which 210 (74.2%) were "true" STEMI. These patients were divided into five age groups. There were no patients with STEMI in the age group 0-30 years, 14 (12 males(M), 2 females(F)) in the 31-45 year age group, 79 (69M, 10F) in the 46-60 year age group, 77 (51M, 26F) in the 61-75 year age group and 40 (16M, 24F) in the >75 year age group.

Conclusion: Although young age groups are receiving full recommended evidence-based treatment, both during hospital stay and on discharge, there is a graded consistent decline in treatment strategies with increasing age.

p-007

Evaluation of mortality in acute ST segment elevation myocardial infarctions over a ten year period: The Malta Experience

MA Sammut, A Borg, M Xuereb, R Xuereb, *St. Luke's Hospital, Guardamangia, Malta*

Aim: To determine whether advances in treatment strategies for patients with acute ST segment elevation myocardial infarction (STEMI) over a ten year period has been reflected in a reduction in short and long term mortality.

Method: All patients admitted to the Coronary Care Unit (CCU) are registered. Data of patients with STEMI was derived from review of case notes. Patients were studied during the periods January 1, 1991 to January 1, 1992 (period 1) and January 1, 2001 to January 1, 2002 (period 2) for events and deaths up to 1 year after admission.

Results: Of the 375 admissions during period 1 and 364 admissions during period 2 noted as MI on the CCU register, 215 (57.3%) from period 1 and

283 (77.7%) from period 2 of the files were traced, of which 161 (74.9%) in period 1 and 210 (74.2%) in period 2 were "true" STEMI. 124 (77%) in period 1 and 149 (71%) in period 2 were males, while 37 (23%) in period 1 and 61 (29%) in period 2 were females. Mean age was 62.2+/-10.1 for period 1, and 62.9+/-12.5 for period 2. Anterior MI was present in 66 (41%) patients during period 1 and 87 (41.6%) patients during period 2. 94 (58.4%) patients in period 1 and 107 (51.2%) patients in period 2 received thrombolytics. There were no primary percutaneous coronary interventions (PCI) in period 1 and 35 (16.7%) primary PCIs in period 2. On discharge, 4 (2.5%), 8 (5%), 23 (25.3%), and 136 (75.1%) patients in period 1 and 53 (25.4%), 128 (61.2%), 91 (43.5%), and 181 (86.6%) patients in period 2 were given statins, ACE inhibitors/ARBs, -blockers, and aspirin respectively. During the year after admission, 8 (5%) patients in period 1 and 35 (16.7%) patients in period 2 underwent an elective PCI, while 8 (5%) patients in period 1 and 18 (8.6%) patients in period 2 underwent CABG. Unadjusted in-hospital and 1-year mortality was 11.1% (period 1), vs 13.6% (period 2), p=0.33 and 7.8% (period 1) vs 4.3% (period 2), p=0.1, respectively.

Conclusion: In spite of advances in reperfusion strategies over the past decade, this did not result in an improvement in in-hospital mortality. The post-discharge 1-year mortality is however improved and probably reflects better revascularization and medical strategies.

p-008

The use of autologous femoropopliteal vein graft reconstruction for the treatment of aortic graft infections

MF Caruana, MH Simms, SR Smith, *Department of Vascular Surgery, University Hospital Birmingham Selly Oak, Raddlebarn Road, Birmingham B29 6JD, Malta*

Introduction: Aortic prosthetic graft infection is a serious and potentially lethal complication for which graft excision and extra-anatomic bypass is a treatment option. The use of femoropopliteal vein segments to construct an aortic graft is a relatively new technique in a situation where there is recurrent or ongoing infection and when the use of further prosthetic material is undesirable.

Design: 1) Systematic review 2) Case presentation.

Case report: 55-year-old gentleman with a history of recurrent graft occlusions and infection presented with acute on chronic lower limb ischaemia. Following repeated graft thrombectomies and axillo-femoral bypass excision and following lower limb duplex assessment, the patient underwent a supra-coeliac aorta to bilateral femoral artery bypass grafting using reversed femoropopliteal vein grafts.

Discussion: Femoropopliteal vein segments provide a valuable source of graft material when superficial autologous veins are unsuitable or unavailable. This presentation looks at the evidence base for such a procedure as well as at the consequences associated with harvesting deep lower limb veins.

p-009

Carotid body tumour surgery under locoregional anaesthesia

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Introduction: Patients with carotid body tumours are usually offered surgical excision of the lesion based on the rationale that they grow slowly and eventually cause pressure symptoms and that they carry a small but not insignificant risk of malignant change. Locoregional anaesthesia for carotid endarterectomy is a well-established technique but to our knowledge its application to carotid body tumour surgery has never been reported.

Case History: A thirty-nine year old lady presented with a painful left-sided pulsatile lump in the neck. This had been gradually increasing in size over a period of eighteen months. Magnetic resonance angiography confirmed the diagnosis of a carotid body tumour. The patient was also known to suffer from cyanotic congenital heart disease due to transposition of the great

arteries associated with Eisenmenger's phenomenon.

Management: The patient was given a superficial cervical plexus block and an inferior alveolar nerve block using a mixture of 0.5% L-Bupivacaine and 2% Lignocaine. The tumour was dissected off the carotid vessels and removed *en masse*. Histology confirmed the diagnosis of a benign chemodectoma.

Discussion: This patient was considered to carry an extremely high mortality risk from general anaesthesia. This poster looks at the various anaesthetic risks associated with Eisenmenger's syndrome and discusses the techniques by which carotid body tumour surgery can be carried out under local anaesthesia.

p-010

Cardiovascular risk factors in patients with peripheral arterial occlusive disease: Primary care awareness and management

MF Caruana, RE Brightwell, S Mitchell, AE Cameron, IS Osman. *The Suffolk Vascular Unit, Ipswich General Hospital NHS Trust, UK*

Introduction: Peripheral arterial occlusive disease (PAOD) is a major indicator for coronary heart disease (CHD). The importance of risk factor management in patients with PAOD in the secondary prevention of cardiac ischaemic events, cerebrovascular events and other thromboembolic events may be under-recognised by primary care physicians

Aim: To assess the degree by which cardiovascular risk factors are recognised and managed by primary care physicians in patients suffering from PAOD and referred to the vascular clinic.

Methods: A prospective observational study looking at risk factor management in 500 consecutive patients referred to the Suffolk Vascular Unit with PAOD between February 1999 and June 2002.

Results: Described per risk factor. Dyslipidaemia: 109 (21.8%) of patients were known to have a dyslipidaemia and were taking lipid-lowering medication. A further 188 (37.6%) were newly identified as having a random total serum cholesterol level greater than 5.0 mmol/L. Diabetes: 92 (18.4%) of these patients were known to suffer from diabetes. A further 9 (1.8%) were newly diagnosed as being diabetic in the clinic. Hypertension: 252 (50.4%) were found to have a resting blood pressure of more than 140/85 mmHg. Smoking: 132 (26.4%) of patients were actively smoking at the time of referral and 23 (4.6%) of this group stopped smoking following advice from the clinic. Antiplatelet therapy: 190 (38%) of patients were not on any form of anti-platelet therapy, when indicated clinically, at the time of referral. Patients were more likely to be on an anti-platelet if they had a history of concomitant Ischaemic heart disease or Cerebrovascular disease.

Conclusions: The prevalence of cardiovascular risk factors in this group of patients is high. Despite this, their importance in relation to subsequent cardiovascular events remained under-recognised in the primary care setting during the period of study.

p-011

Altering pretreatment donor cell MCH class I, class II antigen and notch ligand Delta1 expression prolongs graft survival in allogeneic

vascularised heart transplants

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Background: Allogeneic transplantation experiments, in which mice are pretreated intravenously with L-cells bearing recipient MHC class I antigens and donor MCH class I or class II antigens, have shown prolongation of graft survival (ref). This effect depends on the immunogenicity of the antigens and the load delivered. Here, transplant recipients were pretreated intraperitoneally with donor MCH class I or class II antigens transfected with the Notch ligand Delta 1 (Dl1) and EGFP using a bicistronic vector.

Aim: To see if the level of expression of donor MHC class I and/or class II antigens in the presence of Dl1 alters graft survival in allogeneic vascularised heart transplants.

Methods: The levels of expression of donor MHC class I (H-2Kb) and class II (H-2Ab) antigens were measured by flow cytometry using fluorescent antibody labeling. Dl1 expression was estimated from EGFP expression. The level of expression of MHC class I, class II and Dl1 was measured using mean channel fluorescence. L-Kb/Dl1 cells bear MHC class I and Dl1 while L-Ab/Dl1 cells bear MHC class II and Dl1. Three groups of C3H mice were pretreated with a mixture of 5×10^6 L-Kb/Dl1 cells + 1×10^6 L-Ab/Dl1 cells administered intraperitoneally. The mice underwent a vascularised heterotopic cardiac transplant from C57 BL/10 donors on day 14 and were followed up to 100 days post-transplant. Graft rejection was recorded as the loss of palpable graft contraction.

Results: Compared to the group without pretreatment, all other groups show some prolongation of graft survival.

In L-Kb/Dl1 cells, drop in MHC class I levels yielded a higher mean graft survival time despite a concurrent drop in Dl1 expression.

In L-Ab/Dl1 cells, a substantial increase in MHC class II levels concurrent to the changes in 2, had no apparent effect while Dl1 expression remained constant in all groups.

Conclusions: Graft survival is prolonged in allogeneic vascularised heart transplants pretreated with L cells with reduced levels of expression of MHC class I antigen and Notch Ligand Delta 1 (Dl1). The relative contribution of MHC class I antigen and Notch Ligand Delta 1 expression to this finding is not clear and is the subject of further investigation.

p-012

The changing face of acne

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Acne is changing with an increasingly larger number of patients aged > 20, ever more frequent cases of previously effective therapy found wanting, and better informed patients who do not see acne and its sequelae as a natural process but demand its cure. This presentation discusses all the above with special emphasis on antibiotic resistance and its possible contribution by time honoured management regimens, the appearance of adult acne, and the real place of Isotretinoin in management. A large series of patients treated over a five year period is presented together with the results of treatment.

p-013

A case of presumptive *mycobacterium balnei* infection

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A 55 year old patient developed a nodule over the proximal metacarpophalangeal joint while flying to Australia. He has kept an

aquarium for years and remembered cleaning it out a short while before leaving Malta. The clinical appearance and histopathological findings were in keeping with an aquarium-acquired mycobacterium balnei infection. Bacteriological studies were negative. Treatment with rifampicin and INAH for 6 weeks was highly effective. The nature of this occasionally deceptively benign infection is discussed together with its epidemiology, prevention, recognition, differential diagnosis, and the possible modalities of treatment.

p-014

Parapharyngeal tumours and transmandibular approach to the infratemporal fossa

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Parapharyngeal space tumours comprise 0.5-1 % of all head and neck neoplasms; Diagnosis can be delayed due to its distensible boundaries.

Limited access and critical nearby structures complicate surgical intervention. Location, malignancy, size of the tumour and its relationship to vascular and neurological structures dictate the choice of surgical approach.

A case of left infratemporal fossa lesion is described and its removal by a transmandibular approach.

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p-015

The 'Dizziness Clinic' – An evaluation

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Dizziness is a common complaint among patients in general practice. Despite the high prevalence and the morbidity associated with dizziness and balance disorders it often happens that once obvious and sinister causes have been excluded patients are assured and advised to learn to live with it. Also besides the multitude of vestibular disorders that can cause imbalance and vertigo (ICD code 386) other medical problems, cardiac, psychiatric, haematologic, vascular, ophthalmological, neurological and other disorders can present with a similar complaint of dizziness. In 1972 Drachman and Hart⁽¹⁾ introduced the concept of a 'Dizziness Clinic', which they felt was necessary to diagnose the origin of this symptom. Surveys also indicate that general practitioners feel the need for their patients to have access to a 'one-stop dizziness clinic'. The ENT Department has provided the service of a special clinic for the evaluation of the dizzy patient since May 2000⁽²⁾. The components of this service are the relevant assessment and investigation in the proper set-up, and thereafter the diagnosis and treatment and/or rehabilitation, or further referral as required. A database of the patients seen in this clinic, which comprises 1132 patients, adults and children, seen from the beginning of May 2000 to the end of August 2003, has been a source of information regarding the frequency of the various disorders presenting with the complaint of dizziness. The majority of the patients had a disorder of the peripheral vestibular system, the most common diagnosis being that of benign paroxysmal positional vertigo. The broad spectrum of conditions diagnosed demonstrates the value of such a clinic. The findings have been compared to data from other 'dizzy' clinics⁽³⁾.

References: Drachman D.A., Hart C.W. An approach to the dizzy patient. *Neurology* 1972; 22: 323-334, Department of Health Circular 101/2000. Referral of Patients Suffering from Dizziness and Vertigo Surenthiran S.S. General features and trends in patients presenting to a neuro-otology clinic. *Journal of Audiological Medicine* 2001; 10 (2): 125-135.

p-016

Acute paediatric cervical abscess

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Acute neck swellings are generally treated with antibiotics, proceeding to incision and drainage if an abscess is suspected and fluctuation develops. An acute cervical abscess in a child poses a specific dilemma, as it may be the presentation of an underlying predisposing congenital condition. In addition, any also any form of surgery in the neck can have serious implications for nerve and vascular damage. A five-year retrospective study analysing trends in microbiology, antibiotic sensitivity, clinical evaluation and management of children presenting with an acute cervical abscess of four weeks duration or less was performed.

The case notes of 175 children admitted between January 1996 and December 2000 to the acute surgical admission unit at the Royal Hospital of Sick Children, Glasgow were studied.

There were 90 males and 85 females with a mean age of 3 years (range: 1month to 13 years). One hundred and twenty three (70%) children underwent surgery with pus being confirmed in 114 (93%) of cases. Ultrasound was performed in 70 patients with 48 proceeding to surgery. Positive culture of pus from the abscess cavities revealed *Staphylococcus aureus* in 68% (85% sensitive to flucloxacillin and erythromycin) and *Streptococcus pyogenes* in 23% (80% sensitive to penicillin and 75% to erythromycin). Nine patients had complications.

The role of investigations, clinical signs and symptoms, and treatment options in the management of neck abscesses is discussed.

Keywords: Surgery, Paediatrics, Abscess, Cervical, Microbiology

p-017

A review of Maltese cochlear implant patients

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Patients presenting to the audiology unit with bilateral profound sensorineural hearing loss and who do not benefit from sound amplification with conventional hearing aids are referred for possible cochlear implantation if they fit into a specific criteria.

The first Maltese patient operated for cochlear implantation was a three year old post-lingual girl in January 1996 in Manchester U.K. She suffered from meningitis leading to complete deafness. Since then another eight children and four adults with different aetiology have been successfully operated and regularly followed up. Another five teenage boys were found not suitable for implantation after being audiological assessed.

All cases were referred for initial assessment in Manchester after the diagnosis was confirmed locally following a battery of tests including auditory brain stem responses and a trial period with behind the ear hearing aids. Those cases who passed the initial assessment were operated in Manchester by the same team. The results obtained in these last seven years were very encouraging and all children with cochlear implants attend main stream schooling. All paediatric and adult cases are rehabilitating very well in the local community - the former cases receive a very comprehensive education and speech therapy programme.

It is envisaged that in the near future a cochlear implant centre will be included as part of the local audiology unit where implanted children and adults will have their regular audiological follow up done locally. This will include the 'mapping' of their speech processor. This will be more cost effective and looked upon favourably by the patients and their parents who have to go abroad at least twice a year for the first couple of years.

The local cochlear implant association is doing valuable work towards the well being of such patients while the full collaboration of our department of health is indispensable. Awareness among the general population is on the increase and from the great enthusiasm being shown by all people concerned it seems that cochlear implants are here to stay.

p-018

Sacroiliac torque: another cause of low back disorder amenable to manipulation

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Objective: Sacroiliac torque is presented as another cause of low back disorder that confronts primary care physicians. It has been introduced as a new concept in the mechanics of low back injury which is amenable to simple manipulation that may be performed in the initial assessment of a patient.

Quality of Evidence: Pub-Med and Medline were used as data bases. No publications were available under Sacroiliac Torque. There is no documentation of SI Torque in the medical literature. Therefore, the quality of evidence of SI Torque remains highly theoretical and hypothetical.

Introduction: Low back disorders are some of the most common and clinically baffling conditions confronting a Family7 Physician in daily practice. Most diagnostic measures available, including laboratory, radiology and sophisticated diagnostic imaging, often fail to produce a definitive diagnosis. An encompassing (mechanical low back disorder) diagnosis fails to determine the specific nature of the disability. A back injury is often caused by a twisting movement of the vertebral column as may happen in the process of bending, lifting and twisting. It may occur in routine daily activities, in athletic activities or in manual labour.

Back mechanics and sacroiliac torque (SIT): The anatomy of the vertebral column and SI joints are briefly discussed. Torsion of the vertebral column caused by an excessive rotational movement of the upper body may result in subluxation and locking of the thoracic facets in malalignment with the sacroiliac joints acting as anchors, causing a mechanical torque and a painful back.

Clinical Features; Symptomatology may not be different from other injuries to the back, with tenderness at the sacroiliac joints and evidence of muscle spasm and restricted back movements. However, manipulation may produce immediate relief from pain in cases of SIT.

Manipulation: This seems to be the domain of chiropractors and osteopaths in North America, maybe less so in the United Kingdom. Physicians are notoriously averse to any manual form of treatment. However, a gentle manipulation of the spine may be undertaken at an initial examination or subsequently. No damage can be incurred by this particular manipulation which may take approximately two minutes to perform.

Discussion: The theoretical logic to explain a manipulative manoeuvre may be faulty. It may be argued that any manipulation may cause slips or snaps by displacing the facet joints, even when they are in good alignment. Indeed this may undoubtedly occur, especially if excessive force is exerted on a subject by an overzealous physician, more so, if the subject has a frail constitution,

Conclusion: The theoretical concept of sacroiliac torque has been introduced as one form of mechanical low back disorder which has never been described before in medical literature. Low back manipulation may be used as an aid in early diagnosis and treatment. With such manipulation SIT patients may walk away from the examination table with immediate relief from pain, thereby preventing a protracted low back disability. This provocative paper is aimed at stimulating more study and research on this topic.

p-019

General practitioners' perception of physiotherapy in Malta

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Purpose: Physiotherapy has become a well established profession in Malta with General Practitioners (GPs) gradually becoming aware of its potential. A sound perception of physiotherapy amongst GPs, should enhance and acknowledge further the profession's potential. This study analyses GPs' views of physiotherapy, their referral patterns, methods of communication with physiotherapists and educational background in physiotherapy. The results obtained could be used to create a better awareness of physiotherapy

within the population studied.

Relevance: Through evaluating GPs' views of physiotherapy this study establishes their current perception on the subject and serves as a stepping stone to foster better interprofessional relationships.

Subjects: The subjects selected consisted of all practising GPs in Malta based on the records of the Malta College of Family Doctors.

Methods: The study performed was that of a non experimental descriptive research design. A covering letter was sent along with the questionnaire which was designed specifically for the purpose of the study together with a self addressed and stamped envelope to all the 271 GPs. Two weeks were allowed for the questionnaire to be completed and returned. A reminder letter was sent to all the population. A total of 148 (55%) responded.

Analyses: The data obtained was entered and analysed using the SPSS statistical package. Results consisting of percentage frequencies were graphically displayed using bar charts and pie charts. Hypothesis tests were carried out using contingency tables, cross-tabulations and the Pearsons Chi-Squared test.

Results: A 55% response rate was obtained with 148 (115 male, 29 female) questionnaires returned. Respondents' ages ranged from 25 to 75. The majority of GPs (64%) considered themselves somewhat familiar with physiotherapy with only 32% being very familiar. While 60% of respondents consider physiotherapy qualification to be a diploma, 34% are aware that it is a bachelor's degree. 86% of GPs believe that a patient needs a referral from a doctor before seeing a physiotherapist. While there is 100% agreement that physiotherapy has a role in musculoskeletal disorders 57% agree that physiotherapy has no role in cardiovascular disorders. 78% of GPs agree that communication between the two professions is poor and 53% of GPs occasionally receive feedback from physiotherapists. Of all respondents 90% agree that GPs should have more exposure to physiotherapy.

Conclusion: GPs are familiar with physiotherapy as a profession however they do not know what the training of physiotherapists consists of nor the extent of treatment options offered to meet the unique needs of individual patients. GP education in physiotherapy is lacking and communication between the two professions is also poor.

p-020

Defect in dorso-ventral patterning in a spontaneously aborted foetus

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We report on a spontaneously aborted 13-week male foetus, born with a reversed orientation of the head and upper limb relative to the rest of the body. The head and both upper limbs were facing dorsally while the lower limbs, the abdomen and the thorax were in their normal orientation. The vertebral column was abruptly rotated through 180° at the level of the seventh cervical vertebrae. The clavicles were in their normal positions, and the scapulae were located dorsally while the arms and forearms were directed posteriorly with the elbow flexure directed caudally and the preaxial border directed cranially. The left palm was facing medially, whereas the right palm was facing laterally. The orientation of the right upper limb was equivalent to a medial rotation through 180° at the shoulder joint, while the left upper limb appeared to be a replica of the right upper limb. In addition, the right hand was dorsiflexed at the wrist, while the left hand had a short 2nd digit with absence of the middle and distal phalanges. Both lower limbs had talipes calcaneovalgus. The heart showed a conotruncal defect and single ventricle. The spleen was absent. The other viscera were normal. We interpret this abnormality as a field defect of dorso-ventral patterning of the cranial part of the trunk and upper limb buds, affecting also septation of the outflow tract and ventricle, which develop embryologically in the cervical region. Dorso-ventral differentiation is regulated by Wnt-7a, a member of the Wnt family, which induces the expression of Lmx-1, a Lim homeobox gene that may be responsible for dorsalization of limb buds.

p-021

The Neu-Laxova Syndrome: analysis of a cluster of cases in the Maltese Islands

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The Neu-Laxova syndrome is generally described as a rare lethal autosomal recessive disorder. We report on a cluster of six cases of the Neu-Laxova syndrome that occurred in the Maltese Islands within a period of less than one year between August 2002 and June 2003. The characteristic features in the babies with this syndrome were intra-uterine growth retardation, severe microcephaly, protruding eyes, microphthalmia, cataracts, absent eyelids, cleft lip and palate, small limbs, limb deformities, multiple joint contractures, oligodactyly, syndactyly, ichthyosis and gross subcutaneous edema. The brain was invariably very small with agyria or pachygyria, relatively large ventricles, agenesis of the corpus callosum and a hypoplastic cerebellum. There were marked and very characteristic radiographic abnormalities affecting the skull and limbs. We report new histological findings affecting the skin and subcutaneous tissues. The inter-familial variability of this condition was analyzed. Although there was a statistically significant temporal clustering of cases of this rare condition, there was no identifiable uniformity in relation to geographic distribution, maternal and paternal ages and occupations, unusual exposures to chemicals or radiation during pregnancy. There was of a possibly affected sib in only one of the families, while the family histories were negative in all the other families. Such a cluster of cases has not been previously reported and is discussed in relation to the available evidence on which this syndrome is presumed to be autosomal recessive.

p-022

46, XX Gonadal dysgenesis, short stature and mental retardation in three sisters

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Gonadal dysgenesis in 46 XX individuals is genetically heterogenous. Both sporadic and inherited forms have been described. Some cases have been reported to occur in association with congenital deafness, dysplastic kidneys, short stature or episodes of metabolic acidosis. We report here three sisters, in a sibship of nine sisters and 1 brother, who have primary ovarian failure, mental retardation and short stature. All three sisters were found to have streak gonads on ultrasound. They all had primary amenorrhoea and normal secondary sexual characteristics. Their endocrine profile showed high levels of FSH and LH and one of the sisters had prolactinaemia. Their intellectual capabilities are impaired and they are moderately mentally retarded. Their height is far below the third centile and below the average height in their family. All three sisters have a characteristic facies, with a short philtrum, long columella and prominent antihelix. They also have a short neck with a moderate degree of kyphoscoliosis. One of the sisters had a congenital papillomatous lesion behind the right ear. Routine chromosomal analysis showed a 46XX karyotype.

p-023

Rett syndrome – Clinical and molecular genetic correlations

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Rett syndrome is an X-linked dominant condition resulting from mutations in the MECP2 gene. Approximately 99.5% of cases are sporadic. Classical Rett syndrome affects girls. It is a progressive neurological disorder characterized by normal birth and apparently normal psychomotor

development during the first 6-18 months of life and the loss of purposeful hand use. The diagnostic criteria for Rett syndrome also include an acquired microcephaly, severe impairment of expressive and repetitive language skills, severe psychomotor retardation and the development of gait apraxia and truncal ataxia between the ages of 12 months and 48 months. However since the use of molecular biological techniques for the diagnosis of Rett syndrome, several atypical cases have been identified. Mutations in the MECP2 gene have been identified in individuals with patients previously diagnosed with autism, mild learning disability or mental retardation with spasticity or tremor. Males meeting the clinical criteria for Rett syndrome have identified with a postzygotic MECP2 mutation resulting in mosaicism.

We present here our initial experience with molecular diagnosis in Rett syndrome. In two girls who presented with the clinical picture of Rett syndrome, a different truncating mutation was identified in each. A rare single nucleotide substitution was detected in a third girl with an atypical presentation. These cases will be presented and discussed.

p-024

Familial periventricular heterotopia: Mutation in the FLN1 gene

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Familial bilateral periventricular heterotopia (BPNP) is a neuronal migration disorder characterized by the presence of uncalcified nodules of neurons ectopically situated along the surface of the lateral ventricles. It is an X-linked dominant condition and has been associated with protein truncations or splicing mutations, which tend to cluster at the N-terminal of the FLN1 protein causing severe predicted loss of the protein function. Prenatal lethality is associated with hemizygous boys.

We would like to present two sisters who presented with epilepsy. Their MRI investigation showed bilateral periventricular nodular heterotopia. A third sister presented with recurrent miscarriages but on investigation, her MRI also showed signs of periventricular heterotopia. Their mental capabilities were normal. DNA analysis of their DNA for mutations in the FLN1 gene showed a dinucleotide substitution leading to protein truncation, which was maternally inherited.

p-025

The national human DNA biobank in the post-genomic era

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The DNA biobank at the laboratory of molecular genetics, based at the University of Malta, was established five years ago. It holds a substantial collection of DNA which was generated from blood samples, submitted to the laboratory for molecular diagnosis of genetic disorders and through the neonatal and antenatal screening programmes for thalassaemia and other haemoglobinopathies. Recently, Malta became a partner in a new Eurodis project entitled EuroBioBank. This project brings together eight different countries of the European Community, thus gathering twelve banks and facilitating the access to a total of nearly one hundred and fifty thousand samples of DNA, tissues and cell cultures. The main aim of the project is to set the first operating network of rare diseases biological banks, thus reaching a critical mass of collections indispensable for research on rare diseases affecting around ten to twenty million people in Europe. Through this project the management of the Maltese biobank is being upgraded to European standards. Ultimately, European recognition and certification, would also endow our biobank with the status of a teaching centre on biobanking.

p-026

A variant of apple peel small intestinal atresia and agenesis of the mesentery in a spontaneously aborted fetus

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We report on a variant of apple peel atresia in a 19 week female fetus in a triplet pregnancy, born to non-consanguineous parents, and spontaneously miscarried at 19 weeks gestation. Apple peel intestinal atresia derives its name from a distal loop of small intestine twisted around the marginal artery.

The mother was a 27-year-old lady who had a six-year-old, apparently healthy son. She had polycystic ovaries and secondary infertility, and had ovarian stimulation with clomiphene, which was followed by a triplet pregnancy. She was prescribed dydrogesterone and folic acid, and a low calorie diet because of mildly deranged blood glucose levels. At 19 weeks gestation, she miscarried all 3 fetuses.

Triplet 1 was a female foetus whose crown-rump length, occipito-frontal and biparietal diameters corresponded to dates. There were no obvious external abnormalities. Detailed post-mortem examination showed an abnormal arrangement of the intestines. The stomach was normal while the duodenum was grossly distended and meconium-stained, and the jejunum was short, distended with meconium and arranged in the form of a spiral with its apex anteriorly. The small intestine lacked a mesentery. There was a short atretic segment of small intestine extending to the ileo-caecal junction. The large intestine was collapsed; the caecum and appendix were situated in the midline just below the liver in contact with the ligamentum teres, while the rest of the large intestine was irregularly coiled on the left side of the abdomen. The anus was patent. The rest of the examination was normal.

Detailed pathological examinations of spontaneously miscarried fetuses are not performed routinely in most hospitals, although they may be of great practical importance in genetic counselling, in providing insights into the pathogenesis of anomalies and in detecting anomalies that are rarely encountered in neonates because of their early lethality.

p-027

FISH: Application in the diagnosis of haematological malignancies

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The use of cytogenetics for the detection of chromosomal abnormalities in haematological disorders is of vital importance. Chromosomal findings such as translocations, deletions and inversions are important for the classification and diagnosis of such disorders. In the acute leukaemias, the karyotype may be an important and independent prognostic factor in predicting remission, length of remission, and risk of relapse. Many studies showed that cytogenetic analysis and the identification of chromosomal aberrations were directly related to the treatment strategies adopted for each patient. The role of cytogenetics in diagnosis and management of leukaemias depends largely on the availability of abnormal bone marrow cells for karyotyping and the quality of metaphase spreads. Metaphase spreads from leukaemic cells are usually of inferior quality and quantity as compared to normal cells, which makes the detection of certain aberrations a tedious and difficult job. With the use of molecular cytogenetic techniques such as fluorescence in situ hybridisation (FISH), identification of certain aberrations that would not be resolved by conventional cytogenetic techniques is now possible. Moreover, FISH has the advantage over cytogenetics to investigate the chromosomes and genes in interphase as well as in metaphase cells. This presentation will highlight the importance of FISH in the detection of certain chromosomal abnormalities, and how such results will help in the management of patients with haematological

malignancies.

p-028

Selection of medication in hospitalised elderly patients with angina pectoris

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Objective: To evaluate medication changes in hospitalised elderly patients diagnosed with angina pectoris and to compare the selection of medication with evidence-based treatment guidelines.

Design: Review of medical notes and patient interview.

Setting: St. Luke's Hospital, Malta; January - May 2001.

Subjects: 226 patients, aged 60 years or over, with a history of chronic stable angina and a discharge diagnosis of angina.

Main outcome measures: Prevalence of use of antiplatelet agents, lipid lowering agents, beta-blockers, calcium channel blockers, nitrates, potassium channel openers and cellular anti-ischaemic agents; presence of co-morbidities, concurrent medication and adverse effects.

Results: Prior to discharge, 77% of patients were receiving antiplatelet agents and 27% were receiving lipid-lowering agents. The most frequent anti-ischaemic agents used were nitrates (97%) and second-generation dihydropyridine calcium channel blockers (59%). Beta-blockers were used in 31% of patients and non-dihydropyridine calcium channel blockers were used in 4% of patients. Potassium channel openers (nicorandil) and cellular anti-ischaemic agents (trimetazidine) were used in 5% and 19% of patients respectively.

Of patients discharged on a single anti-ischaemic agent, 96% were on nitrates, while 64% of those using two agents were on nitrates and dihydropyridine calcium channel blockers. Beta-blockers, nicorandil and trimetazidine were generally used in conjunction with at least two other anti-ischaemic agents. The major medication changes involved the addition, or increase in dose, of amlodipine and isosorbide dinitrate. The major determinants affecting choice of medication were age and co-morbidities.

Conclusion: Medication selection for chronic stable angina was not in accordance with treatment guidelines.

p-029

Treatment of differentiated thyroid cancer in the Maltese Islands

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Differentiated thyroid cancer is a relatively common cancer with an incidence that is on the increase throughout Europe and possibly even in the Maltese Islands. Early diagnosis and adequate treatment lead to a successful outcome in most cases and death due to thyroid cancer progression is rare.

Treatment relies on a multidisciplinary approach with involvement of surgeons, oncologists and nuclear medicine physicians. We review the current protocol being used in the Maltese Islands that involves total thyroidectomy, radioactive iodine (¹³¹I) ablation, repeated as necessary, and suppressive doses of thyroxin. Subsequent follow-up involves the use of serial thyroglobulin measurements as well as low-dose ¹³¹I whole-body scans.

Between January 1998 and May 2002, 30 patients received a total of 66 ¹³¹I treatment doses. At follow-up, >60% of patients are free of residual thyroid tissue and metastatic disease. Further follow-up will be necessary to determine the long-term outcome of these patients.

p-030

¹²³I MIBG scintigraphy in patients with neuroblastoma – The Malta Experience

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Neuroblastoma is one of the commonest paediatric solid tumours with an incidence in the Maltese Islands that is similar to Western European figures. Tc 99m – methylene diphosphonate (MDP) and I 123 – meta-iodobenzylguanidine (MIBG) isotope scans are essential tools for the management of these patients as they provide unique information that is not available by other means.

We report on our experience with I 123 MIBG in scanning paediatric patients with neuroblastoma. Between March 1997 and September 2003, 5 patients were examined and a total of 9 scans were performed, at the time of initial diagnosis as well as in follow-up. All these patients also underwent bone scintigraphy as part of the protocol used in our hospital. I 123 MIBG scintigraphy has several advantages over routine imaging modalities; it involves a relatively low dose of radiation, provides excellent images, allows imaging of the whole body in one session, is very sensitive as well as specific, detects the presence of residual tumour following therapy and permits dosimetry studies when therapy with I 131 MIBG is considered.

The major disadvantage is that the relatively short half-life of 13.2 hours results in logistic difficulties in our country, as there are no direct road links to mainland Europe. Proper scheduling of shipment and scanning with co-operation between manufacturers, airlines, road transport networks, local customs officials, hospital staff and patients/parents are essential for a successful outcome.

p-031
Local and distant recurrence rates following treatment of early breast cancer

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The case notes of the first hundred female patients diagnosed with early breast cancer after August 1999 and treated at Boffa Hospital were reviewed and the rates of both local and distant relapse will be presented. Information on stage at presentation, grade of tumour and treatment received will also be reviewed. Median duration of follow up is still short but the study is ongoing.

p-032
In Vitro bioactivity of crude Maltese honeybee propolis

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Propolis is a resinous hive product collected by honeybees from various plant sources and was reported to have cytotoxic and antitumour effects.¹

Crude Maltese honeybee propolis was extracted following the extraction method of Kadota *et al.*² to yield a methanol extract. The *in vitro* bioactivity of this extract was studied on human tumour cell lines by means of MTT cytotoxicity assays. The extract was differentially cytotoxic in a dose-dependent fashion on several tumour cell types. Assays carried out on COLO 679 melanoma cells and K-562 leukaemic cells yielded 50% inhibitory concentrations (IC₅₀) of 38.49 ± 1.79 mg/ml and 37.84 ± 1.09 mg/

ml respectively, for these cells. Morphological appearance of cells during the assays was observed by means of an inverted, light microscope, using phase contrast.

Experiments to investigate the mechanism by which the propolis extract induces tumour cell death are being carried out. Also, identification of the constituents of various bioactive propolis samples, allowing for structure elucidation and possible drug development, are envisaged.

³ Banskata AH, Tezuka Y, Kadota S. Recent progress in pharmacological research of propolis. *Phytother. Res.* 15, 561-571 (2001).

² Usia T, Banskata AH, Tezuka Y, Midorikawa K, Matsushige K, Kadota S. Constituents of Chinese propolis and their antiproliferative activities. *J Nat Prod* 2002; 65, 673-676.

p-033
Cytokeratin 20 as a marker for urothelial carcinoma cells in urine specimens

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The detection of urothelial carcinoma is usually performed by urine cytology, which relies on morphological abnormalities of neoplastic urothelial cells. Urine specimens however may exhibit degeneration and inflammatory/reactive cellular changes which may render definite diagnosis difficult to distinguish from low grade urothelial neoplasia. Specific and sensitive bladder tumour marker may improve the accuracy of routine cytological diagnosis.

Cytokeratin 20 (CK 20), an intermediate filament, has been shown to be expressed in urothelial neoplastic cells but only occasionally in the normal urothelium. The aim of this study was to evaluate the efficacy of immunocytochemistry against Cytokeratin 20 on cells from voided urine specimens for the detection of urothelial carcinoma.

109 urine samples were obtained from a spectrum of individuals and were divided into three groups. Group 1 involved healthy asymptomatic individuals, group 2 included patients with various benign conditions, and group 3 cases were from patients with various grades of urothelial carcinoma, confirmed by cystoscopy and histology. Immunostaining against Cytokeratin 20 was performed on cytocentrifuge urine preparations.

With a 10% positively stained urothelial cells as a cut off value, CK20 positivity resulted in 19/19 of group 3 cases (100% sensitivity). 20/20 of group 1 and 63/70 of group 2 cases were CK 20 negative (92% specificity). Urine cytology alone showed a 100% sensitivity and 86% specificity.

This study demonstrated that immunocytochemistry for Cytokeratin 20 is a specific and sensitive adjunct non-invasive method with the potential to be used as an indicator to better distinguish between inflammatory/reactive and neoplastic cellular changes in urine cytology specimens.

p-034
An investigation into the chemical composition and in vitro apoptosis - inducing bioactivity on cancer cells of resin extracts from *Tetraclinis articulata* (Vahl) Masters

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A total of 12 semi-purified fractions were obtained from *Tetraclinis articulata* resin using conventional alkali treatment and solvent gradient column chromatography, with further separation and purification to isolate pure components, achieved by preparative TLC. Components isolated were subjected to ²H, ¹³C NMR and DEPT spectra analysis and

identification attempted by comparison with known diterpenes from conifers. GC-MS analysis was used after silylating the resin/fractions to render them more volatile. This method was only partly successful for the diterpenes for lack of an adequate diterpene silyl ester database. Combining the two methods a number of labdane, pimarane and totarane diterpenoid compounds have been identified with a good degree of certainty. The study also focused on the *in vitro* cytotoxicity induced by different concentrations of the whole resin and resin fractions, on human neoplastic cell lines. Thiazolyl blue (MTT) monitored changes in respiratory activity, have been found to be dose-dependent with IC_{50} s in the 2 mg/ml - 20 mg/ml range. Furthermore the whole resin is less cytotoxic *in vitro* to mitogen-stimulated peripheral blood lymphocytes with GI_{50} s in the 50 mg/ml. Morphological changes in cell and nuclear size, chromatin condensation and the formation of apoptotic bodies, were monitored both in unstained and acridine orange-stained material. Flow cytometry was used to demonstrate the appearance of a hypodiploid DNA peaks and changes in cell cycle, after staining treated cells with hypotonic propidium iodide (PI) further confirming that the mode of cell death induced by the resin and its fractions is apoptotic.

Key Words: Apoptosis, *Tetraclinis articulata*, resin, diterpenes.

p-035

Investigation on the anti-neoplastic activity of a bioactive extract derived from *Ricinus communis*

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Several drugs used in cancer chemotherapy are derived from natural sources.¹ An extract from the leaves of the castor oil plant, *Ricinus communis*, was obtained by steam distillation. The *in vitro* bioactivity of this extract was studied, on human tumour cell lines and peripheral blood mononuclear cells, by means of MTT cytotoxicity assays.

A combination of techniques was used to monitor the biochemical and morphological changes characteristic of apoptosis, to investigate the mechanism by which *Ricinus communis* extract influences SK-MEL-28 melanoma cell growth.² At low concentrations, staining with quinacline dihydrochloride revealed changes in nuclear size and shape, chromatin condensation and fragmentation, and formation of apoptotic bodies. Propidium iodide-stained cells revealed sub-diploid nuclei by flow cytometry. The expression of phosphatidyl serine on the outer surface of the cell membrane was observed by fluorescence microscopy. Loss of mitochondrial membrane potential, associated with the early stages of apoptosis, was demonstrated by flow cytometry. The principal constituents of the extract were compounds classified as terpenoids, shown by GC-MS analysis.

In conclusion, *Ricinus communis* extract is composed of a number of terpenoids, which are cytotoxic to a variety of human tumour cell types and are capable of inducing apoptosis in SK-MEL-28 melanoma cells at low concentrations, as demonstrated by a number of experiments. This extract may thus be a useful tool in further anti-cancer studies and drug development.

¹Chabner BA, Longo DL, editors. Cancer chemotherapy and biotherapy: principles and practice. 3rd ed. Philadelphia: Lippincott Williams & Wilkins; 2001.

²Darzynkiewicz Z, Bedner E, Traganos F, Murakami T. Critical aspects in the analysis of apoptosis and necrosis. *Human Cell* 1998; 11(1): 3-12.

p-036

Human papillomavirus DNA testing using Catalysed Signal Amplification In Situ Hybridisation (CSA-ISH) on cytology and histology cervical specimens

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Epidemiological studies have shown, beyond any reasonable doubt, a strong, specific universal association between Human Papillomavirus (HPV) infection and cervical cancer. Molecular techniques for HPV DNA testing are being intensely investigated and may have a major impact in cervical screening and follow-up.

The main aim of this study is to assess whether Catalysed Signal Amplification In Situ Hybridisation (CSA-ISH) (Genpoint System, DAKO) may improve HPV detection in cervical cytology specimens.

54 colposcopy patients with normal cervical cytology but positive HPV changes on their cervical histology tissue sections were chosen. CSA-ISH was performed on cervical cytospin preparations and corresponding tissue sections using specific probes for HPV DNA detection and subtyping. Probes against HPV subtypes 6, 11, 16, 18, 31 and 33 were used.

CSA-ISH on cytology and histology sections showed a sensitivity of 78% and 96% respectively. CSA-ISH detected HPV DNA in 39 (72%) of negative cervical cytology cases.

This study demonstrated that HPV detection and subtyping by CSA-ISH is highly suitable as a diagnostic test in cervical histopathology and may prove a useful adjunct screening test in cervical cytology for monitoring patients with viral persistence and recurrent infections.

Keywords: HPV DNA testing, CSA-ISH, In Situ Hybridisation, Cervical Cytology.

p-037

MOC-31 and Ber-EP4 antibodies in the identification of adenocarcinoma in serous fluids

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One of the most common diagnostic difficulties in cytology is the differentiation between metastatic adenocarcinoma, malignant mesothelioma and inflammatory/reactive mesothelial cells in serous fluid specimens. Although there are a number of cytological criteria that have been advocated for making this distinction, in practice it may be difficult to resolve this differential diagnosis as a small percentage of cases do not meet these typical criteria. In these cases ancillary studies, in particular immunocytochemistry may be helpful in resolving this dilemma.

Various studies have pointed out the value of monoclonal antibodies MOC-31 and Ber-EP4, which have been noted to be very specific to adenocarcinomas in serous fluids. 60 cases of serous fluid specimens were collected, of which 40 were malignant and 20 were benign on cytology. In addition to these, 30 histological sections were also included comprising 10 cases of lung adenocarcinoma and 20 cases of malignant mesothelioma. The malignant cases comprised 50 adenocarcinomas and 20 malignant mesotheliomas. Immunocytochemical staining was performed on all the cases. MOC-31 showed 100 % sensitivity and specificity as it reacted with all the adenocarcinoma cases but was negative in the malignant mesotheliomas and inflammatory/reactive mesothelial cells. Ber-EP4 was negative in one case of uterine adenocarcinoma but positive in the other cases (96% sensitivity) but did not react with malignant mesothelioma and inflammatory/reactive mesothelial cells (100% specificity). This study has demonstrated that MOC-31 and Ber-EP4 antibodies are highly reliable and practical markers of adenocarcinomas, and are very useful to distinguish them from mesothelioma and mesothelial reactive cells in serous fluids.

Keywords: MOC-31, Ber-EP4, Adenocarcinoma, Mesothelioma, Serous fluids.

p-038

Frozen section immunohistochemistry in the diagnosis and classification of malignant lymphomas

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The accurate diagnosis and classification of malignant lymphomas are based on morphology, immunohistochemistry and sometimes molecular genetic studies. The aim of this study was to establish the use of frozen-section immunohistochemistry and to design a cost-effective antibody panel in the diagnosis of lymphomas at our centre. 27 cases of fresh lymph node specimens were studied with a panel of antibodies on frozen tissue and compared with the routine antibodies performed on B5-fixed and formalin-fixed paraffin-embedded sections, of which 11 cases were diagnosed as malignant lymphomas. On fixed paraffin sections, most of the antibodies performed better in B5-fixed tissues than in formalin-fixed sections. However, patterns of immunoreactivity of the lymphomas were similar on tissue fixed in either B5 or formalin. Frozen-section immunoperoxidase showed similar results to those on paraffin sections except for an increase in sensitivity for immunoglobulin light chain restriction, which on paraffin section was only demonstrated in 5/8 (62.5 %) of the B-cell lymphoma cases. In conclusion, the routine use of frozen-section antibody panel is not cost-effective or required in all cases, however it may be essential when paraffin section immunohistochemistry is inconclusive in the diagnosis of malignant lymphomas. Hence, fresh tissue should be procured to classify any case not resolved by paraffin panel in morphologically ambiguous cases.

Keywords: Immunohistochemistry, Phenotyping, Non-Hodgkin's lymphoma, Hodgkin's lymphoma, Antibody panel, Frozen section.

p-039

Comparison of specific congenital anomaly rates between 5 countries

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This study compares Maltese congenital anomaly rates with other countries. The diverse risk factors for each specific anomaly group make the overall rates less informative. A comparison table has been compiled by grouping defects by ICD-10 codes.

Malta Congenital Anomalies Registry (MCAR) data for the years 1995-2001 was used. East Sicilian data, based on Indagine Siciliana Malformazioni Congenite (ISMAL) data (1991 to 1998), has been used due to geographical proximity. EUROCAT data (1990 to 1999) gives an overview of the European experience. As a proxy global average rate, national data from Australia (1981 to 1997) and New York State (1995 to 1997) was used, in view of the cosmopolitan population in these regions.

One notices that Malta has the highest rate of malformations, namely cardiovascular and, to a lesser extent, neural tube defects.

One bias of these rates is that, being a small population, Maltese rates may be over- or underestimated. Moreover, while care has been taken to ensure maximum similarity between category definitions among countries, a few differences still exist.

The unavailability of therapeutic abortion in Malta could explain the higher Maltese rates. However, Malta has lower Down's syndrome rates. The higher cardiovascular anomaly rate could also be due to differences in registration criteria.

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p-040

Malta's accession to the European Union – Impacts on health and health care

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Abstract: In 1999 Malta officially began the accession process to the European Union. This required harmonisation in the following areas:

- Food Safety
- Medicines
- Tobacco Control
- Environmental health
- Regulation of health care professions
- Communicable disease surveillance and control
- Coordination of health care benefits

Harmonisation was pursued through the adoption of new legislation and setting up of administrative structures.

The positive impact factors for public health are likely to be:

- Increased standards for health with greater focus on health protection particularly in the areas of food, medicines and environmental health
- Modern legislation regulating all sectors in health
- Greater opportunities for health care professionals for work, training and research through networking
- Improved working conditions for health care workers
- Move towards greater harmonisation e.g. recommendation on cancer screening

The negative impact factors for public health are likely to be:

- Brain drain or unsustainable salary increases for health care professionals
- Possible increase in prices for medicines
- Court rulings invoking greater movement of patients (may be good for the patients)

p-041

The cost of keeping the Maltese ambulance fleet running

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The Maltese ambulance fleet consists of 16 ambulances, each of which appertains to one of three (3) models. Their Mean age from manufacturing, is 11.25 years (Median = 12, Max=16, Min.=7).

In the United Kingdom, an ambulance after two years of service is downgraded to a link vehicle. In Malta some of our ambulances have been imported second-hand from the U.K. and upgraded to be used as an ambulance. Financial constraints lead to 'satisficing' decisions to be taken, which while they may not be the optimal, are satisfactory for the time being'. Financial data analysis show, that the yearly maintenance expense on the Maltese ambulance fleet is rising exponentially with time. This cannot be simply be explained by an expanding fleet as the average yearly maintenance cost per ambulance is also increasing. Indicative of the source of the problem is the positive correlation between the age of an ambulance and the yearly cost of maintenance (correlation coefficient = +0.57 and coefficient of determination = 0.32, with P-value = 0.027). The formula to calculate the approximate yearly cost of maintenance for an ambulance of a certain age is: Yearly Maintenance cost = LM 157.8 + LM 62.8 x age in years².

The aging ambulance fleet is costing us a fortune to keep running and costs are going to increase further in the future.

If the entire fleet is replaced, each ambulance would cost Lm25000, this outlay includes a maintenance contract for 10 years. This would result in the net saving of the growing maintenance cost, over the coming 10 years of the present aging fleet.

Introducing a co-payment of Lm2 for each ambulance trip, with a daily average of 70 trips, would give an additional annual cash flow of circa Lm 50000.

This projected financial scenario combined with an introduction of, a co-payment of Lm2, produces an Accounting Rate of Return (ARR) of 15.5 %, and a Payback Period of 8 years. If a co-payment of Lm4 is introduced, it would result in a Net Present Value (NPV) when discounted at 7% of a positive Lm543400 in 10 years time.

Managerial Accounting empowers decision makers to select between alternative courses of action, to ensure cost efficiency. Short term 'satisficing' decision making is substituted by rational long term strategic planning³ taking into consideration the Political, Social, Environmental and Technological (P.E.S.T.) contextual framework and influences at the time.

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p-042

Follow-up of Hepatitis B immunisation in surgeons and theatre nurses

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Theatre staff are at high risk of contracting Hepatitis B, and this risk can be mitigated by immunisation. Five years ago a survey of theatre staff was carried out to assess the Hepatitis B immunisation status. An identical questionnaire was used to survey the current situation.

The result of this study revealed that more effort has got to be made to ensure that a greater proportion of high risk staff should be immunised against Hepatitis B. The authors discuss possible methods of achieving this goal.

p-043

Does selective viral neurotropism explain selective vulnerability of neurons in AIDS dementia?

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A simple concept of directly operative viral neurotropism appears inadequate to explain a full spectrum of phenomena associated with the creation of a viral reservoir as occurs with central nervous system HIV-1 infection. Indeed, a full series of directly and indirectly operative steps would appear implicated in several instances of viral encephalitis that would involve peripheral blood monocytes, CNS perivascular cells, vascular endothelia, and resident microglia. In an overall context of a highly integrated CNS and immune system responsiveness, viral encephalitis might actually constitute shifting levels of involvement ranging from dysregulation of cytokine production to autoimmune reactivity to potentially evolving pathways of secondary neuronal injury as by reactive oxygen radicals and phagocytic activity. HIV-1 infection of the CNS, in addition, would appear to add attributes of viral genomic integration and of possible emergence of resistance to anti-retroviral drug therapy to various other mechanisms arising from a central role played by CNS macrophages and microglia beyond a strict concept of viral neurotropism.

p-044

Clinical waste production in Malta

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Introduction: Sparse information is available in the literature on the quantities of clinical waste produced in hospital settings yet such data is important to allow clinical entities to determine whether waste segregation and minimisation efforts are producing the desired results.

Aim: To document the quantities of clinical waste produced at St. Luke's Hospital, a 900 bed tertiary care hospital in Malta.

Methods: On designated days, trained personnel visited all the wards and clinical sections within the hospital. All clinical waste bags (group A) and sharps containers (group B) destined for incineration were weighed and documented.

Results: The average quantities of group A and group B waste produced per hospital bed was calculated at 0.54 kg and 0.06 kg respectively. Estimates of clinical waste production from four small district and private non-teaching hospitals in the island yielded similar daily quantities.

Conclusion: The national production of clinical waste in Malta was estimated at 0.9 tonnes per 1000 population per year. This quantity is considerably less than that reported from a number of EU countries and may be the result of an intensive national campaign within healthcare facilities aimed towards more effective segregation and minimisation of clinical waste.

Keywords: hospital, clinical waste, audit.

p-045

Glucagon-like Peptide-1: From physiology to the treatment of Type 2 Diabetes

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The presence of 'incretin' hormones released by the gut in response to nutrient ingestion was first hypothesized in 1902 by Bayliss and Starling. Several subsequent studies in humans confirmed the presence of gut signals that potentiated pancreatic endocrine responses to carbohydrate intake. The term 'incretin' was later coined to describe this gut humoral activity. Identification of several such incretin hormones including glucose-dependent insulinotropic peptide (GIP) and glucagon-like peptide-1 (GLP-1) subsequently followed. GLP-1 has been shown to potentiate insulin secretion and inhibit glucagon secretion in a glucose dependent fashion. It inhibits gastric emptying and may have a central effect on satiety. These characteristics have led to the development of several incretin analogues as potential therapy for the postprandial hyperglycemia seen in type 2 diabetes (T2D). In vitro, GLP-1 has been shown to improve insulin action and glucose effectiveness. However, in vivo, its effects are less clear with various conflicting studies in the literature. Consequently, we have performed several experiments in humans investigating the ability of incretins to modulate glucose metabolism independent of their effects on insulin and glucagon concentrations as well as the magnitude of effect of GLP-1 on gastric emptying and satiety in healthy and diabetic humans. The results of our experiments have direct bearing on understanding the future therapeutic role of incretin-derived therapy in T2D.

p-046

Eosinophilic myositis associated with Behcet's Disease

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Behcet's disease, a systemic vasculitis of unknown aetiology, has a variety of clinical manifestations, the commoner ones including recurrent oro-genital ulceration, uveitis and rashes. Muscular involvement is a rare manifestation of Behcet's disease. Worthman¹, in a world literature search, found only 19 cases, while a review of 309 cases by Taarit² revealed only two cases. It has been suggested that the myositis in Behcet's disease passes through two different stages of inflammation – a granulocytic-monocytic phase followed by a predominantly lymphocytic infiltration phase.

We present the case of a 24 year old Maltese male who satisfies the International Study Group criteria for Behcet's disease, and who developed features of a focal myopathy which differs from that described in the literature in that, histologically, the inflammatory infiltrate included

significant eosinophilia.

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p-047

Glucocorticoid induced osteoporosis

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Glucocorticoids (GCs) are widely used in the treatment of inflammatory diseases, including various connective tissue disorders (such as systemic lupus erythematosus and other connective tissue disorders, polymyalgia rheumatica), obstructive airways disease as well as inflammatory bowel disease. Treatment with GCs, especially when given in a high dose and when prolonged, is accompanied by potential toxicities. Of these, one of the most important is bone loss, or osteoporosis¹, which, although initially asymptomatic, will worsen and increase the risk of fracture in patients on long-term treatment with GCs. It has been estimated that up to 30% of patients on long term GCs develop vertebral fractures², while the risk of hip fracture is increased by twofold³ compared with that of age and sex matched control subjects. Although several measures are available to prevent and treat GC induced osteoporosis, various studies show that these measures are only taken in a minority (15-40%) of patients receiving GCs^{4,5}. This paper describes the current understanding of the disorder as well as current recommendations for its prevention and treatment. It also evaluates the local current practice of managing the problem based on 100 patients attending the rheumatology clinic, St. Luke's Hospital and who are currently on treatment with GCs.

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p-048

Multifocal septic arthritis secondary to infective endocarditis of a normal valve

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This 34 year old lady was investigated for aches and pains and fever. She developed pain, swelling and erythema of left wrist and right inferior radioulnar joint and MCPs of both hands. On examination she looked systemically unwell, had puffiness around neck and face and bilateral lower limb oedema. She was afebrile and haemodynamically stable. She had swelling, erythema and synovitis of the distal radioulnar jt, MCPs & PIPs of the right hand and MCPs, index & middle finger of the left hand. There was fluctuation over the dorsum & palm of the left hand. There was restricted flexion & extension of the middle finger of the left hand and the wrists, but no other affected joints. Blood tests revealed a neutrophil leucocytosis and elevated inflammatory markers. Frank pus was aspirated from her right inferior radioulnar joint, dorsum of the left hand and middle MCP of the left hand. An urgent Gram Stain revealed Gram positive cocci. *Streptococcus pyogenes* were cultured. A transoesophageal echocardiogram revealed small vegetation on anterior leaflet of a normal mitral valve. A diagnosis of multifocal septic arthritis secondary to infective endocarditis

was made and she was treated with intravenous antibiotics for 6 weeks with a good clinical outcome. The discussion centres on her management and progress. A review of the literature is presented.

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p-049

Kaposi's sarcoma in a patient with severe rheumatoid arthritis

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Kaposi's sarcoma (KS) has been associated with human herpesvirus-8. Four types of KS are recognised: classic KS, African endemic KS, AIDS related KS, and iatrogenic KS associated with immunosuppressive therapy. Iatrogenic KS was first described among post-transplant patients on high dose immunosuppressive therapy. Corticosteroids have been linked with the development of KS, and most reported cases are related to the use of these drugs. We describe an HIV negative 76year old male patient, treated with a number of immunosuppressive drugs, including systemic corticosteroids, for severe Rheumatoid arthritis, who developed extensive KS in both his lower limbs. The literature on Kaposi's sarcoma in patients treated with immunosuppressive therapy is reviewed.

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p-050

Effective management and leadership skills for health care workers through education: a retrospective study

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The health care system is continually evolving and managers need training in the multifaceted aspect of managerial work. Staff training and development are used interchangeably. While possibly true, for an educational programme to be effective the trainees need to reflect on and evaluate the knowledge learnt during a course.

According to Jones and Woodcock (1985) an effective manager is one who has a positive self-concept, with clear personal values, able to manage groups and individuals as well as being adaptable and organisation oriented. Essentially these are the components of a certificate course in management for health care workers conducted at the University of Malta

A survey sample of the 300 personnel who finished the course was carried out. The population was sent a questionnaire to evaluate the effects of the course on their managerial skills. The response rate was 50%. Statistical analysis of the data was carried out using factor analysis and Pearson correlation between factors. Significant correlation was found between most of the 3 factors identified by analysis. However further and more in depth studies need to be carried out to evaluate the effectiveness of the training programme.

p-051

The role of acupuncture in musculoskeletal physiotherapy

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The use of acupuncture in musculoskeletal physiotherapy has markedly increased in the past years. Considerable controversy has surrounded Acupuncture, on the one hand extravagant claims have been made for its efficacy while, it has been criticised for its lack of scientific standing. Research based on modern medicine started in and outside China, only after President Nixon's visit to China in 1971. Research for a mechanism of acupuncture has primarily focused on the analgesic effect of acupuncture with attention placed on Melzack and Wall's pain-gate theory (1965) and Pomeranz and Cheng's (1977) research into the chemical effects of acupuncture which was reinforced by animal studies. Ernst and White (1999) have made dramatic efforts to establish a scientific base to the study and practice of acupuncture.

That a needle inserted into the foot should improve the headache or functioning of one's liver is obviously incredible according to Huxley. In terms of currently accepted physiological theory it makes no sense. Therefore, we reject it. As a matter of empirical fact, it does happen. What should we do about events which by all the rules, ought not to occur? Two courses are open to us, we can close our eyes with the hope that they will go away and leave us in peace or alternatively we can accept them for the time being as inexplicable anomalies and confirm.

There is currently no explanation to the existence of channels and meridians. The major criticism for the use of acupuncture is that most of the studies carried out are flawed and do not follow the rigors of scientific research. An attempt will be made to look at the evidence base to the effects of acupuncture in musculoskeletal pain in terms of existing theories and research.

p-052

Out-patient hysteroscopy for assessment of post menopausal bleeding patients

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Objective: To evaluate the efficacy and outcome of assessing patients referred with postmenopausal bleeding (PMB) to a Menstrual Disorder Clinic (MDC).

Design: Retrospective review of data from patients' records.

Setting: Queen's Medical Centre, Nottingham, UK.

Subjects and Methods: A manual review of the records of all patients referred with PMB who were assessed at the MDC in the first four years since its set up on 14th September 1993 was carried out. The follow-up period ranged 2-6 years.

Results: 1062 new patients attended the clinic and 1052 (99.06%) records were traced and assessed manually. There were 208 patients (19.8%) who were investigated for PMB. Their average age was 62.2 (± 11.03) years. 75% (156/208) of patients had a successful hysteroscopy on their first visit while in 6.25% (13/208), this was not indicated. In 29 (13.94%) patients, attempt at out-patient hysteroscopy failed, while 10 other patients did not undergo the procedure for other reasons. 19 patients were found to have endometrial cancer or hyperplasia on Pipelle biopsy. 30.29% (63/208) of PMB patients attending the MDC were discharged after the first visit, 58 were referred for surgery while the rest had an average of 1.6 (range: 1-6) follow-up visits each.

Conclusion: The set-up of a Menstrual Disorder Clinic is an efficient and safe way of assessing patients with postmenopausal bleeding, where unnecessary attendance and interventions are greatly reduced, while serious pathology is diagnosed early. Out-patient hysteroscopy is a valuable tool in this assessment. This is of great benefit to our patients, as well as cost-effective for the health provider.

p-053

The WHO DPAD Study: Maltese

participation and comparison of data on diabetic pregnancies

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The DPAD data was initiated by the WHO-OBSQID projects for various centres in Europe including Malta. This WHO project is an ongoing database that by 2001 included basic outcome indicator information from 17 countries on 6929 cases of GDM and 2292 cases of pre-DM. Comparison with this database allows for the comparison of adverse outcome indicators in diabetic pregnancies between different European centres and thus serves as a "gold standard" for current practice.

Objective: The present study compares the outcome indicators of Maltese diabetic pregnancies during 1999-2002 with the DPAD data.

Research Design and Methods: Maltese women diagnosed as suffering from diabetes during pregnancy were classified into two groups - pre-existing DM (n = 44), and GDM (defined as a 2-hour post-load blood glucose of >=8.6 mmol/l; n=236). Outcome indicators of these two groups of women were compared to the same parameters of the women registered in the DPAD database. Statistical analyses were made using the Chi-Square test.

Results: Maltese women with pre-existing diabetes did not appear to have any statistically significant differences in criteria in care or outcome indicators, though preterm delivery [Malta 15.9% vs DPAD 21.43%; p = 0.487] and induction intervention [20.5% vs 29.37%; p = 0.268] appeared less in the Maltese group possibly predisposing to an increased caesarean section rate [65.2% vs 61.54%; p = 0.461]. Pre-conceptional care was lower in the Maltese group [40.9% vs 49.38%; p = 0.340]. The incidence of gestational diabetes in the Maltese population was non-statistically significant higher than the European average [1.88% vs 2.23%; p = 0.980]. The intervention rate appeared higher with a higher preterm delivery [11.25% vs 7.4%; p = 0.117], Caesarean section rate [35.2% vs 29.4%; p = 0.542] and induction of labour [53.8% vs 16.2%; p<0.0001], though only the latter showed statistical significance. The use of insulin in the Maltese population is significantly reduced [4.2% vs 31.2%; p<0.0001] probably reflecting the clinicians' reluctance to use the medication from fears of inducing hypoglycaemia. The macrosomia rate [12.08% vs 12.7%; p = 0.465] was however not statistically different, this possibly being a function of the high obstetric intervention rate in the Maltese group rather than a reflection of more optimal metabolic control.

Conclusions: The audit confirms that the management and outcome of Maltese diabetic pregnancies is generally in line with the average outcome parameters in European centres. Marked differences are noted in the proportion of patients with gestational diabetes who receive insulin therapy.

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p-054

The threshold criteria for the 75g oral glucose tolerance test in pregnancy and short-term adverse pregnancy outcomes

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The significant threshold values for the 75g oGTT during pregnancy have yet to be conclusively determined.

Objective: The study aims to identify the risk significance of a borderline GTT result.

Research Design & Methods: Women undergoing a 75g oGTT during

the third trimester of pregnancy were classified into two groups - borderline tolerance (2-h post-load glucose 8.0-8.5 mmol/l: n=75), and GDM (≥ 8.6 mmol/l: n=236). Outcome indicators of these two groups of women were compared to the parameters of the women with a presumed normal carbohydrate metabolism (n = 12185). Statistical analysis was carried out using the Chi-Square test.

Results: GDM women showed themselves to be at a significantly increased risk of developing hypertensive disorders during pregnancy and to require obstetric intervention in the form of induction of labour and caesarean section. Their infants were more likely to be macrosomic or preterm and having a low Apgar score at birth. Shoulder dystocia was similarly more likely in infants born to GDM mothers. Women with borderline glucose tolerance did not in any way show any statistically significant increased predisposition to these complications.

Conclusions: It would appear the significant threshold for the 75g oGTT during pregnancy should be of the order proposed by the American Diabetes Association criteria where the 2-hour post-load glucose value is ≥ 8.6 mmol/l.

p-055

Pregnancy in Maltese drug-abusers: a socio-biological study

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The use of illicit drugs has increased disturbingly in the last decades, this increase being reflected by an increase in the number of female drug abusers who present in the pregnant state.

Objective: The study was undertaken to identify the social and biological problems associated with these pregnancies.

Research Design & Methods: A total of 47 cases of current or past heroine abuse [0.24% of total maternities] were delivered at the Karin Grech Maternity Unit of St. Luke's Teaching Hospital in Malta. The socio-biological characteristics of these women were assessed and compared to similar parameters in the remaining pregnant population.

Statistical analysis was carried out using the Yates modification of the Chi-square test and Fisher Exact test as appropriate.

Results: These women have been shown to be generally of a younger age <25 years and are generally unmarried. The women tend to seek antenatal care late in pregnancy. Their associated medical problems include Hepatitis C infection. There also appeared to be a statistically increased predisposition to pre-existing diabetes. There did not appear to be any statistically significant increased risks to the infant, though there may have been a greater predisposition to low birth weight and prematurity.

Conclusions: While the study did not identify significant obstetric adverse outcomes in the drug abuser population, these women did show significant social characteristics that should be addressed to ensure long-term support for the women and their infants. The association to pre-existing diabetes is a disturbing observation that needs to be further assessed in the drug population in general since it may reflect poor psychological support given to young diabetic patients.

p-056

Multiple pregnancies and cerebral palsy

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Introduction: The higher the incidence of Cerebral Palsy in multiple pregnancies and the possibility of investigating the genetic and environmental background, has made twin studies an attractive model for research.

Objectives: To study the effect of multiple pregnancies on the prevalence of cerebral palsy and epidemiology in Maltese children during the ten year period 1981-1990.

Method: In this retrospective cohort and case study, 134 out of 54,556 children born in Malta and Gozo, between 1981 and 1990, were diagnosed as

cerebral palsy. During the same time, 644 infants were born from multiple pregnancies, 9 of whom developed cerebral palsy. The odds ratio for cerebral palsy in multiple pregnancies compared with singleton pregnancies were 6.17 (95% CI 2.92, 12.57). Five of the twin births were premature while six were of low birth weight. All three second order twins had a normal first co-twin. The deliveries of these nine case of cerebral palsy in multiple pregnancy, one was breech and eight were cephalic, all being vaginal deliveries. Six out of nine were monozygous.

Conclusion: The effects of birth asphyxia, prematurity, low birth weight and breech presentation, as well as a bad obstetric history, significantly increase the risk of cerebral palsy in multiple pregnancy.

p-057

A modified OSCE assessing the assimilation and application of ethical principles relevant to Obstetric and Gynaecological practice

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Objective: To develop and evaluate a modified OSCE assessing the assimilation and application of a range of ethical principles relevant to Obstetric and Gynecological practice.

Setting: Candidates for an SpR training rotation

Methods: Twenty six candidates working in Obstetrics and Gynecology were presented with four questions covering a range of relevant ethical scenarios. Their responses were assessed using a marking schedule. The marking schedule was evaluated against a checklist developed for assessing postgraduate medical examinations. Inter-rater reliability was assessed by calculating Kappa values for each question. The items in the marking schedule were also assessed to determine the level of agreement between the two examiners. To assess the contribution of each question to the total score, the question to total score correlations were calculated. The discriminatory capacity of each question was also assessed.

Results: The development of the examination met almost all of the criteria in the checklist for developing a postgraduate examination. Inter-rater reliability was reasonable (4 weighted Kappas ranged from 0.53 - 0.75). There was a high level of agreement between examiners as to whether a candidate had answered an item on the marking schedule correctly. The degree of discrimination of items in the marking schedule was consistent with clinical opinion on the importance of questions.

Conclusion: This modified OSCE examination demonstrates the feasibility of testing ethical principles relevant to practice in Obstetrics and Gynaecology in candidates for postgraduate posts. It meets most of the criteria laid down in a checklist developed to assess postgraduate medical examinations.

p-058

Ambulatory versus inpatient laparoscopy

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Introduction: Laparoscopy is frequently performed in the gynaecological unit. This intermediate operation has been traditionally performed on an outpatient basis. This operation can be performed with equal efficiency and safety as ambulatory, that is, same day, surgery.

Objectives: Comparison of outcomes of patients admitted overnight and those admitted same day for laparoscopic surgery. Investigation of the patients' perceptions of care in order to provide a basis for improvement of consumer satisfaction.

Method: 106 patients were admitted for laparoscopy at Gozo General Hospital. 28 were randomly selected and divided into two groups. A three part questionnaire regarding three aspects of patient satisfaction with professional care included: 1) technical – professional relationship 2) information exchange relationship; 3) trusting, communication, satisfaction, listening relationship.

Results: There was a difference between the two groups regarding concern for comfort, explanation of procedures, and discharge instructions. Results for the three subsets of questions indicate that patients for same day surgery had higher satisfaction rating regarding technical, professional activities, the information provided by the nurses and the trusting relationship perceived to exist between the patient and the nurses.

Conclusion: The provision of same day ambulatory service has become increasingly important in the management of resources. Same day admission program for laparoscopy patients at our hospital has been well accepted by the consumer. Both groups were satisfied by the perioperative care.

p-059

Tension-free intra-vaginal slingoplasty: review of operations for uro - gynaecological problems

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Objectives: To study the effect of tension-free intra-vaginal slingoplasty operation for treatment of urinary stress-incontinence.

Method: Patients presenting with stress incontinence are investigated first, and treated with medications and interferential therapy at the physiotherapy department. Both the trans-abdominal approach and the trans-vaginal urinary operations are performed in our hospital. A new approach has also been introduced in patients who are unable to undergo major surgery due to medical contraindications. In this study we describe the use of tension-free intra-vaginal slingoplasty operation for treatment of urinary stress-incontinence. Assessment of length of hospital stay, outcome of operation, and patient recovery of patients undergoing tension-free intra-vaginal slingoplasty compared with patients undergoing trans-abdominal or trans-vaginal urinary operations.

Conclusion: Patients undergoing tension-free intra-vaginal slingoplasty operations required less pain relief and spent less time under hospital care. Post-operative mobility was significantly better than the vaginal operations and abdominal operations.

p-060

The Woman II Project

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The aims of the WOMAN project are: To create an independent European web site that offers high quality information on the Menopause and related conditions. To create an innovative Electronic Patient Record (EPR) for data collection, management and exchange.

Both these aims had to be done within a European context. This project was partly funded by the European Commission under the 5th Framework protocol (IST). Thirteen European countries participated in this project which started in September 2001.

The main site contains medical information aimed for menopausal women and health professionals. All aspects of the menopause are discussed in the various articles available. The information is updated regularly and is available in all European languages including Maltese.

The WOMAN EPR was created, using innovate Java/XML technologies, and represents a milestone in the creation of a real European standard in the menopausal data collection, elaboration and exchange. This EPR has now been translated and validated in all the European languages, including Maltese. It is available locally both on the Internet and also on our local (Hospital) Intranet.

The ultimate aim of this project is to create a system offering continuity of care and interactions between different healthcare providers working in the women health domain (GPs, gynecologists, menopause centers).

These results have already been presented to the Research Community. The EMAS, European Menopause and Andropause Society Executive and Committee Boards have met the WOMAN consortium and have endorsed the WOMAN results and decided to consider the WOMAN results as the European standard, in order to create a real network to collect data and experiences in a homogeneous way.

The use of dermal skin thickness measurements as a screening test for the presence of osteoporosis

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Bone density alone is not effective for the screening of osteoporotic fractures and screening methods continue to be inaccurate. In an attempt to improve accuracy, a connective tissue parameter, dermal skin thickness was combined with bone mineral density measurement in this study. The aims were to determine the efficacy of skin thickness as a screening test for osteoporotic fracture, either alone or in combination with other bone density parameters.

Menopausal women were recruited sequentially from the gynaecology out-patients' and the bone density unit at the department of obstetrics and gynaecology. Women who had sustained an osteoporotic fracture were referred to our unit by the department of Orthopaedics. A total of 1428 postmenopausal women were recruited. Of these, 135 women had sustained an osteoporotic fracture.

Skin thickness was measured on the medial aspect of the left upper arm using an Osteoson 22-MHz ultrasound probe (Minhorst, Germany) An average of readings was taken so as to minimize any error. Bone density measurements were carried out using a Norland dual energy X-ray absorptiometry and were taken from the lumbar spine (L2-L4), femoral neck and Ward's triangle.

Statistical analysis was performed to test for specificity, sensitivity and accuracy of the models created. Three models were created using skin thickness measurements alone, bone density measurements alone and a combination of the two together.

The combination model using skin thickness and bone density measurements showed that a very high sensitivity could be maintained in the measurements. Accuracy was also improved when using the combination model as compared to the results obtained with either of the two other models.

p-062

Will patients with primary dysmenorrhoea benefit from sildenafil citrate (Viagra R)?

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Background: Dysmenorrhoea causes considerable distress to many women with significant physical and emotional consequences.

Aim: To determine whether Sildenafil citrate improves menstrual pain in women who suffer from primary dysmenorrhoea, as well as determining whether Sildenafil will improve migranous headaches associated with menstruation and improving the well-being and life-style during menses.

Method: This is an ongoing randomised blind cross-over study.

Twenty patients are divided equally into Group A and Group B for a study period of six menstrual cycles.

In the first 3 months Group A will be using Neurofen and Sildenafil for 2-3 days at the onset of brownish spotting or pain, followed by Neurofen and placebo tablets for the subsequent 3 months during menses.

In the first 3 months Group B will start with Neurofen and placebo tablets during menses followed by Neurofen and Sildenafil for the next 3 months during menses.

p-061

Outcome: This is based on a subjective scoring system using the modified Sultan score compiled as a Symptom Diary which includes abdominal pain, backache, pelvic heaviness, headaches, well-being, etc. The patient will also record the overall extent of pain relief, overall effects on blood loss and overall efficacy of treatment. Each patient fills her symptom diary before she takes her medication, at 1 hour and 2 hours after the administration of the medication. This will be done for the first 3 days of her period. On the 4th and 5th day the woman will only fill her symptom diary. The marking system is based on a 4 point system where each symptom will be scored from 0 to 3. The demographic variables of the women will be summarised and compared. This will be done despite the fact that it is a cross-over study and the same patients will partake in both arms of the study. The advantage of a cross-over study is that the patients are their own controls assuming that their life-style does not change. A change in life-style during the study is in fact one of the exclusion criteria.

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p-063

Clinical and social characteristics of 135 patients referred to the miscarriage clinic

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The Miscarriage Clinic is a sub speciality clinic, which receives referrals from the Department of Obstetrics & Gynaecology to investigate and offer treatment to patients who have suffered more than two consecutive miscarriages.

The clinic has been operating for about 10 years now and has established itself as one of the standard services offered with the Department of Obstetrics & Gynaecology.

An analysis of the Clinical and Social Characteristics of 135 consecutive referrals to the miscarriage clinic is presented.

The age range of this group of patients was 19-42 years with a mean of 31 years. By far the majority were married couples and most of these were housewives (83 patients). Sixteen per cent smoked more than 20 cigarettes a day while just over half the patients did not consume any alcohol at all.

The largest group of patients was the idiopathic group. A breakdown of the endocrinological, anatomical, autoimmune and genetic causes is presented. The mean menstrual cycle was found to be just under 30 days. Use of the oral contraceptive pill, clomiphene citrate and human menopausal gonadotrophin is described.

A variety of chronic gynaecological and medical conditions was found in this group of patients. The number of chronic gynaecological conditions was small (3.7%) indicating that this is rarely a factor, if ever, in recurrent miscarriage. In 17% of cases, however, chronic medical conditions were identified confirming that a number of medical conditions are associated with recurrent miscarriage of which the most important are the congenital and acquired thrombophilias.

p-064

The risk of hysteroscopy in patients with endometrial carcinomas

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Objective: The penetration of distention medium into peritoneal cavity occurs in a great proportion of patients at hysteroscopy (HSC). This may originate potential risk of dissemination of malignant cells. To evaluate the real risk of worsened prognosis of these patients a prospective multicentric study was carried out at our Department.

Material and Methods: Two group of patients with endometrial carcinoma have been compared. The diagnosis was made in the study group by HSC and targeted biopsy, while in the control group by the classical D&C. At the end of HSC procedure the puncture of the cul de sac was performed and the fluid obtained was cytologically examined. In both groups peritoneal lavage was performed at the beginning of the subsequent operation and the collected fluid was examined again.

Results: The results were evaluated in 156 patients with HSC and in 71 patients with D&C. In 75 patients with HSC no peritoneal fluid was obtained. In the study group the positive finding of malignant cells from the cul de sac was found in 4,9 %, the suspect finding in 9,9 %, and the negative finding in 85,2 %. The positive finding of malignant cells from peritoneal lavage in the study group (HSC) was in 11,8 %, the suspect finding in 20,4 %, and the negative finding in 67,8 %. In the control group (D&C) the fluid obtained from lavage contained malignant cells in 10,6 %, suspect cells in 19,7 %, and no malignant cells in 69,7 %. Both groups were comparable as for the clinical stages of the disease.

Conclusions: Our results suggest evidence that HSC does not increase the risk of penetration of tumour cells into the peritoneal cavity over the estimates in D&C.

p-067

Video-laparoscopic assisted salpingectomy for ectopic pregnancy

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Introduction: In some centres the gold standard form of treatment for 80% of ectopic pregnancies is laparoscopic salpingectomy or if necessary, salpingotomy. A viable alternative is videolaparoscopic assisted salpingectomy.

Objective: Performing a salpingectomy through a small incision emulating laparoscopic salpingectomy with the assistance of the laparoscope.

Method: In videolaparoscopic assisted salpingectomy, initially the diagnosis of the ectopic pregnancy is confirmed via the laparoscope. During the same laparoscopic procedure and maintaining the patient in the Lloyd Davis position, the diseased Fallopian tube is excised through a very small suprapubic incision under laparoscopic supervision.

Conclusion: Besides the advantage of utilising a small incision (<4cm) this procedure cut down on operating time and allowed early mobilization and discharge from hospital. This latter procedure of videolaparoscopic assisted salpingectomy for ectopic pregnancy is described in three cases which occurred at St.Luke's Hospital during this year (2002).

p-068

Intervertebral disc height shows greater correlation with bone density in menstrual women than in treated and untreated postmenopausal women

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Objective To assess whether there is any correlation between intervertebral disc height and bone density in both menstrual and menopausal women.

Method: One hundred and twenty-five women selected randomly were divided into five groups according to the menstrual status and the treatment given for osteoporosis. The one hundred and twenty-five women were collected randomly from a large directory in a data base of a bone density unit. Forty-four (44) menopausal women were on HRT, 34 women were untreated menopausal women, 15 women were on calcium supplements and another ten women were on bisphosphonates.

The image of the vertebral spine on the computer screen was sought for the women recruited. The adjustment mode was then employed allowing the horizontal cursors to be placed at the edges of the vertebral discs between the tenth thoracic vertebra, till the third lumbar vertebra (D1-D3). The bone density of the lumbar spine (L2-L4) using DEXA was taken of the five different groups of women. This was expressed as a T-score to assess the relationship of intervertebral discs height and osteoporosis (T-score < -2.5).

Results: A highly significant correlation was obtained in the menstrual group ($r = 0.7$) between the intervertebral disc height and the T-score. Lower significant correlations were also obtained in the calcium supplement group ($r=0.39$) and untreated menopausal group ($r=0.31$). Lower correlations were obtained in the bisphosphonate group ($r=-0.028$) and HRT group ($r=0.19$).

Conclusion: A high correlation between the disc height and T-score in menstrual women suggests a close coupling of the anatomical and functional properties of both bone and intervertebral disc in the presence of normo-oestrogenaemic status. The reduction in the correlation with the menopausal status suggests an ushering of a significant variable affecting a denominator common to both bone and disc. It is postulated that the common denominator may be due to the significant effect the menopause may have on the connective tissue component common to both bone and disc.

p-069

Metabolic changes in postmenopausal women taking transdermal hormone replacement therapy

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Objective: to assess the effect of the menopause on metabolic risk factors which may influence atheroma formation.

Method: A small prospective trial was performed on 29 postmenopausal women who had undergone a hysterectomy and salpingoophorectomy. Baseline metabolic profiles were taken 3 months after the operation and following this washout period, transdermal oestrogen (50um 17-b oestradiol) was administered. After 6 months of treatment, the metabolic profile was repeated.

Results: Although the serum cholesterol did not decline significantly (-4.4%), a significant decrease of 19% was noted in the serum triglycerides. A similar drop was noted in the very low density lipoproteins (VLDL), however the larger molecule low density lipoproteins (LDL) decreased by only 2.7%. Correlating with the decline in the very low density lipoproteins the apolipoprotein B decreased by 12.7%.

A non-significant rise of 4.2% in the high density lipoproteins was obtained after six months of transdermal therapy. However the cardio-protective HDL2 subfraction rose significantly by 27% Congruent with HDL non-

significant change, the apolipoprotein A1 remained unchanged.

Lipoprotein (a) decreased after transdermal therapy by 24.5%. Anti-thrombin III acting as a surrogate for the coagulation/fibrinolysis system remained the same. The plasma renin activity reflecting the blood pressure decreased non-significantly.

Conclusion: The above results indicate the favourable changes are obtained in the lipoprotein profile with the administration of transdermal oestrogen to postmenopausal women. Triglycerides and very low density lipoproteins which are relevant to cardiovascular disease in postmenopausal women decreased significantly. Moreover, the HDL2 subfraction which is cardio-protective in this group of women increased. The fibrinolytic system as represented by the anti-thrombin III and the renin activity remained constant. These findings confirm the beneficial effect of transdermal oestrogen on the metabolic profile of postmenopausal women.

p-070

Iliac vessel wall is thicker in untreated menopausal women and menopausal with risk factors for atherosclerosis than in menstrual women and HRT treated menopausal women

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Objective: to assess iliac vessel wall thickness in five groups of women who differed in age, menstrual status and whether the menopausal groups were treated with HRT.

Method: A 3.5MHz ultrasound was used to assess the combined vessel wall thickness of the right iliac artery inner wall and vein outer wall. Three groups of women were menopausal and were distinguished from each other by the (a) administration of hormone replacement therapy (Conjugated Oestrogens) (N=32), (b) a group with high risk factors for atherosclerosis (N=14) and (c) an untreated low risk group of postmenopausal women (N=9). Two other groups of menstrual women without any risk factors for atherosclerosis were also recruited. One group of menstrual women was aged above 35 years (N=35) and another small group were aged below 35 years (N=16).

Results: The highest iliac vessel wall thickness was found in the menopausal group of women possessing high risk factors for atherosclerosis (4.3 ± 0.09 mm). Following this group were the untreated menopausal group of women with a mean iliac vessel wall thickness of 3.9 ± 0.08 mm. Significantly lower thickness were obtained in the other three groups (Mann Whitney U test). The thickness of the hormonally treated menopausal group was 2.93 ± 0.09 mm, the older menstrual group 2.61 ± 0.07 mm, and 2.0 ± 0.06 mm in the young menstrual group.

Conclusion: These results confirm the significant impact high risk factors such as smoking, hyperlipidaemia and diabetes have on the vessel wall thickness due to accelerated atherosclerosis. Besides these risk factors, age also has a significant influence on vessel wall thickness. This study also suggests that the oestrogenaemic state of a woman may effect the health of the vessel wall. In fact, the ageing process and the oestrogen deficiency state of the menopause may act in synergy to exacerbate atheroma formation.

p-071

Reducing the incidence of brachial plexus injuries in obstetric practice, 1980-2002

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Over a ten year period 1980-1990 the incidence of brachial plexus injuries following obstetric trauma was 2.9/1000 live births. A review of traumatic shoulder dystocia over this period of time highlighted a number of risk factors with a background macrosomic population (11.8% > 4.0kg, 1.5%

>4.5kg. The body mass index of the mothers of these babies was high (short and obese) and a high incidence of diabetes of 12% was noted in this group of women. Abnormal labour patterns with prolongation of all the phases of labour were noted. Thirty one percent of traumatic shoulder dystocia followed instrumental deliveries.

During the latter twelve years the incidence of traumatic shoulder dystocia has dropped significantly to 1.1/1000 live births. This may be due increased attention towards the above mentioned antenatal and intrapartum factors. During the antepartum period increased awareness and care towards dietary control in overweight women and where necessary concomitantly prescribing insulin for gestational diabetics.

More attention to abnormal labour patterns especially in the presence of macrosomic infants may have avoided difficult vaginal deliveries leading to traumatic shoulder dystocia. A shoulder dystocia drill has been included in the labour ward protocol. Increasingly breech presentations are being delivered by Caesarean Section. Caesarean Section is not without fetal complications as during the whole 22 year period there were four cases of brachial plexus palsy following abdominal delivery of macrosomic babies.

p-072

Correlations of skin thickness and carotid artery wall thickness in postmenopausal women

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Both the skin dermis and cardiovascular system are derived from the mesoderm. This embryological legacy left both the skin dermis and cardiovascular system with a large connective tissue component. Moreover, the cellular elements of both organs possess the oestrogen receptor.

Fifty-one postmenopausal women on oral hormone replacement therapy and 75 women acting as controls were recruited for this study. Both groups of women had the skin thickness of the medial aspect of the non-dominant arm and the external wall of the carotid artery of the same side of the body measured by a high resolution ultrasound, the Osteoson DII (22MHz). The high resolution of the ultrasound allowed the measurement of the individual layers of the carotid artery.

The skin thickness of the hormonally treated group was found to be 0.93mm while that of the control group was 0.925mm. No differences were noted between the different layers of the carotid artery except for the media layer (controls 0.29±0.08mm and 0.34±0.09mm in the treated group).

Correlations were found between the skin thickness and the various layers of the carotid artery. Stronger correlations were obtained between the skin thickness and media layer. Significant correlations were obtained in the treated group when the externa layer was compared with the intima and media layers.

p-073

Carotid artery wall thickness in oral combined hormone treated and oestrogen implant treated postmenopausal women

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The high resolution 22.5 MHz Osteoson DIII was employed to accurately measure the individual layers of the carotid artery. One hundred and twenty-

nine postmenopausal women were recruited sequentially and categorised into three groups. Forty-six postmenopausal women were on oral hormone replacement therapy (0.625mg conjugated equine oestrogen and 0.15mg Norgestrel) taken for an average duration of 3±1.5 years, 32 women had been on oestradiol (100mg) implants for 3±1.5 years and 51 postmenopausal women acting as controls were also recruited in this study.

The implant group had the thickest carotid artery wall (0.84±0.26) when compared to the other two groups. The full thickness of the carotid artery wall was thicker than the other two groups due to the significantly thicker externa (0.257±0.14mm) and media layers (0.316±0.11mm). Significant differences in the externa layer were noted when comparing the control and implant groups. There was also a significant difference in the media layer when comparing the control group (0.265±0.092mm) to both the oral (0.289±0.087mm) and implant groups. The externa and media layers have a high connective tissue content mainly collagen type I, collagen type III and elastin. The intima layer was significantly thinner in the orally treated group (0.0.249±0.88mm) when compared to the controls (0.287±0.095mm). No significant difference in the intima layer was noted between the control and the implant group (0.279±0.1mm).

These findings suggest that hormone replacement therapy given to postmenopausal women influence in a differential manner the various layers of the carotid artery. Hormone replacement therapy appears to encourage thickening of the arterial layers with the highest connective tissue content and in turn it appears to delay thickening of the intima. These effects on the arterial connective tissue may be partly responsible for the cardio-protection attributed to hormone replacement therapy.

p-074

A multicentre study with the low dose pill

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Since the early 60's the side effects of oral contraceptives were noted to be related to the high doses of ethnyloestradiol employed (50 micrograms ethnyloestradiol). The more serious side-effects of note were arterial and venous thromboses with their attendant risk for embolism. Minor side-effects include nausea, headaches, intermenstrual bleeding and weight gain.

Over the years research has focussed on reducing the dose of both oestrogen and progestin components in an effort to reduce these side-effects. Whilst reducing the dose of both components the contraceptive efficacy has to be maintained so as to retain a satisfactory Pearl index.

These requirements appear to have been attained with the production of the low dose pill 24 day regimen containing 15 micrograms of ethnyloestradiol and 60 micrograms of gestodone. This combination was tried in an open label non-comparative multicentre study performed in five countries of including Malta. Contraceptive efficiency of the 24-day regimen indicated a Pearl index of 0.214 with three pregnancies resulting out of 1,424 women completing 18,223 cycles. The common denominator for contraceptive failure was voluntary or involuntary interruption of pill taking.

Another open labelled multicentre study comparing the low dose 24 day ethnyloestradiol 15/gestodone 60 regimen to the 21 day ethnyloestradiol 20/desogestrel 75 regimen was also undertaken. Five hundred and thirty-nine women were recruited with a total 2,982 cycles. One woman fell pregnant after having missed five pills giving a pearl index of 0.242.

Minor side effects such as intermenstrual bleeding, headaches, nausea and breast pain were the commonest causes for pill discontinuation. The most prominent side-effect was breakthrough bleeding which initially effected 38% of woman recruited. By the 18th cycle only 10% of women complained of intermenstrual bleeding.

In conclusion the 24 day regimen of 15 micrograms ethnyloestradiol and 60 micrograms gestodone offers the lowest dose and contraception available on the market. The low dose pill promises to reduce contraceptive related

side-effects encouraging better compliance and as corollary retaining a satisfactorily Pearl index.

p-075

Direct intra-umbilical Veress needle insertion prior to sub-umbilical incision to establish laparoscopic pneumoperitoneum

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Introduction: For most gynaecological surgeons, the initial steps towards performing a laparoscopy entail peritoneal insufflation via a Veress needle inserted through a sub-umbilical incision. This is a vital step in the successful performance of the so-called closed method laparoscopy. However, problems are frequently encountered when trying to attain adequate pneumoperitoneum. Several attempts may sometimes be required to obtain a pneumoperitoneum increasing risks for laparoscopic visceral and vascular complications, 38% of which are related to Verres needle placement.

Objective: Reduction in number of attempts at Verres needle placement while performing the "closed method laparoscopy".

Methods: As opposed to the conventional method of inserting the Veress needle through a sub-umbilical incision, we employed a centrally directed intra-umbilical Veress needle insertion to attain adequate peritoneal insufflation. After obtaining sufficient pneumoperitoneum, a sub-umbilical incision would be performed and a 10mm trocar gently introduced into the peritoneal cavity. This procedure was performed on 60 consecutive cases of diagnostic and operative laparoscopy.

Results: Pneumoperitoneum was obtained at the first attempt in all but one case where appropriate Veress needle placement was obtained on the second attempt. Two minor difficulties involved two very thin patients whereby in one patient, gas leaked from the defect due to the Veress needle, while in the second patient gas escaped via the umbilical incision. In both cases the abdominal defects were successfully plugged and the procedure continued uneventfully.

Conclusion: Successful first attempt Veress needle insertion appears more possible with this method of needle placement. This method takes the opportunity presented by the unique umbilical anatomy where at its base it is found to be the thinnest region of the abdominal wall. With a reduction in needle placement attempts we postulate a reduction in Veress needle related complications.

p-076

Bilateral total knee arthroplasties: Preliminary results of comparison between simultaneous and unilateral or staged knee replacements

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A recurring discussion in the medical literature concerns the safety and efficacy associated with bilateral simultaneous total knee arthroplasty when compared to single or staged operations. Numerous papers document the advantages of a simultaneous operation, namely a single anaesthetic, reduced overall hospital stay and reduced total costs. These benefits have

to be viewed with the risks associated with a longer anaesthetic, pain control and rate of post-operative complications. In this preliminary study a comparison was made between simultaneous bilateral versus unilateral or staged knee arthroplasty performed by the same orthopaedic firm over a number of years. Length of hospital stay, days to ambulate, blood loss, analgesia and complication rate were compared for both groups. The results indicate that with appropriate patient selection, individuals who present with bilateral symptomatic knees can be operated under a single operative bilateral procedure without increased risk of complications and leading to an overall reduction in hospital stay.

p-077

Post-operative mortality related to waiting time for hip fracture surgery

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In this retrospective study we looked at the difference in one year mortality between two groups of patients operated for fracture of the hip.

Patients and methods: In cohort 1, 72% of the patients underwent surgery on the same day of admission, 15% of the patients the next day, the remaining 13% of the patients waited more than one day for surgery. The mean waiting time was 0.47 days. The percentage of patients who were operated on the same day of admission in cohort 2 was 18%. 69% of the patients had to wait 1 day and 13% waited 2 days or more. The average waiting time was 1.01 days. The date of death for both the 166 patients in cohort 1 and the 197 patients in cohort 2, was obtained from the national mortality register. The two groups were comparable in gender, age distribution and the types of operations.

Results: There was an increase of 10.1% in the mortality of patients in cohort 2. The mortality data of the two cohorts was also analyzed after dividing the patients into three groups according to their age. A statistically significant increase in mortality of 16.9% in patients over 80 years of age in cohort 2 was found. Total mortality at two years after the operation was the same in the two cohorts. Mortality rate for patients in cohort 2 was less than that for cohort 1 patients during the second post-operative year.

Conclusion: This study shows that survival at one year is better when patients who are medically fit for surgery are operated on the same day of admission.

p-078

The incidence of macroprolactinaemia in Maltese hyperprolactinaemia patients

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Background: The average incidence of macroprolactinaemia i.e. sustained hyperprolactinaemia due to high circulating levels of big-big prolactin (BB-PRL) is reported to be around 25%. Macroprolactinaemia can be a cause of asymptomatic hyperprolactinaemia in the general healthy population with incidences of < 3% being reported. The reference method of BB-PRL estimation is by gas filtration chromatography (GFC). However, calculation of % recoveries after precipitation of BB-PRL by Polyethylene Glycol (PEG) has been reported to be a cheaper and simpler alternative for BB-PRL estimation. Some studies though, have reported that this technique cannot be used on all immunoassay analysers due to interference by the PEG itself.

Study: The PEG precipitation technique on the Immulite 2000 analyser was evaluated by comparison of results to GFC (performed at the Laboratoire Marcel MÈrieux, Lyons, France). The incidence of macroprolactinaemia in the general healthy and hyperprolactinaemia Maltese patients was then determined.

Results: In all samples with % recoveries \leq 40%, BB-PRL made up \geq 20% of the total circulating prolactin. In those samples with % recoveries \geq 50%, BB-PRL made up \leq 18% of the circulating prolactin. A grey area for those samples, whose recoveries fall between 40.1-50% was found. These samples must be submitted to GFC for analysis. The incidence of macroprolactinaemia was found to be 1.9% and 27.2% in the Maltese healthy

and hyperprolactinaemic populations respectively.

Conclusion: The PEG precipitation technique was found to be suitable for macroprolactinaemia identification on the Immulite 2000 analyser. The incidence of macroprolactinaemia in hyperprolactinaemic patients is sufficiently high to warrant its measurement in asymptomatic patients, before proceeding to expensive imaging techniques.

p-079

A study of microalbuminuria in an obese population

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Objectives: Overweight/obese non-diabetics and overweight/obese type 2 diabetic (T2DM) subjects were evaluated: (a) to investigate the prevalence of microalbuminuria in these subjects (b) to study the relation between albumin-to-creatinine ratio (ACR) and the following clinical parameters: waist-to-hip ratio (WHR), waist circumference (WC), body mass index (BMI) and blood pressure and (c) to investigate the effect of a 6-week weight loss program.

Study: ACR was evaluated in 51 overweight/obese non-diabetics with BMI 31.3 ± 0.64 (s.e.m.) kg/m^2 , 20 overweight/obese diabetics with BMI 30.9 ± 0.68 kg/m^2 and in 30 control subjects with BMI 23.1 ± 0.26 kg/m^2 .

Urinary albumin and creatinine levels were determined from first morning spot urine samples, before and after a 6-week weight loss program as were BMI, WHR and WC. Blood pressure was measured at the beginning of the program.

Results: At the beginning of a 6-week weight-loss program, logACR was significantly higher in the overweight/obese non-diabetics ($p < 0.001$) and overweight/obese T2DMs ($p = 0.007$) than in controls. LogACR was significantly reduced in the overweight/obese non-diabetics (1.58 ± 0.13 mg/g to 0.90 ± 0.19 mg/g , $p < 0.001$) and overweight/obese T2DMs (1.27 ± 0.20 mg/g to 0.60 ± 0.24 mg/g , $p = 0.005$) by the end of the program. An elevated logACR was evident in a non-diabetic subject with a BMI of 29.3 kg/m^2 . LogACR was positively correlated to basal diastolic blood pressure ($r = 0.357$, $p = 0.010$) and BMI ($r = 0.345$, $p = 0.013$) in the overweight/obese non-diabetic population.

Conclusion: A major reduction in the logACR of all subjects was observed with weight reduction. Prompt remission of microalbuminuria was observed in an overweight non-diabetic subject after weight loss. Weight loss may be an important therapeutic approach for future prevention of renal complications in overweight/obese individuals.

p-080

The prevalence of Epstein-Barr virus antigens in nasopharyngeal carcinoma in the Maltese population

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Nasopharyngeal carcinoma (NPC) is an epithelial malignancy of the head and neck region, which typically has marked geographic, and population differences in incidence. Both genetic and environmental co-factors are implicated in the development of NPC. The Epstein-Barr virus (EBV) is a human herpes virus, strongly associated with the undifferentiated type of NPC, which in some regions is by far the commonest type of the three WHO categories. This fact has triggered the discussion as to whether EBV should be targeted as a potential cure for this type of malignancy.

In this study archival paraffin embedded tissue from 81 NPC cases diagnosed from 1990 to 2001 were analysed. Details such as sex, age and locality of residence of the selected cases were recorded to study demographic data. Freshly stained Haematoxylin and Eosin slides from these NPC cases were reassessed and graded according to the WHO classification, with the majority (84%) classified as WHO type III.

The investigation of a link between EBV and NPC in Maltese patients was performed by immunohistochemical staining with three different antibodies against EBV namely EBNA2, BZLF1 and LMP CS1-4. 90% and 54% of cases

showed positive staining for LMP1 and BZLF1 proteins respectively. No staining for EBNA2 antigen was observed.

Maltese NPC has shown similar trends of gender and age occurrence as classically described. EBV association has been confirmed and LMP1 immunostaining can therefore be considered as a good option for the detection of the virus in NPC. This may be of future benefit to patients in view of new therapeutic modalities being studied.

Key words: Nasopharyngeal carcinoma, Epstein-Barr virus, Immunohistochemistry, LMP1, BZLF1.

p-081

A study of fatalities associated with thermal injuries in Malta over a ten-year period

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Introduction: Fatal injuries from fires in Malta are not common. Currently there are few published local statistics.

Aims: This study aims to establish the pattern of fatal thermal injuries in Malta, with particular reference to the type of incident correlated to the injuries sustained, length of survival and the ultimate cause of death. An attempt is made to assess the significance of contributory factors to death, such as age, comorbid illness and alcohol/drug intoxication.

Method: A review of all deaths over a ten year period between 1993 and 2002, associated with thermal injuries, sustained in fires, fireworks and explosions, is presented. Data is obtained from mortality statistics from the Department of Health Information and forensic post-mortem reports from the archives of the Department of Pathology. Information documented includes the site and type of fire, demographic details of the victims, the type and extent of injuries, underlying natural disease, blood levels of alcohol, drugs and carbon monoxide, length of survival and the ultimate cause of death and the manner of death.

References: Archives, Pathology Department, St. Luke's Hospital, G'Mangia Schembri K, Cacciattolo L., Swain C., A retrospective study of patients admitted to our Burns Unit. Ann. Medit. Burns Club - Vol VII - n4 - December 1994, Knight B., Forensic Pathology. 2nd Edition. Arnold, 1996. Mason J.K. and Purdue B.N., The Pathology of Trauma, 3rd Edition. Arnold, 2000. Public Health Records, Department of Health, Malta.

p-082

Development of an assay for urinary free cortisol estimation on the immulite 2000 chemiluminescent immunoassay analyser

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Background: Measurement of 24-hour urinary free cortisol (UFC) is considered to be the most valuable single diagnostic indicator for the assessment of hypercortisolism. The Immulite 2000 system produced by DPC that is currently used by the laboratory does not provide for the analysis of UFC on its test menu.

Methodology: A simple dichloromethane extraction step is used to

separate UFC from interfering substances present in urine. The extract is reconstituted in charcoal stripped serum with 20% albumin and analysed on the Immulite[®] 2000 using the serum cortisol kit. Method evaluation included extraction efficiency, recovery, linearity, specificity, precision and comparison to the manual radioimmunoassays of Coat-a-Count and Immunotech. An assay specific reference range was calculated.

Results: Mean extraction efficiency of 95% and recovery of 99.8% was obtained. The working range of the assay extends from 12.8-480 nmol/L. Cross-reactivity was highest with Prednisolone (34%) and corticosterone (5%). Within-day and day-day %CV at 35 nmol/L was 8.7% and 11.6%, while at 205 nmol/L was 8.2% and 9.3% respectively. The Immulite 2000 indirect UFC assay has a mean negative bias of 28 nmol/L when compared to Coat-a-Count and Immunotech while direct UFC assay has a mean positive bias of 211 nmol/L. The reference range (n=22) was 55-276 nmol/24h.

Conclusion: The estimation of UFC on the Immulite 2000 using the recommended extraction method showed acceptable performance and is a suitable screening tool for hypercortisolism. This is the first recorded application for an automated UFC assay on the Immulite 2000 analyser.

p-083

Comparison of 5-HIAA methodologies

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Background: The current method of analysis of 5-HIAA by Udenfriend's method is subject to interferences and other crossreactivity with other metabolites with similar molecular structure eg. Serotonin.

Objectives: an Enzyme Linked Immuno Sorbent assay (ELISA) manufactured by IBL-Hamburg was evaluated and compared to HPLC electrochemical detection and to the current Udenfriend's method. A new reference range was established. Method: 24-hour urine samples forty-three patients and seventeen healthy individuals were obtained from the Clinical Chemistry Laboratory and analyzed by all three methodologies.

Results: The ELISA technique had a sensitive, precise and accurate analytical performance. It gave satisfactory results in the Randox External Quality Assessment Scheme while the Udenfriend's method failed all the results. In this study the correlation obtained between the ELISA and HPLC showed an acceptable agreement both in the control population (n=17, r=0.724 p=0.001) and in the patient group (n=43, r=0.822 p=0.000). In the Udenfriend's method, the control population (n=17, r=0.279, p=0.279) did not correlate with HPLC and ELISA, and the patient results (n=33, r=0.372 P-Value = 0.033) correlated with both the HPLC and ELISA.

Conclusion: The ELISA 5-HIAA provides an accessible method for the laboratory, bypassing the cost for HPLC set-up. ELISA is both cheaper than HPLC and simpler. HPLC requires sophisticated sample preparation and extraction, while with the ELISA method the sample preparation is minimal. The current Udenfriend's method needs to be replaced by a newer method that is reliable. In this case the proposed method that can replace the current assay (Udenfriend's method) is ELISA.

p-084

The use of Polyacrylamide Gel Electrophoresis (PAGE) in lipoprotein analysis

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Background: Routine lipoprotein measurement is not comprehensive enough in evaluating all the specific lipoproteins in patients. In addition, it does not detect any abnormal lipoproteins, such as small dense LDL.

Objectives: The aims of this study were: (a) to establish an optimum PAGE protocol in lipoprotein analysis, (b) to compare lipoprotein values obtained from PAGE with those obtained from routine testing, (c) to investigate the relationship between lipid profile values and the prevalence of small dense LDL.

Methodology: An optimum PAGE protocol was established, which was then used to analyse several patients. The values obtained were compared with the ones obtained from routine testing. An LDL size phenotype was

assigned to each patient according to the distance the LDL band migrated on PAGE. The relationship between the prevalence of small dense LDL and the lipid profile values was investigated.

Results: The values obtained from PAGE showed a very strong positive correlation with the ones obtained from the routine laboratory (p < 0.05). However, statistically significant differences were obtained between the mean values obtained from PAGE (LDL: 3.78 ± 1.08 mmol/l; HDL: 1.68 ± 0.69 mmol/l) and from the routine laboratory (LDL: 4.03 ± 1.08 mmol/l; HDL: 1.52 ± 0.42 mmol/l) (p < 0.05). The study showed that decreased HDL cholesterol, and increased triglycerides and cholesterol levels were strongly related to the prevalence of small dense LDL.

Conclusion: We have shown that PAGE is a reliable and efficient method, which provides more information than the routine techniques do. Since this technique is time-consuming, it should not be utilized as a routine one but as a confirmatory test to investigate any suspected cases of atherogenic profiles.

p-085

Analysis of the DNA content (ploidy) of paraffin-embedded pathology specimens using flow cytometry

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In a malignant tumour, certain cells may become genetically unstable. They may loose or aberrantly replicate whole chromosomes or fragments resulting the loss of the normal human 46XY genome. Such tumours are often resistant to chemotherapy. This difference in DNA content has become the basis of a clinically applied test, with euploidy being a good and aneuploidy being a poor prognostic marker.

DNA content analysis has been performed over the last few decades on numerous tumours.. Ploidy assessment has proved a useful indicator in renal cell carcinoma and prostate cancer, amongst others either independently, or together with other markers such as histological grade¹. In other tumours however, such as breast, lung and GIT cancers, the usefulness of this investigation is still very much under debate.

In this study, cells were isolated from thick sections of paraffin blocks, of both benign and malignant tissue samples. The pathological diagnosis was kept hidden with tissues being identified only by sample number. Isolated cells were permeabilised and their DNA stained with propidium iodide, a fluorophore which binds to DNA. The stained cells were analysed by flow cytometry and compared to the DNA content of human blood lymphocytes stained in a similar manner. Ploidy was assessed and correlated to pathological diagnosis and where possible to prognosis by reviewing the patient records. Cases of tumour aneuploidy were clearly identified. The results of this initial analysis are presented.

1) Millot C, Dufer J. Clinical applications of image cytometry to human tumour analysis.

Histol Histopathol. 2000 Oct;15(4):1185-200.

p-086

Use of Amplatzer ASO (atrial septal occluder) devices in three unusual patients

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The Amplatzer device has been used to close a wide variety of interatrial septal defects, ranging from atrial septal defects (ASD) in children and adults, to persistently patent foramen ovale (PFO) with paradoxical embolism in older individuals. The device has also been used for palliation in complex congenital heart disease.

We report the use of this device to close a residual significant ASD after surgical closure of ASD. Our patient had surgery for ASD at 34 years of age at a tertiary referral centre where a 2x3cm defect was closed by direct

suture. She represented four years later with palpitations. An angiogram showed a significant defect low in the interatrial septum. An atrial septal defect device (Amplatzer) was successfully deployed across the defect under transoesophageal echocardiography and fluoroscopy control with complete occlusion along with concurrent electrophysiological study and ablation for her tachycardia.

We also report two children who had critical pulmonary stenosis with attempted balloon dilation in the neonatal period. This failed in both cases and surgery was undertaken. They both remained with persistent cyanosis (saturation in the high 80s associated with clubbing) which was caused by residual atrial septal defects. In both children, the defects were successfully closed with Amplatzer devices (two devices in one child) with dramatic improvement in saturations.

p-087

Femoral venous access in a general paediatric setting

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Femoral venous access is useful in critically ill children. This study documents 99 femoral venous central lines or cannulas in a general paediatric setting, which included neonates and intensive care patients. This study was carried out in SLH, a regional hospital catering for all of the Maltese paediatric population. There were no long term complications associated with femoral venous access. The failure rate was 3.0%. No case resulted in systemic sepsis, and in two patients, lines were removed due to erythema at the entry site. Four neonates (4.0% overall, 7.3% of neonates) developed transiently swollen legs after line removal. In conclusion, the low incidence of complications associated with femoral venous access should prompt carers to seek early help from intensivists or cardiologists if such access is desired. Trainees should be adequately supervised in this technique as it has its own particular complications. A training device for femoral access is also available.

Grech V. Femoral venous access in a general paediatric setting. *Ann Trop Paediatr* 2003; 23: 83-86.

p-088

Late concomitant repair of tetralogy of Fallot and aortic valve replacement following successful pregnancy

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The importance of patient followup after repair of tetralogy of Fallot, with special attention to the development of arrhythmias, has been widely studied. It is only recently that postoperative problems relating to the aortic root of these individuals have been looked into. We present a patient with tetralogy of Fallot who underwent complete correction, together with aortic valve replacement at 33 years of age following a successful pregnancy. To our knowledge this is the third report of primary repair of tetralogy of Fallot with simultaneous aortic valve replacement for severe aortic regurgitation. Our patient is unique in that she had uncorrected and unpalliated tetralogy of Fallot and severe aortic regurgitation and still went through an uneventful pregnancy and delivery. There is only one report of successful pregnancy and delivery in uncorrected tetralogy, but this was not associated with aortic regurgitation.

p-089

Aortic stenosis after uncomplicated surgical repair of tetralogy of Fallot

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Tetralogy of Fallot is only rarely associated with aortic valvar disease. We present a child who had uncomplicated repair of tetralogy of Fallot at 16 months of age, and who developed mild aortic stenosis three years later, with mild to moderate aortic incompetence being seen two years subsequent to that event. No aortic valvar disease had been noted prior to surgery. No intervention is planned at this stage but the condition warrants further careful followup. Aortic valvar disease is very rarely associated with tetralogy of Fallot, with only a handful of cases reported in the literature.

Galea N, Aquilina O, Grech V. Aortic stenosis after uncomplicated surgical repair of tetralogy of Fallot. *Cardiol Young*. 2003; 13: 300-301.

p-090

Complex congenital cardiac disease in a patient with partial trisomy of the long arms of chromosomes 11 and 22

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Abnormalities of chromosomes 11 and 22 are associated with congenital cardiac disease and/or various syndromes. We present a patient with partial trisomy for the long arms of chromosomes 11 and 22: 47,XY+der(22)t(11;22)(q23.3;q11.2), the result of a maternal balanced reciprocal translocation between these two chromosomes. Our patient was dysmorphic and had coarctation of the aorta, a partial atrioventricular septal defect with common atrioventricular junction and exclusively atrial shunting, patent ductus arteriosus, supracardiac total anomalous pulmonary venous drainage, a single kidney, and tracheobronchomalacia. This patient is unusual in having extensive left-sided cardiac involvement, a feature that is very rarely found in this condition. To the best of our knowledge, these features have not previously been documented in this syndrome.

p-091

Bilateral renal artery stenosis presenting with Bell's palsy and hemiplegia

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Renal artery stenosis (RAS) commonly occurs in later life due to atherosclerosis. Fibromuscular RAS (FMD) is rarer, and tends to occur in young adults, particularly women aged 20 to 40 years. We present a 13 year old boy with bilateral RAS at the renal artery origins due to FMD, who presented initially with Bells' palsy due to undetected hypertension. Two years later, he represented with severe hemiplegia due to hypertensive haemorrhagic stroke. Diagnosis was made with isotope studies and with angiography. Balloon treatment failed and renal revascularisation was achieved with a bifurcated homograft from descending aorta to both renal arteries distal to the stenoses. Hypertension was controlled but recurred after four years and was associated with left flank pain. Repeat angiography showed thrombotic obstruction of the left limb of the homograft despite antiplatelet medication. The homograft was reopened with thrombolytic infusion by catheter directly into the homograft. Renovascular hypertension is the most common cause of secondary hypertension, and the commonest cause of renovascular hypertension is RAS. RAS is also increasingly recognised as an important cause of chronic renal insufficiency and end stage renal disease. Unilateral renal artery stenosis causes ischaemic nephropathy on the affected side and uncontrolled hypertension leads to hypertensive nephrosclerosis on the nonaffected side, therefore both uni- and bilateral renal artery stenosis may lead to progressive renal failure.

p-092

Late presentation of classical Scimitar Syndrome

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Scimitar syndrome is a form of partial anomalous pulmonary venous drainage that is dramatically visible on plain chest radiography (CXR). In these individuals, the entire venous drainage from the right lung enters a single anomalous large vein that descends down to the inferior vena cava (IVC). This descending vein is visible on CXR as a curvilinear density along the right heart border and resembles the curved Arabic sword that gives the condition its name. Scimitar syndrome forms part of the large spectrum of associated conditions known as venolobar syndrome. These include right lung hypoplasia or sequestered segments of right lung, congenital heart disease and various others. We report a young lady who presented incidentally, with a murmur, at 16 years of age. Full investigation including angiography showed a large atrial septal defect with right heart dilation and scimitar syndrome. She was operated locally with uneventful and complete correction by baffling of the scimitar vein from its entry into the inferior vena to the left atrium through the atrial septal defect.

p-093

Widespread availability of paediatric medical protocols on the hospital intranet website

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In paediatrics, a wide variety of procedures and interventions (protocols) are standardised. The entire hard copy collection of paediatric protocols used in Malta was put together as a website, and is hosted on the hospital intranet.

64 protocols have been uploaded to date. They are broadly divided into the following categories: paediatric (n=27), neonatal (n=26), syndromes (n=6) and forms (n=5).

Eight protocols consist of spreadsheets and these perform a variety of instantaneous operations which include:

Calculation of antibiotic dosages and fluids for neonates in ml/kg/day, in 10ml increments, starting from 60ml/kg/day from patient weight.

Calculation of anticonvulsant doses and inotrope solution preparation from patient weight. Inotropes are calculated in both low concentration infusions suitable for peripheral administration, and high concentration infusions suitable for central administration.

Calculation of ventilatory mean airway pressure from input ventilation parameters.

Calculation of neonatal umbilical catheter insertion distances by shoulder-umbilicus measurement.

Sedation drug dosages.

Neonatal and paediatric advanced life support drug and fluid dosages.

This archive has proven to be very useful for both medical and paramedical staff in the department of paediatrics, both in the hospital and in peripheral health centres and hospitals. Changes or new protocols may be uploaded at any time, with instantaneous updating of the archive. The website was created and is maintained and updated by the author, thanks to the ease with which modern software allows users to create hypertext markup language.

Widespread availability of paediatric medical protocols on the hospital intranet website

Journal of Audiovisual Media in Medicine (in press).

p-094

Risk factors for QRS prolongation in repaired tetralogy of Fallot

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Repaired tetralogy of Fallot is usually conducive to a normal and unrestricted lifestyle. However, occasionally, late sudden death occurs due to ventricular tachycardia. This is thought to be due to a combination of factors, including both left and right ventricular dilation that may be associated with valvar incompetence, and residual right ventricular outflow tract obstruction (RVOTO). Several studies have shown that QRS duration >180msec is a very sensitive predictor of life-threatening ventricular arrhythmias. We recalled our tetralogy population (n=57) to identify risk factors for prolonged QRS duration on the resting ECG. Factors examined included history, demographics, symptoms, surgery, CXR, ECG and echocardiography. A significant positive correlation was found between QRS duration and degree of tricuspid regurgitation, degree of RVOTO and left ventricular diastolic dimension (LVEDD). A higher mean QRS duration (not statistically significant) was found in the group that had shunt prior to total repair than the primary repair group (shunted n=12, QRS=120.8msec; unshunted n=45, QRS=136.4msec - p=0.09). No significant differences were found between these two groups except for mean delay to surgery (shunted=1093 months, unshunted=174 months - p<0.0001). Conventionally, symptomatic individuals with tetralogy undergo primary repair if the child is old enough. If deemed too young/small, a shunt is inserted and later repair undertaken once the shunt is outgrown with recurrence of cyanosis. Delay to complete repair after shunt insertion with prolonged left ventricular volume overload may permanently alter left ventricular electro-mechanical properties with QRS prolongation. Earlier elective repair with shunt takedown may be a better option.

p-095

Seasonality of births is associated with seasonality of marriages in Malta

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This study quantifies secular trends in seasonal variation in births in Malta, a small Mediterranean country where the vast proportion of births occur in wedlock due to a predominantly Roman-Catholic population. This study also related such variations to seasonal variation in marriages over (1950-1996). A significant peak in marriages (n=111,932) in the third quarter of the year was found for almost the entire period under study. This was paralleled by a peak in births (n=299,558) for the period 1970-1996, which lagged by 13-14 months after the peak in marriages. For the period 1994-1996 (monthly data available by pregnancy order), the peak in births was caused by first pregnancies only. Seasonal patterns in births occur almost universally due to cultural and/or biometeorological factors. In Malta, the reason for a late summer peak in births appears to be due to a practical and planned approach by Maltese couples to contraceptive planning, probably influenced by the

Roman-Catholic ethos and social pressures, with unprotected intercourse occurring only after marriage. In Malta, birth control, ('natural methods') was introduced in the 1960s. Prior to this period, births peaked toward the beginning/end of the year, and this may be the more natural pattern.

References: Grech V, Savona-Ventura C, Agius-Muscat H, Janulova L. Seasonality of births is associated with seasonality of marriages in Malta. *J Biosoc Sci* 2003; 35: 95-105.

p-096

Trends in prevalence and morbidity in wheezing and rhinitis in 5 – 8 yr old Maltese schoolchildren between 1994 and 2001 [ISAAC]

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The cumulative and current prevalences of wheezing and rhinitis in 5 – 8 yr old Maltese schoolchildren were compared between 1994 and 2001 when the ISAAC study was carried out using the same questionnaire filled in by each child's guardian.

In 1994 3506 [78.5% response rate] of 5 – 8 yr children attending state primary schools participated in the study while in 2001, 3816 [80% response rate] took part. 19.1% of these children were wheezers 'ever' in 1994 and this figure increased to 30.2% in 2001 [p<0.00001]. This trend repeated itself for wheezing within the past year 8.8% vs 14.8% [p<0.0001]. Although in 2001 the current wheezers were more likely to have exercise-induced wheezing [p<0.005] and nocturnal cough [p<0.0001], they had less frequent wheezing episodes [p<0.0001] and less acute severe asthmatic attacks [p=0.004].

The rising trend in prevalence in wheezing was mirrored in rhinitis with the cumulative prevalence rising from 23.4% to 28.7% [p<0.0001] and current rhinitis from 20.7% to 24.4% [p<0.0001] between 1994 and 2001. Current rhinitis were more likely to have mild symptomatology in 2001 [p<0.0001] and were most likely to have their nasal problems earlier in the year than in 1994 [February vs April]. Cumulative prevalences of both wheezing and rhinitis were higher in boys in 2001 [p<0.001] whereas this gender difference was not significant in 1994. Maltese doctors were also more prone to diagnose wheezing as asthma and recurrent nasal symptoms as hayfever [p<0.0001] in these children in 2001.

p-097

Asthma management in 8-10 year old children attending Paediatric Outpatients

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Asthma guidelines emphasise the need to target treatment towards inflammation of the airways. The cornerstone to asthma therapy is to move away from b₂-agonists and use anti-inflammatory drugs (inhaled corticosteroids). The aims of this study were to describe patterns of medical treatment prescribed, management, health care trends and the relationship between treatment and disease severity in 349, 8-10 year old children having a history of asthma and/or wheezing episodes at the time of the study or in the previous 12 months. This study was conducted at Children's Outpatients, St. Luke's Hospital. Parents accompanying children answered standardized ISAAC questionnaires on asthma management. The 2 most reported treatment regimens were: i) regular preventers (inhaled corticosteroids) and relievers (b₂-agonist) when wheezy and ii) regular use of both relievers and preventers. When comparing these two treatment plans, children using both preventers and b₂-agonists regularly were more likely to require use of oral relievers (p=0.001), use medication to control exercise-induced symptoms (p=0.017), be admitted to hospital more often (p=0.006) and be absent from school (p<0.001). These results show that children on regular b₂-agonists inhalations tend to experience more severe symptoms and their condition is not adequately controlled. Children who

are prescribed regular inhaled corticosteroids and b₂-agonists as needed are faring well and seem to enjoy a better quality of life. Thus, one can speculate that the use of b₂-agonists does not control asthma and associated symptoms as effectively as inhaled corticosteroids in children. Inhaled b₂-agonists should be used on demand and to relieve acute symptoms - regular inhalation should be avoided.

References: International Study of Asthma and Allergies in Childhood (ISAAC) Phase II Modules – Questionnaires on management of allergic diseases – Asthma Management Module 2.2:19-21. Sears MR, Taylor DR, Cristin GP, Lake DC, Li Q, Flannery EM, Yates DM, Lucas MK, Herbison GP (1990) Regular inhaled beta-agonist treatment in bronchial asthma *Lancet* 336: 1390-1396.

p-098

House dust mite allergen in mattress dust and respiratory health of 8 – 10 year old Maltese children with persistent wheezing

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Exposure to dust mite allergens is associated with asthma severity in sensitized patients. This study aimed to investigate the relationship between dust mite allergen levels in mattress dust and respiratory health in Maltese children. Thirty-one children with a history of wheeze were randomly recruited from a paediatric outpatient clinic: - 16 were persistent wheezers, 15 were wheezers 'ever'. Dust samples were collected in autumn and spring by vacuuming the child's mattress. Der p 1 allergen was determined by ELISA. Persistent wheezers kept symptom diaries for 2 weeks and measured the peak expiratory flow (PEF) twice daily. Der p 1 mean concentrations were 2.61 mg/g (95% CI 1.19-5.74) in autumn and 5.38

mg/g (95% CI 2.49-11.64) in spring (p=0.006). There was no difference in Der p 1 levels measured in mattresses of persistent wheezers and wheezers 'ever' in autumn 0.84 mg/g (95% CI 0.18-3.84, p=0.817) and spring 1.05 mg/g (95%CI 0.22-5.09, p=0.946). A positive relationship (r=0.696; p=0.003) between Der p 1 levels in mattress dust and peak expiratory flow rate (PEFR) variability was obtained in autumn but not spring (r=0.207; p=0.455). Exposure to dust mite allergens may be an important risk factor for persistence of wheeze and asthma in Maltese children.

References: International Study of Asthma and Allergies in Childhood (ISAAC) Phase II Modules – Environmental Module 4.1:63-65.

Jalaludin B, Xuan W, Mahmic A, Peat J, Tovey E, Leeder S. Association between Der p 1 concentration and peak expiratory flow rate in children with wheeze: A longitudinal analysis. *J Allergy Clin Immunol* 1998; 102: 382-6. Zock JP, Brunekreef B, Hazebroek-Kampschreur AAJM, Roosen CW. House dust mite allergen in bedroom floor dust and respiratory health of children with asthmatic symptoms. *Eur Respir J* 1994; 7: 1254-1259.

p-099

Childhood wheezing and inhaled corticosteroids (ICS)

HM Lenicker, Consultant Paediatrician.

The local prevalence of childhood asthma and wheezing is high. Wheezing can be due to diverse causes. Diagnosis may be problematic especially in young children. There may be some over diagnosis and long - term over treatment of asthma. Correct diagnosis is important for prognosis and appropriate treatment. In making a diagnosis of asthma in young children consideration of associated risk factors is important. Grading of the severity is essential for determining the appropriate level of treatment. Use of ICS in low doses is safe and has benefited millions of children. Recent

international guidelines now even recommend ICS as the most effective first line prophylactic treatment for very young children with persistent or severe asthma. In the recommended doses ICS do not have clinically significant or irreversible side effects in the short term. Side effects are dose dependent. There are now emerging reports of symptomatic adrenal insufficiency and adrenal failure in children while on long - term ICS therapy or after its abrupt cessation. Correct diagnosis, appropriate dosage and adjustment, familiarity with the properties of the ICS preparation used as well as sustained regular follow up are important aspects of the safe management of children requiring long term ICS therapy.

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p-100

Student assessment of undergraduate curriculum in Paediatrics

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Aim: The study was designed to assess both satisfactory and unsatisfactory aspects of the undergraduate curriculum in Paediatrics as perceived by the students themselves.

Methods: A simple questionnaire was designed to assess students' perceptions of the curriculum and was returned from 17 students from a cohort of 57 in 1999, and 32 from 39 in 2002.

Results: In most aspects of the course, replies were highly satisfactory and often excellent, particularly with regard to the course organisation, attendance of lecturers, coverage of general paediatrics, tutorials and examinations. Some areas where student dissatisfaction was in excess of one third of respondents, notably the amount of neonatal coverage in 1999, have been addressed and had improved in 2002. Nevertheless, the follow up questionnaire in 2002 has shown that other issues remain problematic, particularly a lack of coverage of community paediatrics and insufficient 'hands-on' teaching.

Conclusions: A simple questionnaire-based format for assessing student feedback was both practical and reliable, and can be applied to assess the influence of any future changes in the curriculum. The questionnaire does not only confirm anticipated curricular deficiencies but is also effective in highlighting unexpected problems that can, therefore, be addressed appropriately.

p-101

The prevalence of Coeliac disease in Down's syndrome in Malta

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The prevalence of coeliac disease in individuals with Down's syndrome is elevated. The objective of this study was to assess the frequency of coeliac disease in individuals with Down's syndrome in Malta. 100 Down's individuals were screened for coeliac disease. A history was taken from all cases who were examined and measured for weight and height. A full blood

count, anti gliadin (IgG and IgA) and antiendomysial antibodies were taken. Equivocal cases were also screened for antireticulin antibodies. Jejunal biopsy was recommended in all serologically positive cases. The frequency of coeliac disease in Down's syndrome was 8%, which is much higher than that found from screening the general population. Screening for coeliac disease in all individuals with Down's syndrome is therefore recommended.

Reference: The prevalence of coeliac disease in Down's syndrome in Malta – Annals Tropical Paediatrics (in press).

p-102

Effective Paediatric triage in the Emergency Department

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A high proportion of patients attending the Accident and Emergency Department are children (<14 years of age). The same triage officers who assess adults are responsible for prioritising children; including neonates and infants. However the triage system used for adults is not reproducible for children due to the different physiological values which vary with age. An analysis of the triage system used for children attending the paediatric emergency department was carried out over one week in August 2001. Out of a total of 234 children, 79 (33.7%) were triaged. Out of these 16 (0.068%) had one vital parameter measured (pulse rate, temperature, or blood glucose), the remaining 63 (26.9%) were prioritised according to the complaint of the parent/guardian. In conclusion, the above data indicate that there is the urgent need for the implementation of an effective triage system for children and the training of officers carrying out paediatric triage. This is essential in the case of several referrals so that those with the most immediate clinical need are treated first.

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Congenital healed cleft lip

– two unusual Maltese cases

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Microform cleft lip (MCL), also called congenital healed cleft lip or cleft lip "frustrE", is a rare congenital anomaly. MCL has been described as having the characteristic appearance of a typical cleft lip that has been corrected in utero. We present two individuals with MCL: a) A girl with bilateral microform cleft lip associated with a preauricular sinus and bilateral camptodactyly, whose father had had bilateral cleft lip repair and a preauricular sinus b) A boy with unilateral MCL who had coarctation of the aorta and an aberrant right subclavian artery that arose distal to the coarctation site. MCL is very rare, and the only reported cohort in the literature gives a rate of 0.06/10,000 live births (95% CL: 0.04-0.09/10,000 live births; n=25). Bilateral MCL is even more rare, and in this only and largest series reported to date, only one case had bilateral MCL.

p-104

Mycoplasma-related Miller-Fisher variant of Guillain-Barre syndrome

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Introduction: Guillain-Barre syndrome (GBS) results in post-infectious demyelination that causes motor but sometimes also sensory polyneuropathy. It usually follows 10 days after a non-specific viral infection. Weakness usually begins in the lower extremities and progressively involves

the trunk, upper limbs and bulbar muscles over days or weeks. Bulbar involvement occurs in about 50% of cases. The most common cranial nerve involved is the facial nerve. Miller-Fisher syndrome (MFS) is a variant of GBS involving the triad ataxia, ophthalmoplegia and areflexia. The pathophysiology of the syndrome can be explained through GQ1b ganglioside autoantibodies seen in 96% of cases, which recognize epitopes expressed specifically in the nodal regions of oculomotor nerves and cerebellar neurons. Organisms such as *Mycoplasma pneumoniae* contain cell walls that are capable of inducing the production of autoantibodies. We present the case of a child who presented with ataxia and ophthalmoplegia but in whom the reflexes were present throughout the illness.

Case report: A 9 year old boy presented with a 3 day history of slurred speech and a 1 day history of bilateral lower limb weakness, dizziness and blurred vision. He had complained of a sore throat one week previously. On examination he had neck and truncal weakness and reduced power in all muscle groups of both upper and lower limbs (MRC grade 4) with normal tone and reflexes; there were no cerebellar signs and the plantar reflexes were downgoing. Sensation was not impaired. He had dysarthria, dysphonia and dysphagia. On the second day after presentation he developed ptosis and a squint and his gait became increasingly unsteady. CSF protein levels and cytology were normal. He was started on intravenous immunoglobulin, which was continued for 5 days. His weakness became progressively worse (MRC grade 3), with increasing ptosis and ophthalmoplegia but with preservation of all limb reflexes. Repeat examination of the CSF showed a pleocytosis but normal protein levels. He showed clinical signs of improvement by the end of the second week. CSF examination at this stage was normal. He continued improving steadily and was discharged after 1 month from presentation. 3 months later he still had minimal facial nerve weakness but with completely normal power in his limbs and trunk. Other investigations included: normal CT and MRI brain scans; negative serology for herpes virus and CMV; negative CSF for herpes zoster, mycoplasma and acid-fast bacilli; negative blood and CSF cultures. Serum *Mycoplasma* IgM was positive on day 1 and negative on day 14 when *Mycoplasma* IgG became positive. GQ1b ganglioside autoantibodies IgG and IgM were negative.

Conclusion: This patient presented with signs suggestive of MFS associated with mycoplasma infection, but in whom the deep tendon reflexes remained preserved. In this regard, this case was a variant of the Miller Fisher variant of GBS.

p-105

Addressing *Helicobacter pylori* infection

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Helicobacter pylori infection is a causative agent for gastric pain. Patients referred for gastric endoscopy should be screened for

Helicobacter pylori infection. The objective was to evaluate the management of patients infected with *H. pylori*.

A questionnaire was developed consisting of sixteen open and close-ended questions. The questionnaire was used in an interview carried out with all 18 prescribers (consultants and surgeons) practising at the endoscopy unit at St Luke's General Hospital. The rate of *H. pylori* infection among patients undergoing gastric endoscopy or other diagnostic procedures and treatment modalities employed in *H. pylori* infected patients were established.

Ten (56%) of the prescribers estimate that 1 in 3 of the patients undergoing an endoscopy are found to be *H. pylori* positive, 3 (17%) estimate 1 in 2 and 1 in 4. The majority of prescribers (94%) carry out diagnostic tests to assess *H. pylori* infection: 4 (22%) using rapid urease test (RUT) only, 7 (39%) using histology only, and 7 (39%) using histology and RUT. Fifteen (83%) prescribers recommend triple therapy, 2 (11%) recommend quadruple therapy whilst 1 prescriber recommends dual therapy. Infection relapse was reported by 16 (89%) prescribers with 6 (33%) prescribers suspecting the incidence of drug resistance during *H. pylori* treatment. Six prescribers (33%) follow-up the treatment of the patients only if they are symptomatic and an alarming 12 prescribers (67%) do not consider the possibility of antibiotic resistance.

A protocol for the management of patients presenting with *H. pylori* infection needs to be developed. Emphasis should be made on recent recommendations regarding therapy with particular reference to

cost-effective regimens whilst monitoring local microbial sensitivity.

p-106

Incidence of glove perforation during surgical procedures

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A study was performed to establish the rate of tear of surgical gloves at St Luke's Hospital and the factors that may influence it. Glove failure is of importance in the prevention of HIV or Hepatitis infections to surgeons and operating staff.

Nine hundred and six gloves were collected randomly at the end of operations from 310 operations (6 specialities) carried out at St Luke's Hospital over a five month period and then tested for perforations using the watertight test described by the American Society for Testing Materials (ASTM) Standard specification. The failure percentage (%) of incidence of defective gloves was determined. Two controls were carried out: control one tested unused gloves and control two reviewed storage areas and storage conditions of the gloves.

From the gloves collected, percentage failure rate was as follows: surgeons 26.5, first assistant 9.2, second assistant 8.3 and theatre nurses 11.1 (average 16.6%) with the highest incidence in obstetrics and gynaecological operations (29.2%). Absence of perforations in the control gloves indicated that the study gloves were perforated during the operation procedure.

The detection of perforations in gloves used in surgical operations strongly suggest that the glove material is unable to withstand adverse operation conditions such as long operation procedures and the use of sharp instruments. It is also important that the pharmacist extends his information services to create education and awareness that gloves are often perforated during an operation. The pharmacist should advise that gloves should be changed more frequently during long operations especially by gynaecological and obstetric staff who had the highest incidence of perforation.

p-107

Self-monitoring in diabetic patients

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Blood glucose self-monitoring is a means of achieving patient participation in the management of diabetes. The aim of the study was to assess the patients' skills of performing blood glucose monitoring in insulin-dependent diabetics aged between 6 and 18 years.

Written informed consent was obtained from the parents of 50 patients attending the Diabetes Day Clinic at St Luke's Hospital (mean age: 13 years, 25 females, 25 males). Each patient was presented with the Medisense blood glucose meter, Medisense blood glucose meter strips, alcohol pads, cotton wool and trash. Patients were asked to bring their personal finger pricker apparatus. The patients were asked to perform the blood glucose test. The investigator observed the procedure and used a skills assessment sheet to document the performance of the patient. The performance of blood glucose testing was divided into 11 steps out of which 3 were considered to be critical (handling of test strip, obtaining a blood sample, applying blood sample to test strip).

A mean skill score of 70% was obtained (62%-73%). There was no significant difference in total skill performance related to age, gender or duration of diagnosis. Considering the three critical skills, 33 (66%) managed to handle the test strip correctly, 39 (78%) obtained a good blood sample and 30 (60%) applied the drops of blood to the test strip as specified by the blood glucose meter manual.

Children suffering from diabetes have difficulty in performing critical tasks required for self-monitoring of blood glucose. Patient education on checking blood glucose self-monitoring techniques improves the technique and supports patient empowerment in the self-management of diabetes.

p-108

Transcriptional regulation of the human muscarinic M₂ receptor gene

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Muscarinic M₂ receptors are important regulators of airway smooth muscle tone and alteration in M₂ receptor function has been described in asthmatic patients. Information regarding transcriptional regulatory control of muscarinic M₂ receptor expression in human airway smooth muscle cells is not available in the scientific literature.

This project aimed to study the transcriptional regulation of human muscarinic M₂ receptors and identify potential polymorphic variation, which may contribute to alteration in receptor expression.

Total mRNA was extracted from a human airway smooth muscle (HASM) primary cell culture and used as a template for analysis. A 5' RACE (Rapid Amplification of cDNA Ends) approach was used to identify and characterize the promoter region of the M₂ receptor. The promoter activity of pGL3E deletion constructs was subsequently investigated using a luciferase-based reporter gene assay approach in transiently transfected HASM and BEAS-2B cells.

Three different regions of transcriptional initiation were identified, with multiple transcription start sites (TSSs) clustered within each region. The distance separating the most 5' TSS from the coding region exceeds 146kb, and includes multiple exons, some of which are alternatively spliced. Sequencing of genomic DNA revealed the presence of a novel 0.5kb hypervariable region located 648bp upstream of the most 5' TSS, a CÆA SNP located 136bp upstream of the most 5' TSS and a multiallelic CA tandem repeat 96bp downstream of the most 5' TSS. The CA repeat has been shown to influence reporter gene transcriptional activity in transient cell transfectants.

This study has elucidated the arrangement of the muscarinic M₂ 5' untranslated region, and has defined the key regions likely to be important in transcriptional regulation of the gene in HASM cells. Studies to define potential linkage between the functional tandem CA repeat and asthma are currently underway.

This work was funded by the University of Malta and the National Asthma Campaign (UK).

p-109

Immunological levels in patients treated with new and old AEDs

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Studies have shown that many traditional antiepileptic drugs (AEDs) alter immunoglobulin (Ig) levels in patients and that immunological factors might contribute to the development of epilepsy. This study considered the effect on Igs, of therapy with traditional and newer AEDs, and a determination of the effect of selected AEDs on lymphocyte proliferation in vitro. In Study 1, group A patients (n = 16) were taking a combination of old and new AEDs. Group B patients (n = 12) were relying solely on old AEDs. Ten healthy volunteers served as a control group. Four blood samples were withdrawn from each patient at 3-month intervals. IgA, IgM and IgG levels were measured using an immunoturbidimetric procedure. In study 2, lymphocytes were extracted from healthy male volunteers and treated with increasing concentrations of vigabatrin (VGB), gabapentin (GBP) and

phenobarbitone (PBT). Lymphocyte proliferation was measured using the liquid scintillation technique, and the results compared to untreated controls. In Study 1, the mean plasma IgA levels were lower for both group A and group B patients, compared to the controls, but not for IgM and IgG levels (p<0.05). The results obtained in the in vitro study showed that for the selected AEDs, there was an immunostimulatory effect in an incubated cell culture for 72 hours, at concentrations of 107pg/ml for VGB and GBP, and at a concentration of 105pg/ml for PBT (p<0.05). It would be preliminary from these limited results to state categorically that the selected AEDs will stimulate lymphocyte proliferation in vitro, as only three donors were used. There is definitely scope for the carrying out of further in vitro tests with respect to both spectrum of AEDs selected, and the number of donors recruited. The results also indicate that analysis of T-cell and B-cell interaction in epileptic patients should be undertaken.

p-110

Measuring consumer perception of a health professional

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Evaluation of the impact of the intervention of health professionals on patient care by the consumer is now gaining relevance within quality care systems. The aim of the study was to examine the Maltese public perception of the community pharmacist.

A self-administered tool based on a quantitative system was developed. The tool assesses consumer satisfaction with advice and services provided by the community pharmacist, and analyses perception of the pharmacist as a health advisor.¹ Psychometric evaluation of the tool was undertaken prior to implementation in the study. Subsequently the tool was distributed to 576 consumers (males 41%, females 59%, average age 33 years, age range 16-71 years). The consumers were identified from the five districts in which Malta is subdivided. Statistical analysis was undertaken using Biomedical Data Package software.

The average perception score obtained was 76% (55%-99%). Consumers from the southeastern region had a higher perception of the pharmacist (79%) when compared to consumers from the other four districts (p<0.05). Consumers aged over 51 years had a higher perception (79%) of the pharmacist than consumers aged between 15 and 30 years (75%) (p<0.01). Skilled manual workers had the highest perception of the pharmacist (80%) whereas managerial and professional workers had the lowest perception of the pharmacist (73%-75%) (p<0.05).

The average perception of the pharmacist may be improved through the organization of health promotion activities in the community pharmacy setting. Such activities will enhance the professional aspect of a community pharmacy and will emphasise the availability of the pharmacist as a health advisor.

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p-111

Patient counselling on discharge

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Patients who are discharged after hospitalisation may have difficulty in understanding the correct use of medications. The aim of this study was to evaluate pharmacist intervention in counselling elderly patients upon discharge from an acute hospital.

A prospective, comparative study was undertaken at Zammit Clapp Hospital, an acute geriatric hospital. The pharmacists prepared four-day medicines supply and a discharge medication leaflet for patients discharged during a

four month period. The information leaflet presented written information on the drugs prescribed and on how to take the medications. In addition, the pharmacists discussed the patients' medication during a counselling session. Patients' knowledge on medications and compliance with therapy were assessed after the pharmacist counselling session and again after two weeks.

Forty patients (mean age: 79.2 years, range: 66-91 years, 13 females, 27 males) participated in the study. The average duration of the pharmacist counselling session was 6 minutes (2-5 minutes). Patients' knowledge on the indications, dosage regimen, and directions for use of the medications recorded after counselling during discharge, decreased significantly fifteen days post-discharge as follows: indications from 87% to 83%, dosage regimen from 23% to 18%, and directions for use from 99% to 95% ($p < 0.05$ to $p < 0.01$). The patients consumed a total of 243 products with an average of 6 medications per patient. Compliance reported by patients fifteen days post-discharge, was with 85% of the medications compared to the 97% intended compliance during discharge ($p < 0.001$).

Patient counselling reinforces patient knowledge and intention for compliance. The decline in knowledge on medications fifteen days post-discharge from hospital may indicate the need for follow-up counselling sessions by pharmacists to help the older persons to use medicine therapy correctly.

P-112

Costings of pharmaceutical care in post-operative and rehabilitation care

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The objectives were to cost pharmacist intervention in post-operative and rehabilitation care.

A Pharmacist Intervention Sheet (PIS) was devised to document time taken by pharmacists in caring for individual patients hospitalised at Zammit Clapp Hospital. The PIS was established after carrying out observation sessions of the pharmacists' interventions and after holding focus group discussions. Validity, applicability and practicality of the PIS were tested. Subsequently the self-reporting method was adopted where pharmacists were asked to follow and document all interventions carried out for individual patients from the time of hospitalization to the time of discharge. Patients followed were randomly selected as a convenience sample, taking two patients from each ward for a one-year period.

A total of 75 PIS were collected. The mean average time of pharmacist intervention during hospitalization per patient was 6.2 minutes (1-423 minutes) costing 0.7 Euros (0.12 Euros-48 Euros). The mean average pharmacist intervention time decreased with increasing duration of hospital admission. Pharmacist interventions were: medication follow-up (23%), participation at ward rounds (17%), interactions with patient and carers (14%), patient case conference (11%), obtaining patient's history (10%), drug preparation on discharge (10%), drug preparation on admission (8%), dispensing medication (4%). Medication follow-up refers to the time spent checking treatment charts for changes and undertaking the subsequent modification of patient unit-dose blister packs, follow-up of patient medical and drug history, identification of drug interactions and monitoring of drug therapy.

Costings and identification of the pharmacists' intervention in post-operative and rehabilitation care of older patients hospitalised at Zammit Clapp Hospital showed that the intervention of the pharmacist is contributing towards patient care within a teamwork approach.

P-113

A model to calculate price of medicines

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The issue of the fairness and transparency in the price of medicines is a valid concern of society. Models to calculate price of medicines help to increase the transparency in price establishment.

The aim was to compare prices of medicines in two countries. Prices for analgesic and anti-infective proprietary products available both in Malta and in the United Kingdom were compiled. For each product, the equivalent unit price in cents (Maltese currency) for the retail price in the UK was calculated and compared to the unit price in cents for the retail price in Malta. Subsequently, correlation between the prices for the two countries was calculated using Microsoft Excel software.

For the analgesics, 32 products were compared whereas for the anti-infective agents 51 products were considered. The correlation ratio when the UK retail price was compared to the Maltese retail price, for analgesics was 0.88 and for anti-infective agents was 0.82. The correlation ratio varies within the anti-infective class: antifungals 0.56, penicillins 0.88, macrolides 1.10. This data suggests that the price tends to be generally higher in Malta.

The establishment of a correlation ratio serves as a basis for the development of a basic model in the calculation of retail price of medicines in different countries. Also such a model helps in price estimation of medicines that are currently not available on the local market.

P-114

Cost value of side effect reduction

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The aim of the study was to determine how much patients are prepared to pay for a medicine with reduced occurrence of adverse effects.

A questionnaire consisting of 10 closed-type questions was developed. Price patients are prepared to pay more for a non-steroidal anti-inflammatory drug which is not associated with gastric irritation as opposed to a classical non-steroidal anti-inflammatory drug known to cause possible gastric side effects was estimated. Inter-rater reliability of the questionnaire was tested: 20 patients visiting a community pharmacy were interviewed by two raters. Face and content validity were evaluated through the setting up of an expert panel of judges. Subsequently, two investigators addressed the questionnaire to 660 (518 females, 142 males) clients who were approached as a convenience sample from 8 community pharmacies and 3 shopping centres. Statistical analysis was carried out using Biomedical Data Package software.

Face and content validity of the questionnaire were strong. Reliability correlation coefficient and internal consistency were high ($r_s = 0.95$, Cronbach's alpha = 0.98). Use of ibuprofen: 43% rarely, 26% <once a month, 15% once a month, 10% >once a month, 3% once a week, 2% >once a week and 1% daily. 12% of clients suffered from stomach pain as a result of ibuprofen. Amount of money in US\$ for 48 tablets patients are prepared to pay more for a product with less side effects: 40% -none, 25% - \$1.5, 16% - \$3, 2% - \$6, 7% - >\$6, 10% - no answer.

Reasons why patients are in general unwilling to pay more for products with none or less gastrointestinal side instead of a conventional non-steroidal anti-inflammatory drug vary according to patient's perceived need for the medication.

P-115

Patient perceived cost of free medication

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The aim of the study was to assess the patients' perception of the cost of medicines received free from the Government Pharmaceutical Services in Malta. In Malta the Government pharmaceutical service provides

free medication, both prescription-only medicines and non-prescription medicines, to patients eligible for this service.

Interviews were carried out with patients who collected their medicines from five Government pharmacies to compile information on the medicine(s) collected from Government pharmacies, the quantity collected and the patients' perception of the cost of the medicine(s) collected. The Wilcoxon test was undertaken using the Biomedical Data Package software to test for correlation between the perceived and actual cost of medicines.

From the five Government pharmacies, 360 patients (184 male, 176 female, mean age 67 years, age range 23-93 years) agreed to participate in this study. The mean perceived cost of medicines collected and the actual cost of medicines for the whole sample (n=360) were US\$20.54 and US\$38.23 respectively. The Wilcoxon test showed that there was a significant difference between the perceived and the actual cost of medicines ($p < 0.05$). When the test was undertaken for each of the five Government pharmacies, there was a significant difference between the perceived and the actual cost of medicines ($p < 0.05$) for all pharmacies except one pharmacy (n=31, $p = 0.117$).

Patients receiving free medication perceive a lower cost for the medicines they are receiving. This implies that these individuals cannot appreciate the high cost of pharmaceutical services being met by the tax payers. Patient education on the appropriate cost of medicines may improve the demands on the service as well as impact on patient compliance.

p-116

The development of a new service for early intervention in psychosis in Luton, Bedfordshire: its impact on existing services in both primary and secondary care

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The development of 50 Early Intervention services for patients with first episode psychosis has become a central part the NHS plan for England.

The reason for developing these services is that there is a long period between when patients first become psychotic and when they begin to receive adequate help. This duration of untreated psychosis[1] is important because it appears that the first three years of a psychotic illness are a critical period[2] after which it is difficult to influence the further prognosis of the illness.

The duration of untreated psychosis was particularly long in inner city Luton-32 months on average. Therefore, Luton appeared to be an area where such an approach could be piloted. It was hoped that the use of effective detection techniques for early psychosis, as well as appropriate psycho-educational, Cognitive Behavioural, Motivational, and Family Interventions, allied with the use of low dose Atypical Anti-psychotic medication would prove effective in managing psychotic illness.[3]

Two years after the pilot was started, it is now being developed into one of the fifty teams envisaged by the NHS Plan.

The development of this new service and especially the early identification of psychotic symptoms in order to reduce the duration of untreated psychosis has had a profound impact on referral patterns between mental health services and primary care.

We have developed training packages to aid GPs to identify psychosis early. We have begun to accept direct referrals from young people's agencies such as educational institutions. We are encouraging Mental Health Promotion in the general population. We use a group of specialised nurses aligned with primary care who help early identification of cases.[4]

The paper will describe the new service and review the first outcomes.

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p-117

Perceptions of managers and providers regarding the challenges facing a small island state (Malta) in improving clinical quality

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Aims and Objectives: The particular vulnerabilities of small island states have been the subject of a UN Declaration (Briguglio, L, 1995), being said to suffer from a lack of economies of scale, insularity and isolation, making development difficult. Professional isolation is noted to be a major shortcoming. (Folkers L et al, 1998). However, the evidence is conflicting in that indicative human development health indicators actually revealed them to be better off. (Easterly W et al, 1999). Galea (1988) describes 'The Healthy islands concept', which sets out to develop organizational systems that motivate and reward collaborative behaviour in the achievement of public health objectives. Small island states have their own particularities that are distinct. This study assesses the perceptions of healthcare managers and providers regarding the impact of this reality on Maltese healthcare.

Methods: Qualitative study; Literature review, followed by twenty In-Depth One-To-One Interviews with key stakeholders addressing technical levels of quality of care and related issues in public and private sector. Sample included all those responsible for national development in healthcare, middle managers delivering clinical care and clinical leadership within the public and private sectors, including doctors, pharmacists and nurses. Audiotaped; consent obtained. Deductive approach.

Results: Emergent themes included the following: culture, politics, historical, structural, systems, people, resources, and implications for change. i 'small island mentality', with implications for service provision and confidentiality emerged. Implications were noted for training and maintenance of clinical competence, adequate care provision at tertiary level, quality improvement, and industrial relations. Solutions included *Bilateral* exchange visits overseas, for further training, and introducing *external change agents* into the system to encourage improvement process development.

p-118

Experience with popliteal-tibial angioplasty

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Transluminal angioplasty is a technique which has been practiced extensively locally. Femoral, iliac, renal and visceral angioplasty have all been approached with satisfactory results. Currently with advance in technology and improvements in the technique of angioplasty a trial is ongoing for the popliteal artery and the smaller arteries of the legs in acute lower limb ischaemia.

Transluminal angioplasty was practiced in stenotic arterial disease by passing guide wires through the lumen followed by high pressure balloon catheters. Eventually, short segment occlusions were also tackled by pushing guidewire/catheter combination through atheromatous occlusions. Lately, floppy hydrophilic guidewires are being channelled subintimally through long segment occlusions in ileo-femoral regions. This has been extended to the popliteal-tibial regions in grossly diseased vessels in acute limb threatening ischaemia commonly in diabetics for limb salvage techniques.

The best results are obtained in the single stenotic lesion which is easily crossed and readily dilated. Difficulties encountered depend on: 1) presence of arterial calcification in diabetes and renal disease as this limits dilation. 2) presence of occlusions which can be impossible to traverse depending on timing of presentation (with late presentation being harder to cross). 3) presence of long segments or multiple segments of stenoses which present large atheromatous bulk which is more difficult to control well without elastic recoil leading to restenosis. The discussion will include arterial anatomy, classification of disease and indications for the technique. The work up, in and post-procedural therapy and angioplasty technique with results and complications will be elaborated.

Our experience in this new technique is building up and Subintimal Popliteal-Tibial Angioplasty is promising and merits further extension with extension into popliteal-tibial stenting in future.

p-119

Lumbar spinal MRI protocols for radiculopathy

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There are standard lumbar MRI protocols in use by most centers for investigating radiculopathy in the lumbar region. In our practice we have also utilised variations to these protocols to research whether other sequences are useful.

The standard lumbar MRI protocols are four sequences: Sagittal T2 and T1, Axial T2 and T1 weighted sequences. In the failed back syndrome and when positive for new growth or inflammation Axial T1 and Sagittal T1 are repeated after gadolinium injection. The benefit of: Sagittal T2 with Fat Suppression(FS), Coronal sequences in T1 and T2 weighting focused on the root pockets (with and without FS), Oblique views focused on neuroexit foramina were all assessed as to whether these provide additional information which will be diagnostically beneficial.

With T2 imaging both csf and fat are depicted bright or high in signal. With Fat Suppression the fat signal will be subtracted and the techa and root pockets will be visualised exclusively of fat. This resulted in more useful assessment of spinal stenosis. With Coronal imaging, the plane of root pockets is sectioned thinly and the nerves and related disc prolapse is readily depicted. This results in better analysis of the neuropathy causing the presenting clinical syndrome with better understanding of what exactly may need therapeutic correction.

The most informative sequences in Lumbar Spine MR Imaging for radiculopathy are:

Sagittal T2 with Fat-suppression

Sagittal T1

Axial T2

If positive or in failed back syndrome contrast enhanced T1 with fat-suppression in the axial and sagittal planes are also important.

In this study sequences of added benefit for diagnostic purposes were:

Coronal T2 (with or without fat suppression) focused on root pockets.

p-120

Routine investigations on admission -relevant and ignored?

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Haemoglucoest, random blood glucose and clotting screen are blood tests

routinely taken on admission of both elective and emergency admissions. Aim: To assess the value and relevance of these tests and assess the action taken by the medical officer in the presence of abnormality.

METHOD: The results of 103 consecutive admissions were collected and the notes of the patient scrutinised in case of abnormality to note what action were taken.

Results: The haemoglucoest correlated well with the result of the random blood glucose. 97 patients had their glucose checked. 42 (43%) had a glucose above 7 mmol/l. 31 (74%) were known diabetics and were managed as such however of the remaining 12 patients only in 3 (25%) was the abnormal result further assessed. The clotting screen was checked in 78 patients. Of these the ratio was considered abnormal (>1.2) in 23 patients (30%). Of these patients 9 (39%) were on anticoagulants. On the remaining 14 with an abnormality in the clotting screen action was taken on receipt of the result in 2 patients (14%).

Conclusion: Although a large number of routine investigations are taken this study points out that any unexpected abnormality in blood tests is usually overlooked. Protocols have to be set up to try to overcome this fault in the system.

p-121

Radical prostatectomy for localised prostate cancer: A review of a personal series

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A review of 10 consecutive patients with localised prostate cancer who underwent a Radical Prostatectomy at St. Luke's Hospital from 1997 – 2003 is presented. The initial diagnosis was confirmed by transrectal prostate biopsy. Preliminary isotope bone scan and CT scan of the abdomen and pelvis showed no evidence of overt metastatic disease.

Method and results: The patients that were selected for the operation were all young (mean age 57.5 years, range 50 – 63) and had minimal comorbidity. The average PSA at presentation was 14 ng/ml (range 5.7 – 33). The average duration of the operation was 5 hours (including frozen section), and mean length of stay was 6 days. Patients were discharged from hospital with an in-dwelling urethral catheter for three weeks.

The mean period of follow-up is now 42 months (range 18 - 72 months). 9/10 patients remain alive and well (one patient died from metastatic disease 3 years post-operatively). The current PSA level is 0.1 ng/ml in 8 patients whilst one patient has a slow rising PSA which now stands at 1.64 ng/ml. This patient will be referred for radiotherapy shortly. Two patients developed calf DVTs post-operatively. Continence and potency are recognized consequences of this type of operation. 7 patients have full continence, whilst 2 have minor stress incontinence. One patient required placement of an artificial urinary sphincter. Only one patient has natural erections, whilst one patient is potent with the help of intracavernosal injections.

Discussion: This personal experience shows that the operation is safe and effective at controlling prostate cancer and has acceptable morbidity. The operation is considered for young men with localized prostate cancer. It is likely that the number of radical prostatectomies will increase in the future as PSA screening will diagnose more cases of cancer at an earlier stage of the disease.

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Total colonic Hirschsprung's disease

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Three cases of children suffering from Total Colonic Hirschsprung's disease are presented.

Apart from giving a review of total colonic Hirschsprung's disease, the management strategies and specific difficulties which were encountered in the group of children will be described in detail.

The aim is to explain the treatment strategies used in Malta, as well as give an indication of the long term outcome of these patients.

p-123

Hickman line migration

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The aim of this poster is to depict a case presentation where a Hickman line migrated from the Superior Vena Cava to the internal jugular vein in an infant on high frequency ventilation.

This is the first described case that associated Hickman line migration with high frequency ventilation. An overview of Hickman line migration is also presented.

p-124

Infection rate after scrotal approach for inguinal hernia and hydrocoele repairs

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Aim: The scrotal approach to inguinal hernia and hydrocoele repairs in boys is a relatively new procedure. The aim of this paper is to look at the rate of wound infection following the scrotal approach and compare it to the classical inguinal approach for hernia and hydrocoele repairs in children.

Method: A questionnaire was sent out to 200 cases of scrotal approach repairs and conventional repairs. The setup of the questionnaire, feedback and results will be presented.

p-125

The relevance of random biopsy in endoscopy of patients with non-ulcer dyspepsia

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Aim: To assess the value of random biopsy of the gastro-oesophageal junction and antrum in-patients undergoing endoscopy of the upper gastrointestinal tract for non-ulcer dyspepsia.

Method: 25 consecutive new patients undergoing gastroscopy for non-ulcer dyspepsia by the same endoscopist were prospectively assessed. Patients with obvious pathology such as Barrett's oesophagus, ulceration, varicities, polyps or growths were not included. CLO test for Helicobacter pylori were taken, the clinical picture recorded and random biopsy of antrum and oesophago-gastric junction at Z-line taken.

Results: CLO test over diagnosed the incidence of helicobacter as compared to histology. The clinical appearance correlated well with the histological result with no additional information obtained from the histological picture.

Conclusion: In the absence of macroscopic pathology, biopsies do not contribute to management of the patient.

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Audit of malignant melanomas treated surgically

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This retrospective study attempts to establish a relationship between the incidence of cutaneous malignant melanoma and patient age, sex, place of residence, tumour site and size in cases treated over a 5 1/2-year period from January 1998 till June 2003. It also provides information regarding the role of surgery in the treatment of malignant melanoma, including the type of surgery, outcome and prognosis, taking into consideration the diagnosis, tumour depth and stage at presentation. The data on these patients was obtained from the senior authors' personal databases of surgical procedures, clinical notes, histology reports and the Malta National Cancer Registry,

Department of Health Information, Malta.

Key References: Cutaneous Malignant Melanoma, Plastic Surgery, Audit.

p-127

Breast care clinic in Malta

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Breast cancer is the commonest tumour in women and a leading cause of death. A Breast Care Clinic has been set up at St Luke's Hospital in an effort to improve the quality of care to breast cancer patients. A multi-disciplinary team was established and cases are discussed at meetings. This study shows that a greater proportion of all breast care patients are being seen at this clinic with encouraging results.

p-128

Asymptomatic aortic aneurysm in the presence of a horseshoe kidney – case presentation and literature review

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Background: The incidence of abdominal aortic aneurysms is around 2% of the population. Horseshoe kidneys are due to fusion of the lower renal poles as the kidneys ascend through the arterial fork formed by the umbilical arteries. This abnormality is found in about 1 in 600 of the population.

So far, around 180 cases of an abdominal aneurysm with a horseshoe kidney have been reported in the literature.

Case report: We present a 63 yr old gentleman who stopped smoking 13 years ago. A coincidental infrarenal aortic aneurysm was picked up on ultrasound. The possibility of a horseshoe kidney was suggested in this investigation. The patient underwent an MRI scan instead of a CT scan since at the time the CT scanner was being refurbished. The MRI confirmed the presence of a 6cm infrarenal aneurysm however dismissed the possibility of a horseshoe kidney.

p-129

Endoscopic placement of a self-expanding metal stent for a benign diverticular stricture of the colon. A case report

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Colonic diverticular disease is a common disorder. Complications include bleeding, diverticulitis, abscess formation, fistulation, perforation and stricture formation. The usual treatment for stricture formation is operative resection.

Self-expanding metal stents are being used increasingly for decompression of the colon in both malignant and benign strictures. Their use has been reported in diverticular disease, radiation strictures, anastomotic strictures and tumours of the colon, in both acute and non-acute settings. The most common complication is stent migration, but stent obstruction and colonic perforation may also occur.

Here we report a case of endoscopic deployment of a self-expanding metal stent in a patient with a sigmoidal diverticular stricture who presented a high risk for open surgery. The guide wire was inserted through the channel of the endoscope, and its position was confirmed with fluoroscopy. A 22mm diameter Wallstent Enteral Endoprosthesis (Boston Scientific) was used. The insertion and deployment of the stent was under both endoscopic and fluoroscopic guidance. Plain abdominal radiography at one day and two weeks after stent deployment confirmed that the stent remained in place. The patient remained well at follow up and was opening her bowels regularly.

p-130

Incidence of acute appendicitis in Maltese patients 1993-2002

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The incidence of acute appendicitis has been reported to be decreasing in incidence in various studies in the United Kingdom.

A retrospective study was performed to determine whether the incidence of acute appendicitis in Malta has changed. Pathology records were computerised at St. Luke's Hospital in June 1992. This allowed the authors to identify cases of acute appendicitis during the years 1993-2002 from the computer records. These were analysed to exclude Gozitan and foreign patients and normal appendectomies. The incidence of acute appendicitis was then calculated using the population estimates from the Malta Demographic Review.

This study has shown no statistically significant change in the incidence of acute appendicitis in Maltese patients during the period studied.

p-131

Retrospective study of Phylloides Breast Tumours

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Phylloides tumours are rare fibroepithelial neoplasms of the breast. They exhibit a wide range of clinical and pathological findings. Phylloides tumours presenting at St Luke's hospital were studied retrospectively. Pathology records were reviewed and 18 cases were identified in the 10 year period 1993-2002. The medical records were reviewed and data on patient characteristics, pathology and surgical management were correlated with local recurrence, metastasis and survival. The patients were all female with a mean age of 41 years (15-70). Most presented with a palpable mass or a mammographic finding that was indistinguishable from a fibroadenoma. The subtle atypical appearances on radiology and cytology might be better identified by a multidisciplinary team approach. The study shows a low incidence of Phylloides tumours with a low recurrence rate when compared to the literature.

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Splenic trauma: Should we treat differently?

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A 36 year old male was admitted to Accident and Emergency Department following a motor vehicle accident. Clinical examination revealed a haemodynamically stable patient. Abdominal examination showed tenderness in right upper quadrant. Ultrasonography of the abdomen was normal. Haemoglobin on admission was 13 gm/dl. A repeat haemoglobin six hours later revealed a Hb of 10gm/dl. Computerized tomography (CT) of the abdomen showed a ruptured spleen. As the patient was haemodynamically stable it was decided to treat the patient in the High Dependency Unit (HDU) setting. His condition remained stable and he was fit to be discharged home on the fifth post operative day.

References: Zucker K. Non-operative management of splenic trauma: Conservative or radical treatment. Arch Surg 1984, 119: 440.

p-133

Successful ex vivo repair

of an intrahilar renal artery aneurysm with autotransplantation

P Andrejevic, AR Attard, Dept of Surgery, St Luke's Hospital, Malta

Renal artery aneurysms (RAA) are rare. Based on autopsy studies, the incidence is 0.01%. However, selected patients who undergo renal arteriography have an incidence of 0.3 – 1%. Most RAAs are asymptomatic, although the incidence rate of hypertension in these patients may be as high as 90%. There is still some controversy regarding the need for repair of asymptomatic RAAs, but in recent years surgery is being increasingly recommended for RAAs greater than 2.0cm in diameter. Treatment options have included stenting, patch repair and bypass grafting. However, these techniques are not appropriate for most intrahilar RAAs where one or more of the segmental arteries may be involved. For these patients, nephrectomy has been recommended in the past. In recent years there has been increased interest in ex vivo repair of such aneurysms with auto-transplantation of the kidney, although such procedures have been predominantly performed in larger tertiary referral centres. We report the case of a 46 year old gentleman who was found to have a 3.4 cm aneurysm of the left renal artery during the course of ultrasonography for non-specific abdominal pain and was found to have hypertension on routine examination. This was an intrahilar aneurysm involving all 3 segmental renal arteries. The aneurysm was successfully repaired by ex vivo bench surgery and auto-transplantation. Kidney function remains normal 1 year post surgery. This case illustrates the point that complex surgery is possible in surgical units with a small catchment population but the outcome of such procedures should be constantly monitored and audited to ensure that acceptable results are being achieved.

Key words: renal artery aneurysm, ex-vivo repair, auto-transplantation.

Reference: Dzsinih C, Gloviczki P, McKusick MA et al. Surgical management of renal artery aneurysm. Cardiovasc Surg. 1993 Jun; 1(3): 243 – 247.

p-134

Obtaining permanent central venous access for haemodialysis using radiological guidance

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Permanent venous catheters have emerged as a long-term vascular access option for renal replacement therapy in end-stage renal disease patients. The radiology department has initiated a service whereby such catheters are inserted using ultrasound and fluoroscopic guidance. This presentation will illustrate the techniques of obtaining permanent central venous access using radiological guidance and will illustrate several of the cases done by our department to date.

Poster Presentations

Poster Presentations

Poster Presentations

Poster Presentations

Conference Programme

	<i>Thursday, 4th December</i>	<i>Friday, 5th December</i>	<i>Saturday, 5th December</i>	
08:45	Welcome			08:45
09:00	Plenary 1	Plenary 3	Plenary 5	09:00
09:45	1A Quality of Care I 1B Dermatology 1C Public Health	2A Surgery I 2B Obstetrics and Gynaecology I 2C Psychiatry	3A Medicine II 3B Paediatrics II 3C Geriatrics	09:45
11:15	Coffee Break	Coffee Break	Coffee Break	11:15
11:45	1D Quality of Care II 1E Infectious Diseases 1F Neurosciences	2D Cardiothoracic Medicine 2E Genetics 2F Ophthalmology	3D Surgery III 3E Obstetrics and Gynaecology II 3F Medicine III	11:45
13:15	Lunch Break	Lunch Break	Close	13:15
14:15	Plenary 2	Plenary 4	<p>Venues</p> <p>Oral Presentations: A D G Cettina De Cesare Hall B E H Neptune Hall C F J Jupiter Hall</p> <p>Poster Presentations: Saturn Hall</p>	
15:00	1G Medicine I 1H Pharmacology and Pharmacy 1J Family Medicine and Dentistry	2G Paediatrics I 2H Surgery II 2J Anaesthesia		
16:30	Coffee Break	Coffee Break		
17:00	Poster Session 1	Poster Session 2		
18:30	Close	Close		