

Malta Medical Journal

Conference Abstract Book

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Gwardamangia

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Sixth Malta Medical School Conference

30th November - 2nd December 2006

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Invited Guests

<i>Guest</i>	<i>Invited by</i>	<i>Sponsored by</i>
Prof Sir Liam Donaldson	Department of Institutional Health	Department of Institutional Health
Prof Tim Eden	Department of Paediatrics	Puttinu Cares Fund
Mr Dick Rainsbury	Association of Surgeons	Department of Surgery
Prof David Hatch	Association of Anaesthesiologists	Department of Anaesthesia
Mr Nick Fahy	Ministry of Health, The Elderly & Community Care	Ministry of Health, The Elderly & Community Care
Prof Peter Crome	Dept of Geriatric Medicine	Institute of Ageing
Prof Vincenzo Tortorella	Department of Pharmacy	Department of Pharmacy
Prof Steve Hudson	Department of Pharmacy	Department of Pharmacy

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

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St Luke's, Sir Paul Boffa, Mater Dei Hospitals
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Sponsors for Guest Speakers

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Department of Pharmacy (Prof Vincenzo Tortorella and Prof Steve Hudson)

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

Foreword

I am delighted to welcome all participants including our eminent guests, invited speakers and registrants, both local and from overseas to the Sixth Malta Medical School Conference. This conference follows the general format of previous conferences in that it is a collection of multidisciplinary sessions with bridging plenary lectures. This set-up creates a wide academic field comprising many disparate specialities and has proven to be a successful formula in previous years.

Outside undergraduate curricular teaching, the triennial Medical Conference remains the largest academic activity of the Medical School and is the showpiece event where many hitherto unrecognised yet extremely valid research is presented. As in previous years, the Conference has confirmed the extent and quality of ongoing academic activity taking place in various disciplines on the local scene and was, once again, 'over-subscribed' with regard to abstract submissions. The Scientific Committee was faced with a particularly difficult task to adjudicate abstracts and formulate an exciting scientific programme. Given the limited local financial support and access to resources, the very existence of this Conference, never mind its quality content, is a salutary achievement in which all participants can take great pride.

The organisational milieu for an event of this nature and size, particularly when the financial starting position is a splendid 'near-zero' is, unsurprisingly, a nightmare! It is only through the dedicated support of numerous individuals that the whole thing eventually comes together. To this end, I

would sincerely like to thank all my colleagues and friends on the Organising and Scientific Committees together with our ever-patient secretary who have all worked tirelessly for well over eighteen months! I must also thank all the Conference Sponsors and the Pharmaceutical Exhibitors without whose financial support this event would be impossible. Equally, we are very grateful for the commitment, expertise and, above all, patience of the key individuals involved in the Conference Co-ordination, Audiovisual Services, Printers and Hotel Venue. All have been an essential part of the 'team' and have worked hard to ensure that the Conference is a successful yet collective tour de force.

I would like to welcome and thank all guest and invited speakers from overseas. Their time and contributions are very greatly appreciated and undoubtedly provide the icing on the academic cake. Finally, a conference of this nature is void without its scientific programme and I must congratulate all those who have provided scientific contributions: ultimately, they have justified the efforts of the Organising and Scientific Committees, and have made the Sixth Malta Medical School Conference possible. To those participants, together with all conference registrants, may I wish you all an enjoyable conference.

Dr Simon Attard Montalto

MBChB, MD (L'pool), FRCP, FRCPC, DCH.

Chairman, Organising and Scientific Committees

Welcome from the Dean

It is with great pleasure that I welcome all participants to the Sixth Malta Medical School Conference.

With the restrictions of being on a small island with a small Medical fraternity, the local a medical community finds it immensely profitable to host a meeting of this kind in order to ensure cross-fertilisation. This will ensure that our medical standards remain comparable to the best on the Continent.

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

A special warm welcome is extended to our overseas guests who have come over specifically to share their vast

experience in their respective fields with us. On behalf of the Faculty of Medicine and Surgery, I would like to take this opportunity to thank the members of the Organising Committee who have 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 loyalty such events would not be possible.

I wish the Sixth Malta Medical School Conference every success.

Prof Godfrey LaFerla

PhD, MD, MRCS, LRCP, FRCS (Ed.), FRCRCP (Glas.), FRCS (Eng.)

Dean, Faculty of Medicine & Surgery

Conference Programme

	<i>Thursday, 30th November</i>	<i>Friday, 1st December</i>	<i>Saturday, 2nd December</i>	
08:00	Registration	Registration	Registration	08:00
08:30	Welcome			08:30
09:00	Prof Sir Liam Donaldson Plenary 1	Mr Dick Rainsbury Plenary 3	Mr Nick Fahy Plenary 5	09:00
09:45	1A Public Health 1B Infectious Diseases 1C Diabetes	2A Surgery I 2B Neonatology 2C Medicine II	3A Surgery II 3B Medicine IV 3C Psychiatry	09:45
11:00	Coffee Break & Exhibition	Coffee Break & Exhibition	Coffee Break & Exhibition	11:00
11:30	1D Medicine I 1E Paediatrics 1F Pharmacology	2D Cardiopulmonology 2E Obstetrics and Gynaecology 2F Geriatrics	3D Medical Education 3E Orthopaedics 3F Medicine V	11:30
12:45	Lunch / Coffee Break & Exhibition	Lunch / Coffee Break & Exhibition	Prize-giving & Closing Ceremony	12:45
14:00	Prof Tim Eden Plenary 2	Prof David Hatch Plenary 4	Venues Oral Presentations: A D G Grand Ballroom B E H Carlson Suite (5th Floor) C F J Marie Louise Suite (7th Floor) Poster Presentations: Reading Room (Above Foyer)	
14:45	1G Oncology 1H Pharmacy 1J ENT, Dentistry	2G Anaesthesia 2H Health Management 2J Medicine III		
16:00	Coffee Break & Exhibition	Coffee Break & Exhibition		
16:30	Poster Session 1	Poster Session 2		
18:00	Close	Close		

Scientific Programme

Thursday, 30th November

08:00	Registration
08:30	<p>Welcome</p> <p>Dr Simon Attard Montalto Chairman, 6th Malta Medical School Conference</p> <p>Dr Ray Busuttill Director General, Health Division</p>
09:00	<p>Plenary 1</p> <p>Prof Sir Liam Donaldson Safety in Healthcare</p>
09:45	<p>Parallel Sessions</p> <p>1A Public Health 1B Infectious Diseases 1C Diabetes</p>
11:00	Coffee & Exhibition
11:30	<p>Parallel Sessions</p> <p>1D Medicine I 1E Paediatrics 1F Pharmacology</p>
12:45	Lunch
13:30	Coffee & Exhibition
14:00	<p>Plenary 2</p> <p>Prof Tim Eden What causes childhood leukaemia & cancer?</p>
14:45	<p>Parallel Sessions</p> <p>1G Oncology 1H Pharmacy 1J ENT & Dentistry</p>
16:00	Coffee & Exhibition
16:30	Poster Session 1
18:00	Close
20:00	Book Launch, Ministry of Health, The Elderly and Community Care

Friday, 1st December

08:00	Registration
09:00	<p>Plenary 3</p> <p>Mr Dick Rainsbury Breast cancer surgery: Back to the future?</p>
09:45	<p>Parallel Sessions</p> <p>2A Surgery I 2B Neonatology 2C Medicine II</p>
11:00	Coffee & Exhibition
11:30	<p>Parallel Sessions</p> <p>2D Cardiopulmonology 2E Obstetrics & Gynaecology 2F Geriatrics</p>
12:45	Lunch
13:30	Coffee & Exhibition
14:00	<p>Plenary 4</p> <p>Prof David Hatch Withholding and withdrawing treatment</p>
14:45	<p>Parallel Sessions</p> <p>2G Anaesthesia 2H Health Management 2J Medicine III</p>
16:00	Coffee & Exhibition
16:30	Poster Session 2
18:00	Close
20:00	Gala Dinner, Radisson SAS, Golden Sands

Saturday, 2nd December

08:00	Registration
09:00	<p>Plenary 5</p> <p>Mr Nick Fahy Consultation on European Community action on Health Services</p>
09:45	<p>Parallel Sessions</p> <p>3A Surgery II 3B Medicine IV 3C Psychiatry</p>
11:00	Coffee & Exhibition
11:30	<p>Parallel Sessions</p> <p>3D Medical Education 3E Orthopaedics 3F Medicine V</p>
12:45	Prize-giving
13:30	<p>Closing Ceremony</p> <p>Prof Richard Muscat Pro-Rector, University of Malta</p>

Detailed Scientific Programme

Plenary Lectures Venue: Grand Ballroom

Thursday, 30th November

09:00 **Plenary 1**
Safety in Healthcare
Prof Sir Liam Donaldson
Chief Medical Officer, England
Chair, World Alliance for Patient Safety
(WHO)
Honorary Prof in Applied Epidemiology,
Newcastle-Upon-Tyne

14:00 **Plenary 2**
What causes childhood leukaemia & cancer?
Prof Tim Eden
Prof in Paediatric Oncology, Christie
Hospital, University of Manchester, UK

Friday, 1st December

09:00 **Plenary 3**
Breast cancer surgery: Back to the future?
Mr Dick Rainsbury
Director, Raven Department of Education,
Royal College of Surgeons, England

14:00 **Plenary 4**
Withholding and withdrawing treatment
Prof David Hatch
Chair, Assessment Committee, General
Medical Council, UK

Saturday, 2nd December

09:00 **Plenary 5**
*Consultation on European Community action
on Health Services*
Mr Nick Fahy
Deputy Head, Health Strategy Unit, Health
and Consumer Protection Directorate-
General, European Commission

Parallel Sessions

Venues: Sessions A, D, G - Grand Ballroom (Ground Floor)
Sessions B, E, H - Carlson Suite (5th Floor)
Sessions C, F, J - Marie Louise Suite (7th Floor)

Thursday, 30th November

Parallel Session 1A Public Health

Venue: Grand Ballroom
Chairpersons: Dr John Cachia
Dr Andrew Amato Gauci

09:45 O-001 The 1918 Spanish flu epidemic in Malta:
lessons for 2006
N Calleja, D Vella Baldacchino

09:58 O-002 Immunogenicity, safety and reactogenicity
of a combined *Haemophilus influenzae* type
b and *Neisseria meningitidis* serogroup
C-tetanus toxoid conjugate vaccine
in infants
*D Pace, MD Snape, S Westcar,
N Begg, J Wysocki, H Czajka, G Maechler,
D Boutriau, AJ Pollard*

10:11 O-003 The school health service -
a needs assessment
M Sammut, D Soler, M Dalmas

10:24 O-004 Community services for Malta's growing
elderly population: screening
- the missing link in our portfolio?
J Mamo, C Gauci, N Calleja

10:37 O-005 The implications of the European Union
on the Maltese health care system
R Zammit

10:50 Panel Discussion

11:00 Coffee Break

Detailed Scientific Programme

Parallel Session 1B

Infectious Diseases

Venue:	Carlson Suite
Chairpersons:	Dr Christopher Barbara Dr Charles Mallia Azzopardi
09:45	O-006 Is MRSA control an achievable target and what will it cost? <i>MA Borg</i>
09:56	O-007 MRSA in autopsy cases <i>MC Camilleri Podesta', M Zarb-Adami, P Cuschieri, MT Camilleri Podesta', A Serracino-Inglott, L Azzopardi</i>
10:07	O-008 Hand hygiene practices amongst medical doctors at St. Luke's Hospital <i>M Montefort, S Chetcuti, E Scicluna, MA Borg</i>
10:18	O-009 Impact of the introduction of antibiotic prescribing guidelines in St Luke's Hospital, Malta <i>MA Borg, P Zarb, P Cuschieri, C Mallia Azzopardi, T Piscopo, E Scicluna</i>
10:29	O-010 Importance of practical undergraduate instruction in venepuncture and intravenous cannula insertion techniques to reduce the risk of needlestick injury in junior medical doctors <i>E Scicluna, MA Borg</i>
10:40	O-011 Three year sentinel surveillance of influenza activity in Malta <i>T Melillo-Fenech</i>
10:51	Panel Discussion
11:00	Coffee Break

Parallel Session 1C

Diabetes

Venue:	Marie Louise Suite
Chairpersons:	Prof Joseph Azzopardi Dr Josanne Vassallo
09:45	O-012 A pilot evaluational study assessing adherence to recommendations for avoidance of hypoglycaemia in insulin-treated Maltese diabetic drivers <i>S Vella, MJ Cachia</i>
09:58	O-013 Audit of the management of patients admitted with diabetic ketoacidosis (DKA) to St Luke's Hospital <i>M Debono, AG Abela, CJ Magri, J Vassallo, J Azzopardi</i>

10:11	O-014 An audit of culture and sensitivity reports of infected diabetic foot ulcers <i>L Micallef Grimaud, MJ Cachia, P Camilleri</i>
10:24	O-015 Charcot foot: an often misdiagnosed diabetic complication <i>S Vella, MJ Cachia</i>
10:37	O-016 Association study of Libyan and Maltese patients with Type II diabetes mellitus <i>A Al-Ashtar, J Azzopardi, S Bezzina Wettinger, J Borg, W Cassar, R Galdies, CA Scerri, J Vassallo, AE Felice</i>
11:50	Panel Discussion
11:00	Coffee Break

Parallel Session 1D

Medicine I

Venue:	Grand Ballroom
Chairpersons:	Prof Herbert Gilles Dr Julian Mamo
11:30	O-017 Death certification in Malta: attitudes and knowledge <i>K England, H Agius Muscat, N Calleja</i>
11:43	O-018 Observational study reviewing the practice in Malta of ordering routine chest X-rays on every medical patient admitted to hospital <i>N Schembri, S Schembri, T Fardon</i>
11:56	O-019 Audit on the treatment of patients admitted to medical wards with a diagnosis of COPD exacerbation <i>J Micallef, D Sammut, D Cachia, C Fsadni, P Fsadni</i>
12:09	O-020 A full cycle audit on the correct assessment of postural blood pressure <i>P Ferry</i>
12:22	O-021 Audit of congenital adrenal hyperplasia diagnosed at an endocrine outpatient clinic <i>S Vella, MJ Cachia</i>
12:35	Panel Discussion
12:45	Lunch Break

Detailed Scientific Programme

Parallel Session 1E

Paediatrics

Venue:	Carlson Suite
Chairpersons:	Prof Tim Eden Dr Paul Vassallo Agius
<hr/>	
11:30	O-022 Childhood obesity: A critical Maltese health issue <i>V Grech, M Ellul, J Torpiano, D Soler, M Caruana, S Attard Montalto</i>
<hr/>	
11:41	O-023 Breastfeeding in Malta: why are rates so low? <i>H Borg, M Buttigieg-Said, S Attard Montalto</i>
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11:52	O-024 The management of asthma in schools <i>R Zammit</i>
<hr/>	
12:03	O-025 Current trends in child abuse in Malta <i>M Mangion, D Zerafa, S Attard Montalto</i>
<hr/>	
12:14	O-026 Declining birth rates and social factors - implications for paediatric private practice <i>V Grech, S Attard Montalto, C Savona-Ventura</i>
<hr/>	
12:25	O-027 Invasive meningococcal disease in Maltese children and adolescents <i>D Pace, S Attard Montalto, A Galea Debono</i>
<hr/>	
12:36	Panel Discussion
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12:45	Lunch Break

Parallel Session 1F

Pharmacology

Venue:	Marie Louise Suite
Chairpersons:	Prof Roger Ellul-Micallef Prof Emeritus Cecil Pace-Asciak
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11:30	O-028 Assessment of the appropriate use of medicines at the medical admissions section of the emergency department <i>L Marie West, M Cordina, B Caruana Montaldo, JM Cacciottolo, S Cunningham</i>
<hr/>	
11:41	O-029 Molecular dynamics of the androgen receptor <i>C Shoemake, S Doughty, V Ferrito, A Serracino-Inglott</i>
<hr/>	
11:52	O-030 Beyond the lipid-lowering view of statins: modulation of T cell response in autoimmune disease <i>S Waiczies, I Bendix, M Ratner, I Nazarenko, S Brocke, O Ullrich, F Zipp</i>

12:03 O-031 Novel anti-cancer agents, PBTs:
inhibition of Gleevec-resistance in
leukemic K562 CML cells by the PBTs.
C Pace-Asciak, N Qiao, D Reynaud, X Li

12:14 O-032 Role of nicotine in memory formation,
neural cell proliferation and apoptosis
C Scerri

12:25 O-033 Development of personalized medication
strategies for the treatment of
neuroblastoma
D Ayers

12:36 Panel Discussion

12:45 Lunch Break

Parallel Session 1G

Oncology

Venue:	Grand Ballroom
Chairpersons:	Prof Tim Eden Dr Bridget Ellul
<hr/>	
14:45	O-034 Incidence and survival of childhood CNS tumours in Malta: 1995 – 2004 <i>S Attard, M Dalmas, N Calleja, N Galea, V Calvagna</i>
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14:56	O-035 A descriptive study of childhood leukaemia in Maltese children from 1980 to 2000 <i>N Galea, V Calvagna, M Dalmas, A Grabowska</i>
<hr/>	
15:07	O-036 Recurrent and malignant pleomorphic adenomas in major salivary glands <i>A Betts, James S DeGaetano, GE Camilleri</i>
<hr/>	
15:18	O-037 Differences in the <i>in vitro</i> bioactivity of crude Maltese honeybee propolis collected at different sites across the Maltese islands <i>EJ Zammit, K Blair Theuma, M Muraglia, MT Camilleri Podesta, S Darmanin, JA Buhagiar, M Zarb-Adami</i>
<hr/>	
15:29	O-038 Dynamic contrast enhanced MRI (DCE-MRI) predicts radiation response in cervix cancer <i>MA Zahra, E Sala, DJ Lomas, RA Crawford, M Arends, J Brenton, LT Tan</i>
<hr/>	
15:40	O-039 Novel methods for symptom control in palliative care in Malta <i>M Casha</i>
<hr/>	
15:51	Panel Discussion
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16:00	Coffee Break

Detailed Scientific Programme

Parallel Session 1H

Pharmacy

Venue: Carlson Suite
Chairpersons: Prof Anthony Serracino-Inglott
Prof Vincenzo Tortorella

14:45 O-040 Adherence, compliance or concordance to drug therapy?
A Serracino-Inglott

14:58 O-041 Pharmacist interventions - should it include prescribing?
LM Azzopardi

15:11 O-042 Pricing of medicines - who is responsible?
M Zarb-Adami

15:24 O-043 Integration of basic sciences with practice
V Tortorella

15:37 O-044 Are research programmes in pharmaceutical care relevant?
S Hudson

15:50 Panel Discussion

16:00 Coffee Break

Parallel Session 1J

ENT & Dentistry

Venue: Marie Louise Suite
Chairpersons: Dr Simon Camilleri
Dr Alexander Azzopardi

14:45 O-045 Occurrence of post-tonsillectomy haemorrhage in Malta: do pre/peri/post-operative antibiotics influence outcome?
M Fiorentino, H Borg Xuereb, M Said

14:58 O-046 Conventional or laser stapedotomy – a comparison of functional results and outcomes
M Said, M Grima

15:11 O-047 An assessment of the validity of the current practice of antibiotic prophylaxis in uncomplicated nasal surgery
M Grima, M Said

15:24 O-048 A comparison of the effects of paracetamol and a corticosteroid against a non-steroidal anti-inflammatory drug on the sequelae following the surgical removal of mandibular third molars
A Bartolo

15:37 O-049 Acute management of dentoalveolar trauma in children
A Camilleri

15:50 Panel Discussion

16:00 Coffee Break

Friday, 1st December

Parallel Session 2A

Surgery I

Venue: Grand Ballroom
Chairpersons: Prof Godfrey LaFerla
Mr Dick Rainsbury

09:45 O-050 Postgraduate training in surgery
D Rainsbury

10:05 O-051 Audit on the ability of house officers to predict the results of pre-operative blood investigations in patients undergoing elective surgical procedures
M Fiorentino, M Schembri

10:14 O-052 Operative cholangiography in the laparoscopic era - back to the future
JE Abela, L Eid, AHM Nassar

10:23 O-053 The influence of peritoneal lavage on bacterial concentration in patients undergoing appendicectomy
D Aquilina, M Szczepinski, R Fenech, P Cuschieri, G LaFerla

10:32 O-054 Empyema thoracis in children with community acquired chest infections
C Fearne, V Said Conti

10:41 O-055 Validation of a Maltese translation of the IPSS score (IPSS-Mlt.)
J Sciberras, PA Zammit, S Bugeja, R Jovanovic, S Mattocks, K German

10:50 Panel Discussion

11:00 Coffee Break

Parallel Session 2B

Neonatology

Venue: Carlson Suite
Chairpersons: Dr Simon Attard Montalto
Dr Victor Grech

09:45 O-056 The impact of artificial reproductive technology on neonatal mortality in the Maltese Islands
P Soler, D Soler

Detailed Scientific Programme

09:56	O-057	A review of central and peripheral vascular access lines in Maltese neonates <i>V Zammit, J Fenech, N Galea, V Grech</i>
10:07	O-058	A series of cases of spontaneously aborted fetuses <i>AM Scerri, A Cuschieri</i>
10:18	O-059	Screening cranial ultrasound examinations in sick preterm and term neonates - the spectrum of findings <i>D Soler, P Soler, R Parascandolo</i>
10:29	O-060	National birth weight for gestational age centile charts and their inferences <i>V Zammit, A Buhagiar, V Grech</i>
10:40	O-061	The national neonatal screening programme: is it time for a change? <i>S Attard Montalto, R Zammit, CA Scerri, J Torpiano, G Buhagiar, R Parascandolo, M Cipriott, AE Felice</i>
10:51		Panel Discussion
11:00		Coffee Break

Parallel Session 2C Medicine II

Venue:	Marie Louise Suite	
Chairpersons:	Prof Marie Therese Podestà Dr Anthony G Fenech	
09:45	O-062	Guideline for suspected lower limb deep vein thrombosis <i>J Borg, T Piscopo, J Micallef, D Sammut, D Barbara, J Diacono</i>
09:58	O-063	Audit on the treatment of patients newly admitted to the medical wards from casualty with a diagnosis of deep vein thrombosis <i>D Cachia, J Pocock, AJ Cassar, M Magro</i>
10:11	O-064	Coombs-positive autoimmune haemolytic anaemia in ulcerative colitis <i>L Micallef Grimaud, MJ Cachia</i>
10:24	O-065	Is the degree of stereo acuity affected by correction of the refractive error? <i>M Francalanza</i>
10:37	O-066	A retrospective study on visual impairment in childhood in Malta <i>S Attard, M Francalanza</i>
10:50		Panel Discussion
11:00		Coffee Break

Parallel Session 2D Cardiopulmonology

Venue:	Grand Ballroom	
Chairpersons:	Prof Albert Fenech Mr Alexander Manché	
11:30	O-067	Lung cancer in Malta: from presentation to surgery <i>A Casha, W Busuttil, J Galea</i>
11:41	O-068	A single centre experience of the arterial revascularisation trial (ART) - a randomised trial to compare survival following bilateral versus single internal mammary grafting in coronary revascularisation <i>K Rochford, G Cooper, P Braidley, N Briffa</i>
11:52	O-069	Early use of dialysis after cardiac surgery <i>A Manché</i>
12:03	O-070	A retrospective audit of the outcome of patients who performed exercise stress tests <i>C Jane Magri, N Gatt, A Fenech, N Calleja</i>
12:14	O-071	Transcatheter ablation of muscular right ventricular outflow tract obstruction: a new technique <i>JV Degiovanni, V Grech</i>
12:25	O-072	Cardiac catheterisation for paediatric and congenital heart disease in Malta <i>C Sciberras, V Grech</i>
12:36		Panel Discussion
12:45		Lunch Break

Parallel Session 2E Obstetrics & Gynaecology

Venue:	Carlson Suite	
Chairpersons:	Prof Mark Brincat Mr Raymond Galea	
11:30	O-073	Intervertebral disc height in postmenopausal women with osteoporotic vertebral fractures <i>Y Muscat Baron, MP Brincat, R Galea, N Calleja</i>
11:41	O-074	Polycystic ovaries produce 75 times more anti-Müllerian hormone (AMH) than normal ovaries <i>L Pellatt, L Hanna, M Brincat, R Galea, H Brain, S Whitehead, H Mason</i>

Detailed Scientific Programme

11:52 O-075 Use of antenatal dexamethasone in late pregnancy and its effect on incidence of neonatal respiratory distress after elective caesarean sections
R Custo, K Zammit, H Grech, J Calleja Agius, M Brincat

12:03 O-076 The effect of sildenafil citrate on the sultan and modified sultan scores in women with severe dysmenorrhoea
R Custo, Y Muscat Baron, M Brincat

12:14 O-077 Dydrogesterone: a possible preventative treatment for preterm delivery
Y Muscat Baron, MZ Mangion, M Formosa, R Galea, M Brincat

12:25 O-078 The emotional well-being of Maltese men and women during the transition to parenthood
R Borg Xuereb

12:36 Panel Discussion

12:45 Lunch Break

Parallel Session 2F Geriatrics

Venue: Marie Louise Suite
Chairpersons: Prof Peter Crome
Dr Peter Ferry

11:30 O-079 General and Geriatric Medicine: together or apart?
P Crome

11:50 O-080 An evaluation of prescribing habits in a chronic care institution for the elderly
A Fiorini, S Abela, A Vella, P Zammit

11:59 O-081 Does a Parkinson's disease class improve the knowledge of Parkinson's disease in patients and their carers?
J Gerada, P Ferry, N Calleja

12:08 O-082 Evaluation of the Parkinson's class programme provided at a rehabilitation hospital for the elderly
V Massalha

12:17 O-083 Official approved translation of the EQ-5D health questionnaire into the Maltese language
MA Vassallo

12:26 O-084 Do older people perceive their visual loss?
E Hattat, P Ferry

12:35 Panel Discussion

12:45 Lunch Break

Parallel Session 2G Anaesthesia

Venue: Grand Ballroom
Chairpersons: Prof David Hatch
Dr Joseph Zarb-Adami

14:45 O-085 Regulating doctors in the United Kingdom
D Hatch

15:05 O-086 The influence of the anaesthetic technique on the surgical outcome of patients after fractured hip surgery
J Gonzi, M Zammit

15:16 O-087 Genomics in cardiac surgery
V Tomic, N Borg

15:27 O-088 The introduction of a nurse-led sedation protocol in intensive care leads to a reduction in mortality in patients undergoing prolonged mechanical ventilation
A Aquilina, S Sciberras, M Galea Scannura

15:38 O-089 Outcome of patients admitted to intensive care with meningococcal septicaemia/ meningitis
J Gonzi, C Abela

15:49 Panel Discussion

16:00 Coffee Break

Parallel Session 2H Health Management

Venue: Carlson Suite
Chairpersons: Dr Natasha Muscat Azzopardi
Dr Renald Blundell

14:45 O-090 Improving service delivery in an outpatient setting
MK Tilney

14:56 O-091 Clinic waiting time at the lipid clinic, St Luke's Hospital
C Azzopardi

15:07 O-092 An evaluation of the discharge planning process at Zammit Clapp Hospital
B Vassallo

15:18 O-093 Emerging ethical themes in European research. Ethical aspects of research projects under FP6
Myra K Tilney

15:29 O-094 Should pharmacies be involved in surveillance for influenza-like illness?
G Spiteri, B Smyth, M McCorry, H Buchanan

Detailed Scientific Programme

15:40 O-095 Paramedics' and pharmacists' attitudes towards changes in working times in St. Luke's Hospital
N Borg, N Azzopardi Muscat

15:51 Panel Discussion

16:00 Coffee Break

Parallel Session 2J

Medicine III

Venue: Marie Louise Suite
Chairpersons: Prof Frederick Fenech
Dr Maria Cordina

14:45 O-096 A first study on the frequency and phenotypic effects of HFE gene mutations in the Maltese population
R Galdies, E Pullicino, W Cassar, S Bezzina-Wettinger, J Borg, AE Felice

14:58 O-097 The value of a routine duodenal biopsy at gastroscopy in diagnosing Coeliac disease
J Pocock, A Caruana Galizia, J Degaetano

15:11 O-098 Analysis of waiting time for cadaveric kidney transplantation
E Farrugia

15:24 O-099 Effect of switching from subcutaneous to intravenous erythropoietin in haemodialysis patients
J Farrugia, E Farrugia

15:37 O-100 Consumption of medicines among adolescents in Malta
R Darmanin Ellul, Maria Cordina, AG Fenech, A Amato Gauci, A Buhagiar, J Mifsud

15:50 Panel Discussion

16:00 Coffee Break

Saturday, 2nd December

Parallel Session 3A

Surgery II

Venue: Grand Ballroom
Chairpersons: Prof Victor Griffiths
Mr Arthur Felice

09:45 O-101 Single-stage management for patients with uncomplicated acute gallstone pancreatitis - are pre-operative MRCP and ERCP really necessary?
JE Abela, A Mirza, AHM Nassar

09:56 O-102 Incidence of breast cancer in women referred for screening to the breast clinic, St Luke's Hospital
C Cini, G Caruana-Dingli, A Attard, C Swain

10:07 O-103 Modified Mathieu procedure for hypospadias repair
C Fearne

10:18 O-104 A lower than expected incidence of HPV DNA detected in Maltese benign and malignant breast tumours
R Mallia, JP Camilleri, C Camenzuli, P Cacciattolo, J Cauchi, A Safraz, P Schembri-Wismayer

10:29 O-105 A review of radical cystectomies carried out in Malta over the past 8 years
S Bugeja, PA Zammit, J Sciberras, S Mattocks, K German

10:40 O-106 Living-donor renal transplantation: our local experience
J Psaila, R Attard, E Farrugia, L Buhagiar, AR Attard

10:51 Panel Discussion

11:00 Coffee Break

Parallel Session 3B

Medicine IV

Venue: Carlson Suite
Chairpersons: Dr Andrew Borg
Dr Mario Sammut

09:45 O-107 Juvenile Huntington's disease in Malta
A Cuschieri, A Galea-Debono, E Said

09:58 O-108 Two-photon imaging of cell-specific fluorophores in transgenic mice - an exploratory tool to study mechanisms of white matter injury
Mario Valentino, Mark P Goldberg

10:11 O-109 Are chondroitin and glucosamine in combination effective in the treatment of osteoarthritic pain?
MR Sammut

10:24 O-110 A survey of Paget's disease of bone in Malta
B Coleiro, C Mallia

10:37 O-111 Biological therapy in rheumatic disease: five year experience in Malta
C Mallia, B Coleiro

10:50 Panel Discussion

11:00 Coffee Break

Detailed Scientific Programme

Parallel Session 3C Psychiatry

Venue: Marie Louise Suite
Chairpersons: Dr David Cassar
Dr Christian A Scerri

09:45 O-112 Community mental health services in Malta and their development: a review
D Cassar, M Caruana

09:58 O-113 The impact of having a family member facing mental health problems on the caregiver and the family: how can social and psychiatric services be of help?
A Abela, AM Vella, R Farrugia

10:11 O-114 Establishing whether a community mental health team has managed to reduce the number of psychiatric admissions to hospital
J Vella Baldacchino, K Buhagiar, E Cini, M Xuereb, R Coleiro

10:24 O-115 Establishing whether there is a correlation between the psychiatric diagnosis, the number of admissions and the length of stay spent at hospital
J Vella Baldacchino, R Coleiro, M Xuereb, E Cini, K Buhagiar

10:37 O-116 Maltese translation of the Camberwell Assessment of Need
L Xerri, J Vella Baldacchino, E Cini

10:50 Panel Discussion

11:00 Coffee Break

Parallel Session 3D Medical Education

Venue: Grand Ballroom
Chairpersons: Prof Joseph Cacciottolo
Dr Nikolai Attard

11:30 O-117 Attitudes of medical and dental professionals and students towards research
S Azzopardi, P Cacciottolo, AG Fenech, C Galea, W Galea, MJ Grima, R Pullicino, AM Scerri, N Schembri

11:43 O-118 Gender and performance in the MD degree final examination in medicine
C Farrugia Jones, JM Cacciottolo

11:56 O-119 Medical students' perspective on pharmaceutical marketing
B Vella Briffa, AM Scerri, KB Theuma

12:09 O-120 The course in Behavioural Sciences in the Faculty of Medicine and Surgery: A review
D Cassar

12:22 O-121 Developing a specialist training programme in Family Medicine for Malta
MR Sammut

12:35 Panel Discussion

12:45 Prize-giving and Closing Ceremony

Parallel Session 3E Orthopaedics

Venue: Carlson Suite
Chairpersons: Mr Frederick Zammit Maempel
Mr Charles Grixti

11:30 O-122 A simple method for the objective assessment of the arthropathy – a preliminary study
LA Galea, J Agius, C Bezzina, C Sciberras

11:41 O-123 One year mortality after proximal femoral fractures
J Galea, S Zammit, M Abela, C Grixti

11:52 O-124 Hand infections severe enough to warrant hospital admission
A Sultana, CK Bezzina, C Sciberras

12:03 O-125 Hand and wrist configurations in patients with carpal tunnel syndrome
LA Galea, R Gatt, C Sciberras

12:14 O-126 A review of the relationship between obesity and total knee replacement outcome
K Micallef Stafrace, G Pecotic, J Cutajar, A Bernard

12:25 O-127 Biomechanical analysis of lumbar spine implants
Z Sant, JN Borg, Z Florian

12:36 Panel Discussion

12:45 Prize-giving and Closing Ceremony

Parallel Session 3F Medicine V

Venue: Marie Louise Suite
Chairpersons: Prof Angela Xuereb
Prof Alfred Cuschieri

11:30 O-128 A profile of genetic diseases in Malta
A Cuschieri, E Said, S Suleiman

Detailed Scientific Programme

- 11:43 O-129 Linkage to a region on chromosome 11p12 in two Maltese families with severe osteoporosis
C Vidal, R Galea, M Brincat, A Xuereb Anastasi
-
- 11:56 O-130 Translation of IGBP-1 mRNA contributes to the regulation of expansion and differentiation of erythroid progenitors
G Grech, M Blazquez-Domingo, H Beug, B Löwenberg, M von Lindern
-
- 12:09 O-131 Haemoglobin F Malta I: interactions *in vivo* that regulate gamma to beta globin gene switching
J Borg, CA Scerri, R Galdies, W Cassar, M Pizzuto, M Caruana, S Bezzina-Wettinger, AE Felice
-
- 12:22 O-132 An update of beta-thalassaemia carrier screening in Malta
AE Felice, R Galdies, W Cassar, M Pizzuto, J Borg, S Bezzina-Wettinger, M Caruana, CA Scerri
-
- 12:35 Panel Discussion
-
- 12:45 Prize-giving and Closing Ceremony
-

The Editorial Board, Malta Medical Journal, would like to invite all authors to submit full manuscripts of their conference presentations to be considered for publication in the Malta Medical Journal. The full instructions to authors may be viewed by visiting www.mmj-web.org

Oral Presentations

O-001

The 1918 Spanish flu epidemic in Malta: lessons for 2006

N Calleja¹, D Vella Baldacchino²¹Department of Health Information, ²Health Division, Valletta, Malta

In 1918, since Malta had been nursing many wounded troops during this period, the Spanish flu pandemic did reach Maltese shores around the second quarter of 1918. Very detailed public health annual reports were kept at the time, including detailed epidemiology of the pandemic influenza. Indeed 20388 civilians (91 per mille) are known to have been affected, out of which 807 died (4 per mille). Analysis of figures reported in the Annual Report of Public Health for the involved years shows that the largest civilian caseload occurred in the harbour area with a fairly similar numbers in other regions of the islands. However, the highest incidence rates were observed in the North of Malta, followed closely by Gozo and the South-east. This study aims to try to draw hypotheses whether temporal changes in incidence could be associated with the timing of public health measures. In addition, using the census population of 1921 as a denominator, age and gender weighted projections will be made onto the 2005 population to estimate the incidence of such a new pandemic. One understands that the assumption of similar conditions between 1918 and 2005 may not be plausible in a number of respects. While hygiene and public health has improved considerably, more of the population moves out of its locality of residence on a daily basis. Such a projection could provide us with an estimate of the upper limits of the expected caseload. Treatment and vaccination is expected to be better as well and, therefore, projections of mortality are not likely to be so realistic. In addition, regional differences are not expected to be so prevalent in view of increased population mobility.

O-002

Immunogenicity, safety and reactogenicity of a combined *Haemophilus influenzae* type b and *Neisseria meningitidis* serogroup C-tetanus toxoid conjugate vaccine in infants

D Pace¹, MD Snape¹, S Westcar¹, N Begg², J Wysocki³, H Czajka⁴, G Maechler¹, D Boutriau¹, AJ Pollard¹¹Oxford Vaccine Group, Centre for Clinical Vaccinology and Tropical Medicine, Department of Paediatrics, University of Oxford, Churchill Hospital, Headington, Oxford, UK,²GlaxoSmithKline Vaccines, Rixensart, Belgium,³Specialist Team of Care over Mother and Child, Dispensary Medicine of Development Age, Poznan, Poland,⁴Cracow Specialist Hospital, under the name of John Paul II, Vaccination Centre, Krakow, Poland

Background and Aims: Conjugate vaccines protecting against *Haemophilus influenzae* type b (Hib) and serogroup C *Neisseria meningitidis* (MenC) are part of the primary infant immunisation schedules in several developed countries. A single combination vaccine could provide an alternative to the existing Hib and MenC vaccines. We evaluated the immunogenicity and safety of a novel combined Hib-MenC conjugate vaccine (Hib-MenC-TT) in British and Polish infants (103974).

Methods: 500 healthy infants aged 6–12 weeks were randomised to a control group, receiving a MenC-CRM197 vaccine (Meningitec™) administered concomitantly with a diphtheria, tetanus, acellular pertussis, inactivated polio and Hib vaccine, DTPa-IPV-Hib (Pediaceal™) or to a study group receiving Hib-MenC-TT and DTPa-IPV (Infanrix™-IPV) at 2, 3 and 4 months. Serum samples were collected at baseline and 1 month after the 3rd immunisation. A serum bactericidal antibody assay (SBA-MenC) titre of $\geq 1:8$ and anti-polyribosylribitol phosphate (anti-PRP) antibody concentration of $\geq 0.15\mu\text{g/ml}$ were used as correlates of protection against MenC and Hib respectively.

Results: On an interim analysis of the sera from 144 participants, Hib-MenC-TT recipients had significantly higher anti-PRP geometric mean concentrations than participants in the control group ($17.0\mu\text{g/ml}$ [13.8–20.8] versus $2.1\mu\text{g/ml}$ [1.2–3.7]). SBA-MenC geometric mean titres were lower in the Hib-MenC-TT recipients (637.4 [510.9–795.2] versus 1202.5 [861.7–1678.0]). However, 100% of Hib-MenC-TT recipients had SBA-MenC titres $\geq 1:8$ and anti-PRP concentrations $\geq 0.15\mu\text{g/ml}$ post-immunisation in each group, achieving the pre-defined non-inferiority criteria for Hib and MenC immunogenicity. The reactogenicity profiles of the Hib-MenC-TT and DTPa-IPV vaccines were similar to the MenC-CRM197 and DTPa-IPV-Hib.

Conclusion: Interim analysis confirmed that the combined Hib-MenC-TT vaccine had comparable immunogenicity and reactogenicity profiles to separate injections and could provide an alternative to the currently used vaccines in the infant immunisation schedule in the UK.

O-003

The school health service - a needs assessment

M Sammut¹, D Soler¹, M Dalmas²¹School Health Service, Primary Health Care,²Department of Health Information

Introduction: The School Health Service consists of a small group of doctors and nurses who provide various services to children within all State and Church schools.

Aim of this needs assessment: Changes in our society's lifestyle and in the health needs of children and their families, coupled with the financial and human resource constraints of the Health Service raised the need to evaluate the present *modus operandi* of the School Medical Service, with the intention of obtaining a clearer perspective as to how this service could be improved in its efficiency and efficacy.

Methods: A monthly report of the work done in schools is one of the routinely collected data. The monthly reports from January 2005 to June 2006 for the work done in the Cottonera, Paola and Tarxien area schools were analysed.

Results: The fact that children are seen at school means that there is a high "catchment" rate. The school environment is a "neutral territory" for both the child and the family. This tends to demedicalise the issues concerned. The screening carried out yields substantial positive results. However there is room for greater effectiveness and efficiency of this service.

Conclusions: There is need for a review of the *modus operandi* of the School Health Service with emphasis on creating networks of teams with other departments providing child services. This would integrate work without the need for further human and financial resource recruitment.

O-004

Community services for Malta's growing elderly population: screening - the missing link in our portfolio?

J Mamo¹, C Gauci², N Calleja³

¹University of Malta,

²Department of Public Health, Malta,

³Health Information Services, Malta

Aims: to review the basis for screening of community dwelling elders in other EU countries such as Sweden, Germany and the UK and discuss the feasibility/missed opportunity in Malta's failure to even conceive such screening.

Methods: a brief review of the available services in the community to address the needs of Malta's growing elderly population is presented. A thorough assessment of the basis for the decision to screen elderly persons in their homes in other EU countries and the evidence that exists at present in favour of such screening. Expected gains in terms of the population's health and in potential cost-benefit are discussed with the aim of quantifying what Malta stands to gain or lose by such screening.

Results: costs involved in national screening programmes of community dwelling elderly persons are clearly very high. However, gains expected in terms of quality of life, reduced admissions to residential care and even life years gained could well outweigh such costs.

Discussion: Malta's current economic situation is such that, despite the potential gains, including financial ones in terms of health care savings, it is unlikely that such a strategy will be considered in the foreseeable future locally.

Conclusion: screening of Malta's growing elderly population could remain the missing link in our range of services. Such an expensive facility could reduce the evident, growing demands for institutional care which is ultimately a more costly option.

O-005

The implications of the European Union on the Maltese health care system

R Zammit

Department of Institutional Health

Following a national referendum Malta joined the European Union (EU) on the 1st of May 2004 to become the smallest Member State, at the southern most border of the enlarged European Community. As a small island state with a long tradition of medical care it has a sophisticated medical infrastructure that compares very favorably with industrial Western European countries offering a wide scope of treatment as a benefits-in-kind health care package. A challenging scenario could develop when the Single European Market rules as applicable to the EU healthcare policy are transposed to the Maltese Health Care System with its unique geopolitical context. Proactively reacting to these challenges necessitates policy makers to consider from various options, the two main ones being: 1. Constrict the offered health care package, and re-dimension the medical infrastructure so as to have a similar situation akin to that of Luxembourg, another small EU Member State with a comparable population base. 2. Build on the existing medical infrastructure in a way to take advantage of the recent EU membership. Malta as an island in the Mediterranean, with a service economy based mostly on tourism, could project itself as an ideal country for Northern European elderly citizens to have an alternative residence. A predilection to this option, or its possible hybrid variations could well succeed in preserving the 'ethos' of the Maltese Health Care System. To follow this re-crafted strategy, the Maltese Health Care system needs to re-orient to the realities and implications of EU policies in healthcare and contribute in their development at EU level in a manner to derive advantage from their evolution. Recommendations are suggested on how this could be achieved and transform EU membership from a potential threat to the Maltese Health Care System into an opportunistic challenge.

O-006

Is MRSA control an achievable target in Malta and what will it cost?

MA Borg

Infection Control Unit, St Luke's Hospital, Malta.

Methicillin resistant *Staphylococcus aureus* (MRSA) infections remain a major infectious disease challenge within the Maltese Islands. From the first outbreak with St Luke's Hospital in 1995, cases have continued to increase in the past decade to reach a situation whereby more than 45% of *Staphylococcus aureus* isolates from blood cultures are methicillin resistant, one of the highest in Europe. In addition there is evidence of an ever-increasing prevalence of community MRSA. Several factors undoubtedly play a role in the local endemicity of MRSA. Overcrowding within St Luke's Hospital (St Luke's Hospital) has already been identified to be a major instigator behind MRSA incidence especially in medical wards. Antibiotic consumption is recognised as a major driver of resistance and indications are that antibiotic use in Malta is also on the high side. Furthermore studies of hand hygiene compliance, a cornerstone of nosocomial infection prevention, suggest a need for major improvement. Targeting these three risk factors is vital to achieve a successful outcome but will not necessarily reverse the situation. Isolation of positive MRSA cases remains critical to ultimate control. Recent mathematical modelling data suggests that a comprehensive search and destroy policy is the only effective solution to eradicate MRSA. In high endemicity situations this will require a comprehensive programme of patient screening both on admission as well as of all contacts of cases diagnosed during the hospital stay, both patients and staff. The availability of sufficient isolation beds is a prerequisite and even if this were to be done, the modelling data suggests that based on current prevalence in St Luke's Hospital, 15 – 20 years will need to elapse before full control is achieved.

O-007

MRSA in autopsy cases

MC Camilleri Podesta¹, M Zarb-Adami¹, P Cuschieri²,

MT Camilleri Podesta³, A Serracino-Ingloft A¹, L Azzopardi¹

¹Department of Pharmacy, University of Malta,

²Department of Bacteriology, St Luke's Hospital,

³Department of Anatomy, University of Malta

Nasal carriage of *Staphylococcus aureus* has become a means of persistence and spread of multiresistant staphylococci, especially Methicillin-resistant *Staph. aureus* (MRSA). MRSA has become a public health threat, both in hospitals and more recently in the community.

Aim: This study should indicate whether antibiotic medication and hospital stay predispose to nasal colonisation with *Staph. aureus* including MRSA when compared to a second cohort that had not been admitted to hospital recently.

Method: Nasal swabs were obtained from cadavers prior to undergoing post-mortem examinations. The nasal swabs were taken to the Bacteriology Lab where attempts were made to culture *Staph. aureus* from the nasal swabs. Staphylococci were tested for their antibiotic susceptibility. The organisms that were resistant to oxacillin were tested using a Penicillin Binding Protein (PBP2a) Latex Agglutination test, which is a confirmatory test for MRSA.

Results: From the 43 specimens taken, 34 of these had not been hospitalised before death. The remaining 9 died in hospital. 44% of the patients not hospitalised were colonised with *Staph. aureus*. 3 out of the 15 patients colonised with *Staph. aureus*, were MRSA positive (i.e. 9% of the non-hospitalised population).

This cohort is compared to hospitalised patients, where 33% were colonised with *Staph. aureus*; of these, 2 out of 3 patients were MRSA positive (i.e. 22% of the hospitalised patients were colonised with MRSA).

Conclusion: These preliminary findings provide confirmatory evidence that hospitalisation increases the incidence of MRSA carriage compared to the non-hospitalised population.

O-008

Hand hygiene practices amongst medical doctors at St Luke's Hospital, Malta

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¹Medical School, University of Malta,

²Infection Control Unit, St Luke's Hospital

Introduction: The ease of acquisition and transfer of transient pathogens on the hands of healthcare workers is an important factor in the spread of hospital infections. Thorough hand decontamination before and after patient contact is therefore essential for prevention.

Methodology: An observational study of doctors was carried out at St Luke's Hospital, Malta, between November 2005 and February 2006. The frequency and preferred method of hand hygiene before (if an inanimate object was touched previously) and after patient examination / contact was observed, together with concurrent availability of hand hygiene facilities. Observations were made at outpatient departments as well as in hospital wards.

Results: A total of 898 observations were made from 49 firms, each comprising an average of four doctors. Overall compliance before and after patient contact was 22.7% and 33.5% respectively. Poorest compliance was evident in house officers (16.7% before contact) as compared to the most compliant group - registrars (45.5% after patient examination). Within specialties, hand hygiene practices were lowest in Obstetrics & Gynaecology (10.6% overall) and highest in specialised surgical units (52.5%). There was no significant difference in hand hygiene compliance between ward-round and out-patient settings. The presence of adequate facilities resulted in a statistically significant improvement in compliance. Nevertheless, even when adequate facilities were available within easy reach, 74.8% and 64.6% of doctors failed to perform hand hygiene before and after patient contact. Alcohol hand rub was the preferred method in the wards whilst handwashing was mainly utilised in the outpatient setting.

Conclusion: Hand hygiene amongst doctors in St Luke's Hospital is low and could be a factor in the high MRSA endemicity. Campaigns are clearly required to improve compliance and reduce risk of transmission of nosocomial infections.

O-009

Impact of the introduction of antibiotic prescribing guidelines in St Luke's Hospital, Malta

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T Piscopo¹, E Scicluna²

¹Antibiotic Team,

²Infection Control Unit, St Luke's Hospital, Malta

Background: Antibiotic prescribing guidelines were introduced in St Luke's Hospital in 2004 as part of an educational initiative, aimed at improving the use of antibiotics, started three years earlier.

Methods: The impact of the guidelines was assessed through a questionnaire sent to 300 medical professionals working in St Luke's Hospital. The respondents were asked to provide feedback on the impact that the guidelines had in their practice, as well as to respond to various conceptual questions relating to antimicrobial resistance and antibiotic use. The yearly consumption of selected antibiotics was also analysed to evaluate whether the guidelines resulted in any appreciable differences in the patterns of use.

Results: The questionnaire was replied by one hundred and seventy-six 176 doctors (12% consultants, 13.3% senior registrars, 16.7% registrars, 20% senior house officers, 38% house officers). Respondents indicated that they found the format and content of the guidelines useful. They strongly agreed that policies were useful tools to achieve best practice and that they felt that the issue of the guidelines did not interfere with their prescribing choices. However, replies were neutral as to whether the guidelines changed their individual prescribing practices and slightly negative when asked if prescription of third line agent should be restricted to infectious diseases specialists. Consumption of antibiotics following the start of the initiative fell by a third, particularly co-amoxiclav and erythromycin. However non-

formulary antimicrobial consumption (e.g. carbapenems and quinolones) continued to increase.

Conclusion: The introduction of antibiotic prescribing guidelines in St Luke's Hospital had a beneficial response from the users, both in terms of acceptance as well as practice, although the need for improvement remains.

O-010

Importance of practical undergraduate instruction in venepuncture and intravenous cannula insertion techniques to reduce the risk of needlestick injury in junior medical doctors

EA Scicluna, M Borg

Infection Control Unit, St Luke's Hospital

Background: Surveillance of needlestick injuries within St Luke's Hospital in the years 1999-2003 showed peaks of incidence corresponding with the time of employment of house officers.

Method: Self-administered questionnaire distributed during the MD induction seminars of July 2004 and 2005 to assess the degree of theoretical and practical instruction in sharps use and injury prevention during their course.

Results: In 2004, 73.5% of the junior doctors had performed more than five venepunctures within their entire undergraduate course but only 26.5% stated that they performed the same number of intravenous cannula insertions. More than half of respondents indicated a lack of confidence to safely perform these interventions without the risk of self-injury. The majority stated that they had had insufficient hands-on instruction on correct venepuncture (77.5%) and of intravenous cannula insertion (83.7%). The results from the 2005 questionnaire showed a significant increase ($p < 0.001$) in the practical instructions of both venepuncture and cannula insertion which went up to 65.9% and 52.3% respectively when compared to the previous year. There was also a significant increase ($p = 0.007$) in the number of junior doctors confident in performing these practices. These differences were accompanied in 2005 by an apparent reduction in the magnitude of injury incidence peak within the subgroup of doctors aged 25 years or less.

Conclusion: The study highlights the importance of practical training in venepuncture and cannula insertion, rather than theoretical instructions, within the MD course in order to improve the self-confidence of neograduates and as a result reduce the risk of sharps injuries.

O-011

Three year sentinel surveillance of influenza activity in Malta

T Melillo-Fenech and participating General Practitioners

DSU, PH

Influenza is a highly contagious, acute febrile respiratory illness causing annual epidemics that are highly unpredictable. In contrast to most other acute respiratory infectious of viral origin with similar clinical symptoms, influenza is usually more severe and is commonly associated with complications either directly through primary viral pneumonia or indirectly through secondary non influenza complications either pulmonary or non pulmonary in nature. Every year, influenza results in 3-5 millions cases of severe illness and kills 0.25-0.5 million people worldwide. It affects people of all age groups especially the elderly and very young, and is a major burden for society from both clinical and economical points of view. Influenza remains the most major health threat worldwide. As the elderly population increases, future influenza epidemics will be associated with ever increasing hospitalization rates and excess mortality unless adequate prophylactic measures are taken. Since 2003, Sentinel Surveillance on influenza activity in Malta started being monitored.

A group of General Practitioners participate every year throughout October up to May the following year, and provide daily information on the incidence of influenza like illnesses seen in their practices. The aim is to collect timely information on influenza activity to reduce the morbidity and mortality associated with this disease

O-012

A pilot evaluational study assessing adherence to recommendations for avoidance of hypoglycaemia in insulin-treated Maltese diabetic drivers

S Vella, MJ Cachia

Department of Medicine, St Luke's Hospital

Hypoglycaemia, a common side-effect of insulin therapy for diabetes, may be associated with significant morbidity and interfere with everyday activities such as driving. Laboratory studies have demonstrated that cognitive functions which are critical to driving, such as visual information processing, attention reaction times and hand-eye coordination are impaired by hypoglycaemia, resulting in an increased risk of car crashes. This is particularly relevant for drivers receiving intensive insulin therapy. Patients should be advised to test blood glucose before driving, ensure an emergency carbohydrate supply, carry a blood glucose meter at all times when driving, and allow an adequate time to recover before resuming their journey if they should experience hypoglycaemia when driving. Results from a cohort of twenty consecutive insulin treated Maltese diabetic drivers presenting to Diabetes Clinic at St Luke's Hospital suggests little compliance in this regard, and forms the basis of a further in-Department study currently being carried out.

O-013

Audit of the management of patients admitted with diabetic ketoacidosis (DKA) to St Luke's Hospital

M Debono¹, AG Abela¹, CJ Magri¹, J Vassallo¹, J Azzopardi¹, N Calleja²

¹*St Lukes Hospital, G'Mangia,*

²*Department of Health Information, G'Mangia*

Aim: To analyse the management of patients admitted with DKA according to the existing protocol.

Methods: Patients admitted with 'DKA' between 14th August 2004 and 14th August 2005 were identified from the Admissions book at the A+E Department. Data was obtained from patients' medical records and analysed according to a preset proforma. Parameters measured, investigations taken, insulin regime, intravenous fluids and potassium supplements given were recorded.

Results: From a total of 56 patients, 50 files were traced, of which 19 satisfied the criteria for the diagnosis of DKA. In the population studied the mean age was 35 years with a male predominance of 58%. 11 patients were Type 1 diabetics, 4 were Type 2 and another 4 were newly diagnosed Type 1 diabetics. Only 2 patients had their parameters checked regularly according to protocol. In the majority of patients fluids given in the first 22 hours coincided with the amount of fluids stated in the protocol whilst 47% of patients (n=9) were administered the stipulated amount of insulin via infusion pump. As regards potassium supplementation 89% of patients (n=17) were started on potassium replacement at a later stage resulting in a lower mean potassium level (3-4mmol/L) than the target of 4-5mmol/L. The mean duration of stay in hospital was 7 days.

Conclusion: Various problems have been identified on analysis of audit results. These principally included errors with parameter monitoring, and dose of insulin and potassium supplementation. Deviations from the protocol resulted in increased length of stay in hospital. Consequently, an audit cycle is recommended after introduction of the new DKA guidelines.

O-014

An audit of culture and sensitivity reports of infected diabetic foot ulcers

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Fifteen per cent of people with diabetes develop foot ulcers. The most common risk factors for ulceration include diabetic neuropathy, structural foot deformity and peripheral arterial occlusive disease. Diabetic ulcers are highly susceptible to infection, which is a major cause of amputation. Systemic antibiotics are regarded as part of standard treatment for invasive infections associated with diabetic foot ulcers.

An audit of wound swab results of diabetic foot ulcers of patients being followed up at the podiatry unit of the Diabetes Clinic was carried out. This involved a total of 144 culture and sensitivity reports of wound swabs. The aim of the audit was to assess the most common infective organisms and their sensitivities.

Bacteria were cultivated in 88.17% of cases. 7.6% of swabs revealed highly mixed flora suggestive of contamination whilst no pathogens were isolated in 4.16%. In 59.7% of swabs more than one organism was cultured from the same ulcer. A high recurrence rate of diabetic ulcers was also noted.

The most commonly isolated organisms were Staphylococcus aureus, 43% of which were MRSA, Streptococci, Pseudomonas aeruginosa and Enterococci. Other common organisms were Proteus mirabilis, Morganella morganii, Escherichia coli, Klebsiella oxytoca and Citrobacter koseri. A common pattern of antibiotic sensitivities was noted though rarely some strains were resistant to antibiotics to which the same strain was usually sensitive.

Wound swabs of infected ulcers are essential to guide antibiotic therapy in the treatment of the diabetic foot, with the ultimate aim of preventing morbidity and mortality.

O-015

Charcot foot: an often misdiagnosed diabetic complication

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Charcot neuroarthropathy is a progressive degenerative condition characterized by joint dislocation, subluxation and pathological fractures of the foot of neuropathic patients, often resulting in a debilitating deformity. In developed countries, the condition is most commonly encountered in diabetic individuals (incidence 0.1-0.5%) and results in a foot that is at risk for ulceration and amputation. Acute Charcot neuroarthropathy can be misdiagnosed as cellulitis, osteomyelitis, inflammatory arthropathy, fracture or deep vein thrombosis. We present a series of initially misdiagnosed cases of Charcot neuroarthropathy, highlighting the need for a high index of suspicion. This may allow the early institution of appropriate treatment, namely immobilization, bedrest, offloading and possibly pamidronate, if one is to reduce significant morbidity and severe deformities.

O-016

Association study of Libyan and Maltese patients with type II diabetes mellitus

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Type II Diabetes Mellitus is a common disease with onset in middle-aged individuals, caused by an imbalance between insulin production and action. Genetic studies point to major genetic components with an expiation of maturity onset diabetes of the young (Mody), specific diabetes susceptibility genes remain to be identified. Single nucleotide polymorphisms (SNPs) and mutations in different genes may be implicated in developing Type II Diabetes. In this study we analyzed 9 such genes that include IPF, MTHFR, mitochondrial tRNA, Resistin, PPP1R3, ADRABeta2, MIF, PTPN1 and

TLR4. SNPs were chosen from each gene according to stringent criteria based on developing Type II Diabetes in other populations. SNPs were genotyped in the Libyan and Maltese patients and compared with healthy Maltese citizens. DNA was extracted from whole blood, and genotyping of each gene determined by PCR-RFLP. Concurrently, pools of DNA from random Maltese newborn were carried out using fluorometry for accurate quantification. All genes were in Hardy-Weinberg Equilibrium and statistical analysis was carried out by SPSS (student package 12). Chi square analysis of all data in between populations and across populations revealed a significant association of the ADRABeta2 gene of both Libyan and Maltese Type II Diabetic patients with healthy Maltese controls ($p < 0.05$ for both). There is no difference between Libyan and Maltese Diabetics ($p=0.07$) indicating that this gene has a common predisposition to both populations. On the other hand, IPF gene was only associated with the Libyan Diabetes Type II and not with the Maltese population ($p < 0.05$). All other genes were not statistically significant associated with Type II Diabetes. The results show a strong association of the ADRABeta2 (Arg16Gly) and IPF (missense mutation Cys18Arg) genes with Type II Diabetes.

O-017

Death certification in Malta: attitudes and knowledge

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Aims: The accuracy of death certification by doctors completing death certificates in the Maltese Islands is not known. Since death certificate information forms an important public health tool, this study was carried out to assess the knowledge, attitudes and behavior of certifying doctors in relation to death certification, to determine the scope for future intervention.

Methods: A postal questionnaire was sent to doctors having completed at least three death certificates during the year 2002. Closed questions established personal and career details, death certification experience and knowledge, attitudes and behavior in relation to death certification and its uses. Four case studies were also included. Doctors had to fill in 'cause of death statement' for each study presented.

Results: 67% of doctors answered the questionnaire. Only 6% of all doctors had received formal training in death certification and 84% of doctors felt that training in death certification was needed. Training during housemanship years was ranked as the best method of training followed by training during medical school, information handouts and last seminars/CME initiatives. Factors which made filling in of death certificates more difficult included patients with multiple pathology (65%) and not knowing the patient enough (57%). Most doctors (95%) felt that accurate death certification was important and used as a legal proof of death, source of demographic data and for epidemiological research. Error rates in the case studies presented ranged from 30% in case study 1 to 80% in case study 4.

Conclusions: The results of the case studies reflect a lack of training in death certificate completion at all levels of medical experience. However there was a generally constructive attitude to the importance of death certification which would indicate that most doctors would be receptive to a training program.

O-018

Observational study reviewing the local practice in Malta of ordering routine chest X-rays on every medical patient admitted to hospital

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Objective: To assess whether any additional information is obtained through the routine requesting of chest X-rays on all adult medical admissions.

Design: Observational study.

Setting: Accident and Emergency Department, St Luke's Hospital, Malta.

Participants: All adult acute medical admissions, irrespective of age and gender.

Main outcome measures: The number of cases where unexpected findings were reported on routine chest X-rays.

Method: Participants were subdivided according to their smoking status as smokers, non-smokers and ex-smokers. They were then in turn divided into 2 age groups: <50 year-old, >50 year-old. The respective chest X-ray reports, as documented in the admission medical notes, were revisited and categorised as normal chest X-rays, confirming a diagnosis or whether unexpected findings were reported.

Results: Out of a total of 109 patients assessed, 23 were smokers, 70 were non-smokers and 16 were ex-smokers. Normal chest X-rays were reported in 19, 41, and 4 of smokers, non-smokers, and ex-smokers respectively. Diagnosis was confirmed on chest X-rays in 1, 15, and 6 of smokers, non-smokers, and ex-smokers respectively. Unexpected findings were diagnosed in 3 smokers, 14 non-smokers, and 6 ex-smokers making up a total of 23 cases out of the 109 gathered. Out of these 23 cases, 7 were unexpected findings requiring further investigation including: possible lung primary (2), newly diagnosed lung metastases (2), pneumonia (2), aortic aneurysm (1); 6 of these cases being in the >50 age group. Interestingly 3 were smokers.

Conclusions: The practice of requesting routine chest X-rays in all patients admitted to medical wards is almost exclusively useful in those over the age of 50 years especially in smokers, We suggest reviewing current practice. practice.wed.

O-019

Audit on the treatment of patients admitted to medical wards with a diagnosis of COPD exacerbation

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An exacerbation is a sustained worsening of the patient's symptoms from their usual stable state which is beyond normal day-to-day variations and is acute in onset. In all patients with an exacerbation referred to hospital, a chest X-ray should be obtained, ABGs should be taken and urea and electrolytes should be measured. In the absence of significant contraindications, oral corticosteroids should be used, in conjunction with other therapies, in all patients admitted to hospital with an exacerbation of COPD. Antibiotics should be used to treat exacerbations of COPD associated with a history of more purulent sputum. Oxygen therapy should be used to maintain adequate levels of oxygenation. Before discharge, spirometry should be measured, patients should be given appropriate information to enable them to fully understand the correct use of medication, including oxygen and arrangements for follow-up should be made. The aim of the audit is to compare practices at St Luke's Hospital with the recommended guidelines as published by the British Thoracic Society. Particular attention was given to the use of systemic steroids, oxygen, antibiotics and ventilatory support. Regarding the long-term management of these patients various aspects that could influence outcome were looked into including inhaler technique testing, smoking cessation information, respiratory outpatient review and patient compliance with treatment after discharge.

O-020

A full cycle audit on the correct assessment of postural blood pressure

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Background: Recurrent falls are very common in older people. One of the causes of recurrent falls is orthostatic hypotension. The correct measurement of blood pressure (BP) change with posture is thus central in making this important observation. There is great variation in the clinical practice of measuring postural change in BP.

Aim: To assess whether nurses at ZCH have the correct theoretical knowledge of how and when to measure postural BP in patients.

Methodology: The study population comprised nursing staff who had

the responsibility of measuring postural blood pressure when such a measurement was requested by a doctor. A set of 3 short multiple completion type questions were distributed to the nurses on duty on 2 consecutive days including the evening shifts. It was emphasised that the audit was anonymised and confidential. A 45 minute lecture on the physiology of blood pressure control, the reasons why we measure postural BP and the correct technique of measuring postural BP was delivered by the author to all the nursing shifts. During the discussion that followed, it was agreed that a printed proforma would be devised on which the definition of postural hypotension would be printed, together with the correct technique and a separate area for charting a patient's BP and the symptoms experienced by that patient if any, during the procedure. Six months later, in the second cycle of this audit, the same multiple completion questions were repeated. Results from the first and second audit cycles were compared.

Results: 34 and 27 nurses respectively participated in the first and second audit cycles. There was an overall improvement in knowledge from 82% to 96% getting 1 question right, 28% to 96% getting 2 questions right and 3% to 56% getting all 3 questions right.

Conclusion: This full cycle audit was successful in improving nurses' knowledge in the correct practice of measuring postural change in BP.

O-021

Audit of congenital adrenal hyperplasia diagnosed at an endocrine outpatient clinic

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Congenital adrenal hyperplasia is an autosomal recessive group of disorders characterized by a deficiency of one of the enzymes necessary for cortisol and/or aldosterone biosynthesis. There is a wide clinical spectrum, ranging from neonatal presentation with salt wasting and virilization, to non-classic presentation in adulthood with hirsutism, acne and oligomenorrhoea. Hypertension is also a recognized important manifestation. Congenital adrenal hyperplasia should be considered in the differential diagnosis of hirsute patients. We present an audit of twenty five patients diagnosed with congenital adrenal hyperplasia at an endocrine clinic at St Luke's Hospital, outlining the diagnostic criteria used. This audit has identified that there is no need for a synacthen test to establish a diagnosis if baseline levels of 17-hydroxyprogesterone are clearly elevated. There is a need however, to establish the baseline normal values for 17-hydroxyprogesterone and testosterone for the Maltese population, and stratify for age to ensure the correct cut-off point for these tests for the Maltese population.

O-022

Childhood obesity: a critical Maltese health issue

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Overweight and obesity is becoming epidemic, worldwide, in both adults and children. This problem is particularly evident in all most all westernised societies due to particular lifestyle and dietary habits. 20% of Europe's school-age children are estimated to be overweight and of these, 1 in 5 is obese. The local situation is reaching critical levels, with childhood and, indeed pan-population, obesity being very widely prevalent. Up to 25% of Maltese children are overweight (85-95% centiles for BMI), and 8% are obese (>95% centile for BMI). In certain age groups, Maltese children are the most obese worldwide, surpassing countries such as Italy, Greece and the US. These figures are the result of genetic factors indigenous to the population, but significantly compounded by an exercise-poor, increasingly sedentary lifestyle together with a startling national penchant for fat-rich, unhealthy food consumed in large quantities. The direct, indirect and long term health risks for the individual and population as a whole are indisputable and, given the current obesity trends for the country will result in an astronomical increase in morbidity and mortality from ischaemic heart disease, stroke and cancers. Moreover, this health burden will translate into an escalating

health budget requirement of at least Lm 33.6 million per annum. Obesity is, therefore, the greatest current national health crisis and must be classified as such with urgency. Only then will the problem be afforded the urgent attention required at all levels of the socio-political milieu. A seriously-funded, major national campaign must be implemented with urgency and will need to address the crisis at all levels including prevention, lifestyle issues and therapy.

O-023

Breastfeeding in Malta: why are rates so low?

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Background: Malta has one of the lowest breastfeeding rates in Europe. Mothers report of a lack of support from family members and health professional and early cessation of breastfeeding remains widespread.

Aim: This study reviewed statistics for the first 6 months of life and identified reasons why mothers discontinue breastfeeding.

Method: A random sample of 405 new mothers who chose to breastfeed at St Luke's Hospital, were contacted by phone at 1 week post delivery and then each month up to 6 months, and asked to voice their feeding experience.

Results: Breastfeeding attrition rates were high with very few babies still breastfed at 6 months. The most common reason for introducing artificial feeding was on the advice of health professionals, usually without any medical indication. Mothers who introduced bottle feeds in hospital lacked confidence to breastfeed and most stopped breastfeeding soon afterwards.

Conclusion: This study highlights that the majority of health professionals are not sufficiently committed to supporting breastfeeding mothers. Artificial feeding methods are still widely recommended with no scientific-based rationale and, once advised to do so, many mothers felt that bottle-feeding was necessary for the well being of her child. The introduction of a clear hospital policy and compulsive education for all health professionals involved in maternity care is strongly recommended.

O-024

The management of asthma in schools

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Aims: Asthma is one of the most common chronic disorders of childhood. Teachers find themselves responsible for supervising schoolchildren with asthma during school hours. They are involved in decisions regarding emergency treatment and the administration of regular prophylactic treatment. In this study a short descriptive situation followed by a questionnaire was designed to assess the knowledge of asthma amongst school teachers, to identify lacunae of limited understanding, and to assess how teachers feel about managing children with asthma in particular regarding policies for giving medications.

Methods: The teachers attending the yearly In-service Training Programme organized by the Education Division and enrolling in the module Health at School, were invited to participate in the study by answering the questionnaire. This consisted of 5 statements about the nature of asthma, its treatment and management, that the respondents marked true or false. With 100% participation rate the answers of 140 respondents were analysed using the Statistical Package for Social Sciences (SPSS) to provide tabulations and statistical calculations.

Results: By cross tabulations of the respondents' results it was found that: 45.7% of the respondents were not willing to assist an asthmatic child take their medications because they lacked the appropriate knowhow. 6.4% did not feel safe to give treatment notwithstanding they thought they knew enough on asthmatic treatment presumably because of lack of a school medication policy/protocols. Of concern is that 35.0% would offer help even though they felt they did know enough regarding asthmatic treatment. Only 12.9% felt confident enough to assist children have their medications at school.

Conclusions: Whilst a protocol regarding medications at school is needed, teachers need more guidance in supervising asthma and its management. The school health services could play a larger role in educating teachers

O-025

Current trends in child abuse in Malta

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Background and Aims: The socially complex aetiology of child abuse makes its eradication difficult yet it's significant negative impact demands early identification and appropriate management. To this end, local authorities have established efficient tracking and processing protocols for suspected cases, covering medical, social, legal and police aspects. This review presents the current status of abuse in Malta.

National Statistics: Child abuse is steadily on the increase: from 1993 up to 2004, Agenzija Appogg recorded a total of 6,711 reports under the Child Protection Services, of which 4,136 involved some form of child abuse, 55% in those aged 6-15 years and 12% in preschool children with a M:F ratio of 1:1.5 (1:5 for sexual abuse). 2% were referred from Health Services, 30% from Appogg, 27% relatives, 25% other agencies, 12% Education and 4% from the Police.

Types of abuse: As in other countries, physical abuse comprises 30% of cases; neglect 17% and sexual abuse 13%, although all types are likely to be under-reported. This is especially so for sexual abuse that involves preschool children who may not report the event compounded by the absence of penetration and external physical signs in just 2 out of 11 cases in one local review. Abuse by proxy (Munchausen syndrome) is only diagnosed once every 10 years in Malta.

Conclusion: Whilst case identification has increased steadily, the enhanced support services (Paediatric team, Appogg, Vice Squad, Family Court, etc), have considerably improved the overall liaison and medico-socio-legal package available, and those filing reports are protected by the Data Protection Act. Nevertheless, much still needs to be done to improve inter-agency liaison.

O-026

Declining birth rates and social factors - implications for paediatric private practice

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Malta exhibits many secular western trends including declining birth rates, declining fertility rates and increasing numbers of single parents. Moreover, the number of practising paediatricians is continually rising. This is expected to have a significant impact on private practice, which is widely used by local doctors to supplement low (by European standards) salaries. Like Dr. Tertius Lydgate in George Eliot's 'Middlemarch', many doctors may find this a further compelling reason to leave Malta in order to seek greener pastures.

O-027

Invasive meningococcal disease in Maltese children and adolescents

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Background and aims: *Neisseria meningitidis* is one of the leading causes of meningitis and septicaemia in children and adolescents. Serogroups B and C constitute the majority of meningococcal disease in most developed countries today. The incidence of serogroup C disease has decreased in those countries introducing the conjugate meningococcal C vaccines in their national immunisation schedules. The aim of this study was to look at the incidence and serogroup distribution of meningococcal disease, in children and adolescents, in Malta.

Method: All laboratory and clinically confirmed meningococcal cases occurring during 2000-2005 in 0-18 year old children and adolescents were retrieved from data collected by the Public Health and Microbiology Departments. The total number of meningococcal cases in all ages was also noted.

Results: The incidence rate for laboratory and clinically confirmed meningococcal disease was 2.7-5.6 per 100,000 population per year. Disease burden was highest in 2-4 year old children (mean: 42%). Serogroup B was responsible for most laboratory confirmed cases, followed by serogroup C. The proportion of invasive disease caused by serogroup C in 0-18 year olds has increased from 5.6% in 2000-2002 to 14.2% in 2003-2005.

Conclusion: Similar to other European countries, serogroup B *Neisseria meningitidis* is responsible for the majority of invasive meningococcal disease. Continued surveillance for serogroup C is warranted in view of the recent increase in meningococcal C cases and the availability of effective conjugate meningococcal C vaccines.

O-028

Assessment of the appropriate use of medicines at the medical admissions section of the emergency department

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Background: Appropriate prescribing remains an important priority in all medical areas of practice. Medication appropriateness can be defined as the outcome of a process of decision-making that maximises net individual health gains within society's available resources.

Objective: To apply a Medication Appropriateness Index (MAI) to identify issues of inappropriate prescribing amongst patients admitted from the Emergency Department (ED).

Method: This study was carried out at St Luke's Hospital on 125 patients following a two-week pilot period on 10 patients. Patients aged 18 years and over and on drug therapy were included. Patients who were not reviewed prior to the post-take ward round and direct admissions were excluded. Drug treatment for inappropriateness was assessed by using a MAI, which was tested for content validity and reliability.

Results: Treatment charts of 125 patients, including 697 drugs, were assessed using a MAI. Overall, 115 (92%) patients had ≥ 1 medications with ≥ 1 MAI criteria rated as inappropriate, giving a total of 384 (55.1%) drugs prescribed inappropriately. The mean \pm SD MAI score per drug was 1.78 ± 2.19 . The most common drug classes with appropriateness problems were supplements (20.1%) and antibiotics (20.0%). The most common problems involved incorrect directions (26%) and incorrect dosages (18.5%). There were 36 omitted drugs with untreated indications.

Conclusion: Considerable inappropriate prescribing was identified, which could have significant negative effects on patient care.

O-029

Molecular dynamics of the androgen receptor

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Aims: This is a comparative in silico investigation of the binding modalities of different ligands to the Androgen Receptor, and the effects that these different ligands have on its dynamics.

Methods: The AMBER 8 suite of programmes was used in order to simulate the binding and the trajectory of the Androgen Receptor over a period of 4.8ns. The trajectory of the Androgen Receptor was simulated for both the apo and the holo forms of the protein, with the holo form being bound to vinclozolin, diethylstilboestrol, corticosterone and metribolone. Coordinates for the Androgen Receptor bound to metribolone were obtained from the Protein Data Bank (PDB).

Results: Both the apo form, and the protein-ligand complexes equilibrated well over the period studied, and hydrogen bond analysis and principal component analysis indicated that the androgen receptor bound with high affinity but with different modalities to non steroidal ligands.

Conclusions: The Androgen Receptor is promiscuous, binding both steroidal and non steroidal ligands. An in-Department understanding of how non-steroidal ligands bind to the active site of this receptor is fundamental to the design of non-steroidal pharmacologically active agents.

O-030

Beyond the lipid-lowering view of statins: modulation of T cell response in autoimmune disease

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The pharmacological interference within T cell effector pathways is one therapeutic strategy for chronic inflammatory autoimmune disorders that are mediated by CD4+ T helper (Th) cells, such as multiple sclerosis (MS), diabetes and rheumatoid arthritis (RA). One candidate group of drugs for this therapeutic approach is the family of 3-hydroxy-3-methylglutaryl coenzyme A (HMG-CoA) reductase inhibitors, collectively known as statins. These orally-administered drugs have been used for several years as the gold standard for lipid-lowering therapy but have also shown (from early clinical trials and animal experiments) therapeutic benefit in autoimmune disease including MS and RA. Although a plethora of molecular processes have been reported for their mode of action, the main biological alterations responsible for modulating T cell response by statins involve an interference with cell cycle progression and induction of anergy; a differentiation towards a regulatory phenotype; and a disruption in cytoskeletal dynamics necessary for migratory function. While most of our findings have been reported in the animal model or using in vitro systems, a Phase II clinical trial in relapsing-remitting MS that we are currently finalizing will clarify the implications of preclinical data and help identify in vivo therapeutic targets in the pathogenesis of the disease.

O-031

Novel anti-cancer agents, PBTs: inhibition of Gleevec-resistance in leukemic K562 CML cells by the PBTs

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Leukemia is a heterogeneous disease characterized by malignant proliferation of cells of the hematopoietic system. CML is characterized cytogenetically by the Philadelphia (Ph) chromosome, resulting in the generation of BCR-ABL chimeric fusion protein and is associated with increased levels of tyrosine kinase activity shown to play a role in generation of CML in animal models. Several studies have suggested that K562 cells, a tumor cell line derived from a CML patient in blast crisis, are resistant to apoptosis induction. Gleevec, a promising new inhibitor of tyrosine kinase is effective against BCR-ABL positive leukemia. However, Gleevec use has been complicated by the development of resistance with subsequent leukemia relapse. We have developed K562 cells that are resistant to apoptosis by Gleevec. In the studies reported herein, we demonstrate that PBTs cause apoptosis of Gleevec-resistant K562 cells in vitro. These studies indicate that PBTs overcome Gleevec resistance possibly acting through a different mechanism than through tyrosine kinase inhibition. Previously we showed that PBTs control neoplastic cell growth in vitro and in vivo and that the effect in vivo lasts 3-4 cycles longer than the treatment period. Furthermore we showed in vivo that PBTs and Gleevec are synergistic. These studies suggest that PBTs may provide novel anti-cancer agents to lower the concentration of

chemotherapeutic drugs needed thereby decreasing the observed side effects of these drugs. (Supported by the OCRN)

O-032

Role of nicotine in memory formation, neural cell proliferation and apoptosis

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Nicotine is the neuroactive compound that is considered to be responsible for the development and maintenance of tobacco addiction. Despite the abuse potential of nicotine, the acute effects of this drug are considered to have a neuroprotective effect on the adult brain to the extent that nicotine-derived compounds have been proposed for the treatment of age-related brain pathologies and as enhancers of cognitive performance. However, in heavy smokers, abstinence from nicotine is accompanied by significant cognitive impairments possibly indicating the presence of drug-induced changes in brain plasticity. This observation suggests that chronic administration of nicotine might impair brain mechanisms important for learning and memory formation. The area of the brain involved in these processes is known as the hippocampus. The subgranular zone of the dentate gyrus within the hippocampal formation is one of the few areas of the brain in which neural cell proliferation continues to occur in adulthood. This cellular process can be enhanced by a variety of treatments including an enriched environment, physical activity and antidepressant drugs. Recent research work in our laboratory has shown that chronic administration of nicotine dose-dependently decreases cell proliferation and increases cell-death in the rat hippocampus. Similar doses of nicotine have also been found to inhibit the acquisition of a spatial memory task. These results suggest that chronic nicotine administration can have adverse consequences on the adult brain, raising an additional concern about the consequences of tobacco smoking.

O-033

Development of personalized medication strategies for the treatment of neuroblastoma

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Neuroblastoma is the most common solid tumour of childhood and is the third most common cancer in children under five years of age. Initial treatment for children afflicted with advanced neuroblastoma usually involves chemotherapy. However, the main problems associated with chemotherapeutic agents are the dose-dependent adverse effects occurring mainly through interactions with non-tumour related cells, and the risk of the emergence of drug resistant tumours. Recent advances in molecular biological analysis and genetics research have opened new frontiers in the quest for the development of 'tailor-made' drugs, according to the individual patient's metabolic and genetic make-up and is part of the emerging translational medicine 'bench to bedside' approach to drug development.

Aim: To develop hypothesis led derivatives of chemotherapeutic agents currently used in neuroblastoma chemotherapy and possessing enhanced specificity for target tumour genes, thus identifying risk categories and reducing adverse effects in the patient whilst increasing the effective dosage.

Methods: qPCR and micro-array data and analysis to determine genes dysregulated due to the chemotherapeutic agents are used for studying the specificity of drug - target gene interactions. Evolutionary molecular modeling approaches will consequently be applied for modifying the drugs in order to enhance target gene specificity.

Results: At the time of writing of this abstract, preliminary analyses relating to micro-array and qPCR data are being finalized.

Conclusions: This molecular translational medicine approach to drug development, in the context of neuroblastoma, will produce drugs with improved efficacy and reduced ill effects for the neuroblastoma patient.

O-034

Incidence and survival of childhood CNS tumours in Malta - 1995 to 2004

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Introduction: CNS tumours comprise approximately 1/5 of all childhood cancers and pose particular management challenges. This study is a retrospective descriptive study of all CNS tumours in Maltese children aged up to 14 years from Jan 1990 to Dec 2004.

Methods: Cases were highlighted from the Malta Cancer Registry as well as from case records of the Paediatric Oncology Unit at St Luke's Hospital. The main aims of this study were to look at the incidence and survival of children with brain tumours in Malta, and to compare these with similar data from other European countries.

Results: There were 40 cases during the period encompassing 1990 to 2004. This translates into an incidence rate of 34.1 per million child years. Boys slightly outnumbered girls. Histology was available for 33 cases, and the most common histological type was astrocytoma followed by medulloblastoma / PNET. The main management modalities were surgery, chemotherapy and radiotherapy. The overall survival probabilities using Kaplan-Meier survival estimate, are 64% and 57 % at 5 and 8 years after diagnosis respectively.

Discussion: This is the first study looking at paediatric CNS tumours in Malta. The main points which emerge from this study are (a) the overall incidence rate compares favourably with that of many European countries, (b) management is compatible with state of the art knowledge and guidelines for management of these problems and (c) the overall survival rate compares favourably with that of other European countries.

O-035

A descriptive study of childhood leukaemia in Maltese children from 1980 to 2000

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Aims: This presentation is a retrospective descriptive study of childhood leukaemia in Maltese children from 1991 to 2000 and aims to describe the incidence and survival of Maltese leukaemic children during this period. The presentation will also compare the incidence and survival of Maltese leukaemic children during the study period with that of a previous study from 1981 to 1990.

Methods: The incidence of leukaemia in Maltese children from the ages of <1 to 14 years will be worked out using the data obtained from the Malta Cancer Registry. The data on survival and treatment will be obtained from the patients' hospital records. Kaplan-Meier survival curves will be used.

O-036

Recurrent and malignant pleomorphic adenomas in major salivary glands

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The pleomorphic adenoma is the most common salivary gland tumour and accounts for about 60% of all salivary gland neoplasms. The clinical management of these benign tumours can be complicated by their tendency to recur. A 10-year recurrence rate of roughly 7% has been reported for parotid pleomorphic adenomas. Furthermore malignant transformation has been reported in 1.9 - 23.3% of all pleomorphic adenomas. This study was carried out in order to establish the recurrence rate and the rate of malignant transformation in major salivary gland pleomorphic adenomas in Malta as well as to establish the incidence of carcinosarcomas and metastasising pleomorphic adenomas. The histopathology archives from 1970 to 2005 at St Luke's Hospital, Malta were searched for all cases

reported as pleomorphic adenomas, carcinoma ex pleomorphic adenomas and metastasising pleomorphic adenomas. The patients' histories were reviewed in order to ascertain whether the tumour was a first presentation or a recurrence. Pathology slides were reviewed when required. The data obtained was then compared to that reported in the literature. The incidence of major salivary gland malignancy was also compared to that of intra oral minor salivary glands

O-037

Differences in the *in vitro* bioactivity of crude Maltese honeybee propolis collected at different sites across the Maltese islands

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Background: Propolis is a complex honeybee product deposited in the beehives, where it is thought to protect the hive and its occupants from microbial infection. Propolis has several reported medical applications in view of its antiseptic, antimycotic, antibacterial, antiviral, antiprotozoal and anti-inflammatory properties.

Aims: The purpose of this study was to analyse the chemical constituents of the methanol extract of Maltese honeybee propolis, collected from different locations in Malta, and to investigate the *in vitro* cytotoxic activity of these extracts against human cancer cell lines.

Methods: Crude Maltese honeybee propolis was first extracted in water and then in methanol. The final methanol residue was dissolved in dimethyl sulphoxide (DMSO) and used for cytotoxicity testing on human cancer cell lines using standard MTT (3-[4,5-Dimethylthiazol-2-yl]-2,5-diphenyl-tetrazolium bromide) assays. Propolis contents were also analysed by GC-MS

Results: Results obtained show that the propolis collected from different areas in Malta has widely varying cytotoxic activity on cancer cells *in vitro*; the mode of cell death observed is morphologically consistent with apoptosis.

Conclusion: Propolis collected from different sites showed variations in the cytotoxic effects reflecting the differences in the species of plants on which the bees had foraged, including seasonal variation of flora.

O-038

Dynamic contrast enhanced MRI (DCE-MRI) predicts radiation response in cervical cancer

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Aim: To assess the predictive role of DCE-MRI parameters in the regression of cervical cancer

Method: Patients with locally advanced cervix cancer (stages Ib2-IVa) undergoing primary chemoradiotherapy were recruited. Each patient underwent DCE-MRI at three time points: prior to start of treatment, after 2 weeks of external beam radiotherapy (EBRT) and at the end of EBRT. Each examination included pre-contrast T2 sequences for optimal tumour localisation and dynamic T1 scans. The parameters evaluated for predictive purposes consisted of the relative signal intensity (rSI), the rate of contrast uptake, the area under the curve at 90seconds (AUC90), the volume transfer constant (K_{trans}) and rate transfer constant (k_{ep}) between the intravascular and extracellular-extravascular compartments. The correlation between the DCE-MRI parameters and the tumour regression was investigated using Spearman's correlation coefficient (r) with 2-tailed significance testing.

Results: 10 patients were recruited in the study. The initial tumour volumes ranged from 3.8cm³ to 197.3cm³ (median 37cm³, s.d. 55.7cm³). The percentage volume regression at the end of EBRT ranged 100% to 40.9% (median 76.1%, s.d. 19.1%). The percentage volume regression showed a significant correlation with the pre-treatment DCE-MRI parameters: rSI (r= 0.94; p<0.001), rate of uptake (r=0.78; p=0.008), AUC90 (r=0.9; p<0.001), Ktrans (r=0.97; p<0.001) and kep (r=0.77; p=0.009). There was no correlation between the tumour volume and the kinetic parameters or the percentage tumour regression

Conclusions: Pre-treatment DCE-MRI parameters are predictive of tumour regression and provide additional biological information which reflects the perfusion of the tumour microenvironment and is independent of tumour volume.

O-039

Novel methods for symptom control in palliative care in Malta

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Aim: The introduction over the last year of several novel methods of symptom control by the author involving both invasive and non-invasive methods in terminally ill patients at the Palliative Care Clinic at Boffa Hospital is explained.

Methods: The data in this report was collected retrospectively from Procedure Lists and analysis of follow-up in patients' case notes. Patient confidentiality was maintained at all times. The invasive methods reviewed include the following:

- long term epidural and intrathecal catheterisation
- coeliac block for upper GIT malignancies
- multilevel sympathetic ablation for lower GIT
- hypogastric block for pelvic malignancies
- chemical ablation of solitary metastasis

Non-invasive methods include pain management using new indications for old drugs (e.g. ketamine for intractable pain relief) that have been introduced.

Results: The use, mechanism of action and results of these methods in palliative control of pain in patients suffering from cancer is discussed.

Conclusion: The role of the multidisciplinary team with different specialities, including oncologists, palliative care physicians, anaesthetists, pharmacists, physiotherapists, nurses and members of other caring professions, in the management in both pre- and post-procedure phases is highlighted. The role of radiofrequency and chemical neuroablation as well as neurolytic and non-neurolytic nerve blocks is discussed.

O-040 – O-044

Seminar on pharmacist intervention

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In order to appreciate the impact of changes occurring in pharmacy, it is important to understand the societal and economic forces driving the rapidly changing healthcare system. It is essential also to evaluate the effect of these changes on other health care providers and health care entities such as hospitals, clinics and nursing homes.

Health care is moving towards becoming an integrated delivery system where health professionals practice within a network, sharing patient information and transferring patients between one sector and another as the level of care they require changes. As the continuum of care becomes more and more integrated, pharmacists are required to support patients in managing their conditions and to optimise drug therapy. Within this scenario pharmacists help the patient navigate around the various sectors and provide a focal point for patients to discuss drug therapy and to achieve patient concordance with the increasingly complex health systems. Pharmacists also provide patient support in accessing medicines and this includes pharmacist interventions as supplementary or independent prescribers. In order for these interventions

to be of benefit to the patient it is essential that they are carried out as part of an agreed pharmaceutical care plan.

The value of integrated health care delivery lies in achieving rational, safe and cost-effective care. Within the integrated care scenario emphasis on the totality of costs also emerges. Reviews look into population-based outcomes, individual prescription drug costs, cost of drugs and care and pricing of medicines, the whole area of pharmacoeconomics.

Practice experiences in pharmacy education are ideal for prospective pharmacists to experience contemporary procedures as well as to develop the skills required for ongoing career development. It is essential that pharmacy education and research converge towards contemporary evolutions in the profession. By integrating the basic sciences with the professional aspects of pharmacy and through appropriate research programmes, students are encouraged to develop competencies that the profession will require in future decades to continue to respond to changes in health care delivery systems.

O-045

Occurrence of post-tonsillectomy haemorrhage in Malta: do pre/peri/post-operative antibiotics influence outcome?

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Introduction: Haemorrhage is the most common complication after tonsillectomy. It requires re-admission of the patient to hospital, most commonly for observation, but active intervention is sometimes needed.

Method: The notes of 1464 patients who underwent tonsillectomy with or without adenoidectomy over a 3½ year period were analysed retrospectively to determine the incidence of post-tonsillectomy haemorrhage and its relationship to pre/peri/post-op antibiotic cover.

Results: Secondary haemorrhage occurred in 41 (2.8%) patients. The majority of these, 29 (70.7%) required no active treatment, whilst 12 (29.2%) required further surgery to achieve adequate haemostasis. In 2 cases (4.9%), bleeding was severe and the patient required a blood transfusion. Thirty eight (92.6%) patients who suffered secondary haemorrhage had received pre/peri/post-op antibiotics. Only 3 (7.3%) had not received any antibiotic cover.

Conclusion: Antibiotic administration pre/peri/post-tonsillectomy does not influence the incidence of secondary haemorrhage.

O-046

Conventional or laser stapedotomy – a comparison of functional results and outcomes

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Introduction: Surgery for the conductive hearing loss of otosclerosis was the result of the pioneering work of Shea and his collaborators in the sixties. The use of the laser in stapes surgery was first proposed by Perkins, and quickly taken up by many other surgeons. Laser assisted stapes surgery allows for minimal manipulation of anatomical structures, with precisely delivered forces, the principle advantage of this being reduced morbidity and improved functional results.

Aims: In this retrospective study the authors attempt to identify advantages and benefits of Laser assisted stapedotomy as opposed to conventional stapedotomy.

Methods: The functional results and clinical outcomes for two groups of selected stapedotomy patients, one group after conventional, and the other after laser assisted stapedotomy, are compared. The technical advantages and drawbacks for the two techniques are also discussed.

Results: Patients after laser assisted stapedotomy were more comfortable, and suffered from less vertigo postoperatively, than those undergoing conventional stapedotomy. Conservation of the 8KHz frequency was almost always obtained for the laser assisted procedure, not so for the conventional procedure. There was no difference in obtaining closure of the

air-bone gap for the two groups. The laser assisted procedure was, on the other hand, technically more difficult than the conventional approach. The actual expense incurred in obtaining a laser unit was considered another drawback.

Conclusions: Although laser assisted stapedotomy is considerably less cost-effective and more difficult than the conventional procedure, the significantly superior functional results and clinical outcome outweigh the disadvantages.

O-047

An assessment of the validity of the current practice of antibiotic prophylaxis in uncomplicated nasal surgery

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Introduction: Despite the large number of studies on the usefulness of antibiotic prophylaxis in surgery, there is little or no guidance on how to implement new codes of practice, or how to audit current guidelines.

Aims: In this study the authors analyse clinical outcomes in order to assess the validity of antibiotic prophylaxis in uncomplicated nasal surgery.

Methods: Three groups of selected patients were studied. One group was treated with a single preoperative intravenous antibiotic dose, a second group was postoperatively given a standard five day course of antibiotic, and a third group was given no antibiotics at all. Incidence of complications, average recovery times and drug adverse reactions was compared for the three groups.

Results: There was no significant difference in incidence of complications, in average recovery times or in the incidence of drug adverse effects, between the three groups.

Conclusions: In the absence of any evidence of clinical benefit obtained from the use of antibiotic prophylaxis in uncomplicated nasal surgery, it is not felt that the application of this practice is justified

O-048

A comparison of the effects of paracetamol and a corticosteroid against a non-steroidal anti-inflammatory drug on the sequelae following the surgical removal of mandibular third molars

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Aim: In this double-blind randomised controlled clinical trial, a combination of oral paracetamol 1g and oral dexamethasone 1mg four times daily, was evaluated against oral diclofenac sodium 50mg three times daily, for the control of postoperative pain, swelling and trismus following the surgical removal of mandibular third molars under local anaesthesia. The purpose for such a study was to find an alternative drug regimen for the control of the common postoperative sequelae of oral surgery, especially for those patients in whom the usual drug regimens (e.g. NSAIDs) are contraindicated.

Method: Postoperative pain was recorded 8-hourly by the patients using a visual analogue scale pain chart for 7 days, while facial swelling and trismus were assessed by the investigator on the second, fourth and seventh postoperative days. Facial swelling was determined using a measuring tape, while trismus was evaluated by measuring maximal interincisal opening.

Results and conclusions: ANOVA for repeated measures analysis indicated that the patients in the paracetamol and dexamethasone group experienced an overall mean reduction of 36% in pain ($p < 0.05$), of 76% in facial swelling ($p < 0.001$) and of 56% in trismus ($p < 0.001$) as compared to the patients in the diclofenac sodium control group. Levene's test for equality of variances showed that the inter-patient variation with respect to pain, swelling and trismus in the paracetamol and dexamethasone group, was also significantly less than that in the diclofenac sodium group ($p < 0.05$).

Pearson bivariate correlation tests show that the reduction in swelling and trismus ($p < 0.05$) are significantly correlated in both groups. None of the patients reported any adverse drug reactions.

O-049

Acute management of dentoalveolar trauma in children

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Introduction: Cases of orofacial trauma presenting to the general dental practitioner, general medical practitioner and doctors working in casualty are a relatively common event. These clinicians should be well versed in the immediate management of trauma to both primary and permanent teeth. Dental injuries usually involve a combination of injuries to a tooth and its supporting structures with certain types of injuries requiring more immediate treatment than others. Prompt, accurate diagnosis and appropriate emergency treatment will greatly improve the prognosis for many dentoalveolar injuries.

Materials and Method: Data on 159 cases of trauma to children aged between 5 and 23 years of age (250 traumatised permanent teeth) was collected over a period of 5 years (Aug 2001 – Aug 2006). Treatment was carried out either at the School Dental Clinic, St Lukes Hospital Dental Department, University Dental Clinic or a private dental clinic. These patients will be recalled to assess the outcome of treatment

Results: 4 % attended casualty Department as a first line emergency assessment prior to being referred on. Males accounted for 63 % of the children in the sample. Dental injuries that presented most frequently in permanent dentition were uncomplicated crown fractures of enamel and dentine (34%). 72% of the traumatised permanent teeth suffered a form of luxation injury and 3% were cases of avulsion (complete loss of tooth from socket).

Conclusion: A clinical audit of the management of trauma anterior teeth is required to evaluate the efficacy of immediate emergency treatment.

O-050

Postgraduate training in surgery

D Rainsbury

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Mr Dick Rainsbury is the Past President of the Section of Surgery of The Royal Society of Medicine, Foundation Chairman of the Breast/Plastic Surgery Interface Group, Foundation Breast Tutor The Royal College of Surgeons of England and Chairman of the National Breast Reconstruction Audit Steering Group. He has a particular interest in breast surgery, based in Winchester, UK, and is the Director of the Raven Department of Education of the Royal College of Surgeons of England.

He has a wide experience in postgraduate instruction and will discuss the recent, radical changes in postgraduate surgical training in the UK, including the implementation of the new curriculum and its impact on foreign trainees and on breast surgery.

O-051

Audit on the ability of house officers to predict the results of pre-operative blood investigations in patients undergoing elective surgical procedures

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Introduction: It is usual practice for house officers within the surgical department at our hospital to request routine pre-operative blood investigations in all patients undergoing elective surgery regardless of their medical fitness or ASA scoring. This audit assessed whether house officers were able to predict the outcome of blood investigations taken pre-operatively, and whether this prediction influenced the outcome of the

surgery. It also assessed whether UK guidelines on the indications of pre-operative blood investigations could be safely adopted in Malta.

Methods: House officers within our firm were asked to request appropriate blood investigations only in patients who had any obvious clinical indication or were ASA grade more than two. A full blood count was taken in women of childbearing age and a haemoglucotest was performed in the admitting ward on all patients. However, if the UK guidelines suggested blood investigations, these were also requested. House officers were also asked to indicate the predicted result of these investigations.

Results: 429 patients were operated by our surgical firm over one year. Data was collected for 266 (62%) patients, on whom 498 blood tests were requested. 454 blood results were correctly predicted as normal. 11 test results were predicted to be abnormal but were in fact normal. 18 blood tests were correctly predicted as abnormal, and 15 blood tests had incorrectly predicted abnormal results. No complications arose, and no surgical procedure was cancelled as a direct result of blood investigations that were not requested.

Conclusions: House officers are able to correctly predict the result of pre-operative blood investigations in the vast majority of cases. This can result in significant cost saving if pre-operative blood tests are only requested based on good clinical judgment.

O-052

Operative cholangiography in the laparoscopic era - back to the future

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Aim: Operative cholangiography, once a routine part of open cholecystectomy, appears to have declined in the laparoscopic era, with increasing numbers of patients receiving MRCP/ERCP. We aim to evaluate our conventional practice of routine operative cholangiography at laparoscopic cholecystectomy and aim to demonstrate its benefits.

Methods: Patients were recruited prospectively and a total of 1688 procedures were analysed. The median age was 51.5 years (IQR = 25) and the male: female ratio was 1:4. Pre-operatively patients were divided into two groups for further analysis. Group 1 (n=530, 31.4% of total) had one or more risk factors for choledocholithiasis (jaundice, pancreatitis, altered liver function tests and/or ultrasound evidence. Group 2 (n=1158, 68.6%) had no such pre-operative risk.

Results: In Group 1, duct stones were confirmed at cholangiography in 247 cases (47% yield). In Group 2, 73 patients (6.3% yield) were actually found to have duct stones. A total of 323 common bile duct explorations were performed - 173 (53%) had laparoscopic trans-cystic clearance, 150 (43%) had laparoscopic choledochotomy, whereas 15 patients (4%) were open conversions. We further subdivided Group 2 into four age groups and performed sub-group analysis. With increasing age, we found that operative cholangiography has a statistically significant higher stone yield ($p > 0.001$) in patients not previously suspected to have duct stones: 2.2% in patients aged 29 or less (n=131), 4.4% in those aged 30 to 49 (n=461), 6.9% in those aged 50 to 69 (n=475) and 24% in patients aged 70 or more (n=91).

Conclusion: Routine operative cholangiography facilitates single-session management of bile duct stones without need for pre- or post-operative ERCP. Moreover, it detects unsuspected choledocholithiasis in a significant percentage of low risk subjects. In this group of patients there is a significant incremental stone yield with advancing age.

O-053

The influence of peritoneal lavage on bacterial concentration in patients undergoing appendicectomy

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Background: The value of intraoperative peritoneal lavage in the treatment of peritonitis is controversial. Surgeons that are in favour argue that this is beneficial others argue that this is detrimental.

Aim: To measure bacterial concentration before and after peritoneal lavage in patients undergoing emergency appendicectomy.

Methodology: We recruited 30 patients with a possible diagnosis of appendicitis. Patients were randomly allocated either in the lavage group or in the control group. Once the peritoneum was opened alginate swabs were taken from the RUQ, RIF and pelvis. Patients in the lavage group underwent peritoneal lavage with 500 cc of saline at the end of the operation. This was then aspirated and swabs retaken from the same sites. Patients in the control group did not undergo peritoneal lavage but swabs were be retaken from the same sites all the same.

Results: The results showed: 1) a statistical significant reduction in bacterial concentration in patients undergoing peritoneal lavage; 2)lavage did not predispose to bacterial dissemination.

Conclusion: Peritoneal lavage is beneficial as it dilutes the bacterial population and removes the majority of organisms.

O-054

Empyema thoracis in children with community acquired chest infections

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Introduction: A retrospective study of 22 consecutive cases of children who presented to St Luke's Hospital between January 2000 and December 2005, with a community acquired chest infection which required surgery, was conducted. The presenting symptoms, clinical course and outcomes were monitored and analyzed. Baseline observations and patterns of empyema thoracis in the local community were recorded.

Methods and Patients: 22 children were included in the study. The age range was between 3 months and 12 and a half years. The average age was 3 years 8 months. 5 were girls (23%) and 17 were boys (77%).

Results: All the children in the study presented with fever (n=22). Most (21 of 22) also had a cough on presentation. The cough was equally divided between dry (n=11) and productive (n=10). Other symptoms on presentation were shortness of breath (n=6), vomiting (n=12), lethargy (n=6), irritability (n=5), epigastric pain (n=10) and tachypnoea (n=9).

Conclusions: 1. Ultrasound reporting in empyema thoracis in children by paediatric radiologists will decrease the need for CT scanning. 2. Introduction of video assisted thoracoscopic surgery may result in a shorter hospital stay for selected patients with less trauma to the child. 3. The introduction of guidelines for the treatment of empyema thoracis in children with a community acquired chest infection is recommended.

O-055

Validation of a Maltese translation of the IPSS score (IPSS-Mlt.)

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Objectives: To test the psychometric properties of a Maltese version of the IPSS score and compare the outcome with the psychometric properties of the original American score.

Methods: A prospective observational study was conducted at the Urology Outpatient's Department., St Luke's Hospital in 50 patients with Benign Prostatic Hyperplasia (BPH) (age >50 years) and 60 control subjects (age 18 to 49 years) in order to test the validity and reliability of the IPSS-Mlt. Eligible subjects were given the translated version of the Maltese IPSS at the outpatients clinic and then where asked to submit another questionnaire one week after the initial one.

Results: Construct Validity was assessed by correlating the IPSS-Mlt. scores with the QOL question in the IPSS and another global question on bother with Urinary symptoms. Discriminatory Power was assessed by calculating the area under the receiver operating curve (ROC). Reliability was evaluated using the test-retest method and checking for Internal Consistency reliability was done using Cronbach's alpha coefficient. Sensitivity to change was

calculated as the effect size in pre-TURP vs. post-TURP scores in a subset of patients undergoing TURP.

Discussion: The validation of a Maltese version of the IPSS is a necessary exercise in the standardisation of care of patients with LUTS.

O-056

The impact of artificial reproductive technology on neonatal mortality in the Maltese islands

P Soler, D Soler

Background: Epidemiological studies have clearly demonstrated a positive correlation between multiple pregnancy and an increased neonatal morbidity and mortality. Studies have also shown that an increase in the number of multiple births closely follows an increase in the number of couples being treated for infertility.

Aim: To determine the effects of high order pregnancy on the survival of babies (singletons, twins and higher-order) admitted to the SCBU in the period 1989-2005.

Methods: Retrospective data collection from the SCBU Neonatal Admission Register: gestation, birth weight, cause of death, pregnancy order, fertility treatment.

Results: There is a rising trend in the number of twins and higher-order pregnancies with the increasing availability of assisted reproductive technology; there is a six to ten fold increase in the death rate of babies resulting from high-order pregnancy. The costing of "futile" intensive care delivery is estimated.

Conclusion: The findings are in agreement with studies conducted in Europe and USA; the implications on NIC services at a National level are discussed.

O-057

A review of central and peripheral vascular access lines in Maltese neonates

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Aim: To categorise the use and problems encountered with vascular access lines in neonates admitted to the local neonatal unit.

Method: Prospective data for all umbilical, peripheral arterial and venous lines from 1st January 2005 to 31st June 2006 were captured into a custom database application. This included birthweight, gestation, diagnosis, indication, catheter lifespan, reason for removal and complications.

Results: A total of 264 lines were inserted in 172 neonates. The gestational age ranged from 23 to 40 weeks (median 34). 129 umbilical arterial catheters (UACs), 39 umbilical venous catheters (UVCs), 28 femoral venous lines, 41 radial arterial lines and 11 peripherally inserted central catheters (PICC) were performed. The median lifespans were 5 days (range 0-35), 4 days, (range 0-14), 12 days (range 2-37), 5 days (range 1-24) and 5 days (range 2-10) respectively.

12.4% of UACs were removed because of suspected or proven sepsis, 4.7% because of suspected onset of necrotizing enterocolitis, 3.9% because of vascular changes to the lower limbs, 3.4% of UACs were dislodged. 15.4% of UVCs were removed because of sampling difficulty, 36% of femoral venous lines were removed for suspected or proven sepsis, 27% of radial arterial lines were dislodged, while 36% of PICC were blocked. No neonatal deaths were directly attributable to the presence of a central line.

Conclusions: The median durations and complications are compared with published series.

O-058

A series of cases of spontaneously aborted fetuses

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Introduction: Spontaneously aborted fetuses frequently have developmental anomalies. Chromosomal abnormalities have been reported in 30-50% of cases.

Aims: This paper presents the results of a detailed anatomical examination of a series of cases of spontaneously aborted fetuses, together with their cytogenetic testing.

Methods: Foetuses were obtained following informed parental consent for any post mortem tests necessary for the purpose of establishing the cause of intra-uterine death.

The maternal histories were used to obtain information on the ultrasonography carried out during the mother's pregnancy, as well as any other findings relevant to establishing the cause of foetal death. The procedures for examining the external features and for dissection of small foetuses are discussed. X-ray imaging was used to view the skeletal system of foetuses, as a diagnostic investigation. Cytogenetic testing was used to diagnose cytogenetic abnormalities.

Results and conclusions: The abnormalities found included limb abnormalities, facial abnormalities, lung abnormalities, omphalocele and encephalocele. Cytogenetic testing used in other cases revealed the occurrence of Turner Syndrome, trisomy 18, and a case of triploidy.

O-059

Screening cranial ultrasound examinations in sick preterm and term neonates - the spectrum of findings

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Aims: To review the spectrum of cranial ultrasound findings and to determine whether the proportion of those within high to low prognostic risk categories is consistent with reports from other units.

Methods: A retrospective analysis of all cranial ultrasound scans carried out within our unit from October 1999 to October 2001 was performed. Scanned neonates were divided into a Preterm group (< 36weeks gestation) and a Term Group (>36 weeks gestation). Scans were categorized into normal or abnormal based on ultrasonographic standards. Distribution of grey to white matter lesions was also noted within the groups. Findings were then categorized into prognostic risk groups.

Results: Forty percent (269/674) of babies admitted during the study period were scanned. Most were preterm 167 (58%) while 112 (42%) were term. Most abnormal scans were seen in babies born before 28 weeks gestation. Milder grades of intraventricular haemorrhage (GMH/IVH2) were present in 4.5% of preterm and none in term babies. Cystic periventricular leucomalacia was an uncommon finding in all gestations. Congenital brain abnormalities were the commonest abnormalities in term babies. Low risk scans were found in 86-95% of preterms born between 28-36 weeks while only 43% were low risk type in those born before 28 weeks. White matter lesions were commoner in preterm group.

Conclusion: Findings in this group are comparable with that published from other neonatal units. Ultrasound identification of babies with high risk scans remains a valid tool which helps the clinician to identify those requiring close follow up because of associated increased incidence of neurodevelopmental problems.

O-060

National birth weight for gestational age centile charts and their inferences

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Aim: The development of national weight for gestational age centile charts with pathological subgroup analysis and comparison to other populations.

Method: Anonymised birth weight for gestational age data with relevant maternal and neonatal observations over the period 1995-2005 were obtained from national statistics. The formats were standardized and imported into an SQL database that enabled filtration for single live births and grouping by sex. The data was scrutinized manually for obvious keying errors. The best estimate of gestational age from last menstrual period (LMP) and expected date of delivery (EDD) was selected using established

guidelines. Erroneous outliers were detected by comparing the gestational age with the binned median and standard deviation. A Box-Cox transform was used to fit an LMS regression and generate separate centile charts within the R package. ICD 9 coding of the original data enabled selection of maternal and infant pathological subgroups. AutoRegressive Integrated Moving Average (ARIMA) was used to check for seasonal variation in birth weight.

Results: Processing of the initially filtered 22,396 males and 20,936 females revealed the expected paucity of births below 35 weeks but still enabled the fitting of charts starting at 24 weeks. Infants of diabetic mothers, those with pregnancy induced hypertension, plus other infant pathology groups were compared to the fitted model.

Conclusion: Centile charts for Maltese neonates are presented. Median Maltese term birth weight was just under 100g of standard Caucasian models. Possible reasons for this are proposed.

O-061

The National Neonatal Screening Programme: is it time for a change?

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Background and Aims: Currently in Malta, newborn infants are routinely screened for thalassaemia and congenital hypothyroidism using umbilical cord blood samples. However, this method may be associated with false negative results, and other 'screenable' conditions may be sufficiently prevalent to justify their inclusion in the national programme. This national review study assessed the various options with a remit to make firm recommendations to government.

Methods: The review committee assessed the position in detail over a three year period, consulting widely with experts both locally and overseas. Recommendations for disease inclusion into the screening programme included the following: i. Disease fulfilled established criteria for newborn screening; ii. Local incidence significant to warrant inclusion; iii. Impact of disease and delay in treatment resulting in significant morbidity; iv. Issues relating to availability of screening test, v. Ease of sampling and impact on collection; v. Monetary implications.

Results: The report concluded that at least two additional disorders, namely atypical phenylketonuria due to DHPR deficiency and cystic fibrosis fulfill criteria for inclusion; others such as dopamine responsive dystonia due to sepiapterin reductase deficiency and classical phenylketonuria due to Phe hydroxylase deficiency are likely to fulfill criteria but prevailing evidence is, as yet, insufficient to make a firm case for their inclusion.

Conclusion: There is clear evidence for a review of the current screening programme. However, all proposals will necessitate significant changes in additional laboratory assays and personnel requirements (particularly with the adoption of a 'day 5' Guthrie-type collection rather than umbilical sampling). All entail a significant monetary increase from circa Lm15,000pa to Lm64-98,000pa depending on which programme/assays are adopted.

O-062

Guideline for suspected lower limb deep vein thrombosis

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Aim: The aim of this audit is the evaluation of the guideline for the management of suspected lower limb deep vein thrombosis in the casualty setting.

Method: A total number of 137 cases, who presented at the Casualty Department over a period of three months, were included in the study. Patients were divided into low risk and moderate-to-high risk categories according validated Well's scoring criteria including clinical signs and medical history and the appropriate investigations were performed according to guideline. Data was hence collected and the patients were followed up to monitor the outcome.

Results: Of the 137 patients included in the study 106 patients were discharged directly from the casualty department. 31 patients required admission. Of these, 22 had a confirmed DVT.

Conclusion: A considerable number of admissions were avoided. The guideline was modified in order to accommodate those patients who according to guideline necessitated follow-up Doppler studies. In view of the logistic problems encountered in organising the latter, a venogram is now being advised instead.

O-063

Audit on the treatment of patients newly admitted to the medical wards from casualty with a diagnosis of deep vein thrombosis

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Background: Venous thromboembolism (DVT/PE) is a common medical condition with an excellent prognosis once appropriate treatment is started. Inadequate treatment on the other hand is associated with a high mortality. Guidelines for the treatment of DVT have recently been published in the New England Journal of Medicine.

Aim of audit: To assess if DVT management at St Luke's Hospital follows these guidelines and identify any pitfalls in management.

Methodology: All patients admitted with a suspected diagnosis of DVT/PE during the year 2004 were identified. From these 400 patients, 100 were randomly chosen. The relevant data was inserted on a prepared data sheet from the patients' medical records.

Results: Out of the 100 patients selected, only 41 were diagnosed with DVT/PE. In more than half the patients the diagnostic investigation of choice was a venogram. The most common risk factors for DVT/PE were immobilization, cancer and a previous DVT. Regarding management flaws, in a significant number of patients (12) a heparin loading dose was not given. In 12 patients the target APTT ratio was not reached within 2 days of starting anticoagulation. In 12 patients, heparin was not given for the minimum duration of 5 days. An overlap of heparin and warfarin for 2 days after reaching the target INR was not done in the majority (25) of patients. 8 patients from the study population passed away, 2 of these dying from PE. The other 6 patients died from an underlying malignancy.

O-064

Coombs-positive autoimmune haemolytic anaemia in ulcerative colitis

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Background: The incidence of immunological disorders is greater in patients with inflammatory bowel disease than among the general population. The association of ulcerative colitis and autoimmune haemolytic anaemia was first described in the early 1950's but no more than fifty cases have been documented. Detailed description of the pathogenic mechanisms involved is lacking.

Case Report: A 46-year old lady with ulcerative colitis presented with an anaemia of 3 months. The patient had undergone a restorative proctocolectomy and ileal pouch reservoir in 1990. She had lately been suffering from pouchitis and had been prescribed mesalazine suppositories. These were discontinued when the patient was found to have a haemolytic anaemia. However, two months after withdrawing mesalazine, the patient's haemoglobin continued to drop to 6.2g/dL whilst the reticulocyte count increased further. There was no exacerbation of colitis during this time.

Direct Coomb's test was positive. The patient was treated with prednisolone 60mg daily and within ten days of starting steroids, the haemoglobin had increased to 10.1g/dL. Steroids were gradually tailed down over a three month period and the patient's haemoglobin level has remained stable.

Conclusion: A review of cases of Coomb's positive haemolytic anaemia in association with ulcerative colitis shows that there is a marked preponderance of female patients (F:M = 7:1), the anaemia appearing at a mean of 10 years after the onset of the colitis, independent of the age of the patient. Although corticosteroids and/or immunosuppressive therapy are often successful, some patients require splenectomy and occasionally colectomy.

O-065

Is the degree of stereo acuity affected by correction of the refractive error?

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Purpose: The aim of this study was to consider changes in the level of stereo acuity with different levels of corrected and uncorrected hypermetropia and myopia.

Method: The study was a prospective study with a cross-sectional design. 55 candidates were selected from a database of ametropic subjects. 42 subjects accepted the invitation; 5 were eliminated, 18 were hypermetropic, while 19 were myopic. The level of stereo acuity was measured with and without correction, using the Frisby Plates mounted on a specifically designed bench.

Results: Using regression analysis, in both the hypermetropic and myopic groups, the threshold of stereo acuity was not significantly influenced by the degree of refractive error when measured with the appropriate correction (Hypermetropic group: $p > 0.05$; Myopic group: $p > 0.05$). However when the threshold of the level of stereo acuity was measured in the same subjects without the appropriate correction, then these levels were significantly reduced (Hypermetropic group: $p < 0.001$; Myopic group: $p < 0.0001$). The mean threshold levels of stereo acuity in the hypermetropic group and the myopic group measured 33.5 and 22.5 seconds of arc respectively when measured with correction. Without the correction the mean threshold was significantly reduced to 76.4 and 75 seconds of arc respectively. Using Paired Sample t-test to compare means, it was found that the difference in means with and without correction was highly significant (Hypermetropic group: $p < 0.05$ and Myopic group: $p < 0.05$).

Conclusions: In this study corrected ametropic subjects had a normal threshold level of stereo acuity. All subjects when uncorrected had significantly reduced stereo acuity. Finally subjects with myopia had a better threshold level of stereo acuity than those with hypermetropia.

O-066

A retrospective study on visual impairment in childhood in Malta

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Aims: The purpose of the study was to perform a retrospective descriptive study of children with visual impairment and to look at the epidemiological characteristics and the services available for rehabilitation.

Method: The Orthoptic files of 800 children registered at the Orthoptic department between January 1997 and December 2005 were examined and children who satisfied the criteria for low vision, blindness or any other significant visual defect were selected for data analysis.

Results: A total of 66 children, 38 males and 28 females, were found to have some form of visual disability. 20 were cortically blind, 19 had severe visual impairment, 5 had moderate visual impairment and 18 had low vision. The visual acuity of 4 children could not be measured accurately for classification. While 20 children had no significant refractive error, 17 children had variable degrees of myopia and 9 had a degree of hypermetropia. 14 children were found to have another ocular pathology and 40 children had two or more medical pathologies. Treatments ranged from spectacle correction and

occlusion therapy to surgical intervention. One case had chemotherapy and radiotherapy. Two important observations made were (a) very few patients had perimetry and visual evoked potentials studies performed, and that (b) Only very few children with low vision were using low vision aids.

Conclusions: We recommend that services for visual evoked potentials should be made more available, thus providing more information regarding the visual function. There should also be more services for low-vision aids that seem to be so lacking in use in our cohort of visually impaired children.

O-067

Lung cancer in Malta: from presentation to surgery

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Aim: This paper looks into the state of lung cancer resection in Malta, specifically the delay in time from presentation to operation and the operability rate. The local situation is then compared to the Calman report on lung cancer ("Improving Outcomes in Lung Cancer" NHS Executive UK, 1998 p11-199).

Methods: A retrospective collection of data from theatre operation books was used to collect the total number of curative or palliative surgical procedures for lung cancer. These included wedge excisions, lobectomies and pneumonectomies. Data for the two participating consultants was used to identify patients for which data related to timing from presentation to operation was sought. Retrospective analysis of case notes was then performed on this subset of patients.

Results: There were 14 cases of resection of lung cancer in 2005, of which 9 were used to analyse waiting times. Time from presentation of symptoms to first tentative diagnosis was 70 days, from diagnosis to referral for surgery was 65 days, and from referral to operation was 11 days, the total time being 146 days. Pneumonectomy rate was 14% and open and close thoracotomy rate was 7%. Only 33% of patients received treatment within 2 months of presentation.

Conclusion: The results are analysed by comparing with the six key recommendations for "gold standard" lung cancer services as stated in the Calman NHS Cancer Plan UK. Recommendations are suggested for improvement of lung cancer services in Malta.

O-068

A single centre experience of the Arterial Revascularisation Trial (ART) - a randomised trial to compare survival following bilateral versus single internal mammary grafting in coronary revascularisation

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Aim: The aim of this study is to present very early data from a single centre participating in the ART study, a unique multicentre international surgical randomised controlled study comparing the use of single versus bilateral mammary arteries in surgical revascularisation of patients with multi-vessel coronary disease.

Methods: Between November 2005 and May 2006, a total of 76 patients who were referred for CABG (coronary artery bypass grafting) were screened for the ART study. Of these, 39 patients have been enrolled and 23 of these have undergone surgery. All of the enrolled patients had multivessel disease affecting at least, the LAD and circumflex branches of the left coronary artery. They all had exertional angina CCS class III or IV or presented with a NSTEMI.

Results: 13 of the patients who were operated on were randomised to receive a single mammary artery and supplemental conduits (long saphenous vein/radial artery) and 10 were randomised to have bilateral mammary arteries and supplemental conduits. There were no deaths or

major morbidities and at 6 weeks, all patients were angina free.

Conclusion: Although this unique surgical randomised controlled trial was long in the planning, its execution has been trouble free. Bilateral internal mammary artery grafting for multivessel coronary disease can be performed with minimal morbidity and its early results are as good as the more traditional operation using a single internal (left) mammary artery graft.

O-069

Early use of dialysis after cardiac surgery

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Introduction: Renal replacement therapy may become necessary after cardiac surgery. An important risk factor for this development is pre-operative renal impairment that is more prevalent with increasing age. Over the past 12 years the percentage of patients over 70 undergoing cardiac surgery has increased from 21% to 30%. Our use of dialysis has increased from 1% to 7% over this period. The timing of dialysis after surgery is crucial to the outcome of these patients

Aim: To determine the optimum timing of dialysis in acute renal failure after cardiac surgery.

Methods: A retrospective analysis was made of our changing practice in this field.

Results: In the first 6 years of this series (phase 1) only 3 (19%) of the 16 patients who underwent dialysis were discharged from hospital. During the latter 5.5 years (phase 2) 38 (73%) of the 52 patients who underwent dialysis survived. In phase 2 we used dialysis in the early phase of acute renal failure after cardiac surgery, when oliguria set in, and before the metabolic consequences of renal shutdown occurred.

Conclusion: We believe this protocol of early dialysis was responsible for our improved results and also enabled us to accept more patients with renal impairment for surgery.

O-070

A retrospective audit of the outcome of patients who performed exercise stress tests

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Aims: To determine how many patients with a positive stress test actually proved to have coronary artery disease on coronary angiography and to identify situations where exercise stress test has a low sensitivity.

Methods: The subjects chosen for this study were patients who performed exercise stress test during 2003, as provided from the records at Cardiac Lab. Case notes of patients were then reviewed retrospectively. Any relevant past medical history, stress test result, coronary angiogram and/or MIBI report, relevant admissions or consequent discharges were noted, together with the management of patients with positive coronary angiogram. Coronary angiogram was taken as the gold standard investigation for identification of coronary artery disease.

Results: Out of approximately 1500 patients who performed a stress test during 2003, 1148 case notes could be traced. The population studied was predominantly male (64.3%). Average age was 54.8 years. 238 patients were diagnosed with a positive stress test. Of these, 187 proceeded to coronary angiography and 73% (136) had a positive result. A lower incidence of risk factors was reported in the group with false positive stress tests. Out of the patients who were diagnosed as having a normal exercise stress test, 52 also had a coronary angiogram done; 69% (36) resulted positive. Of these 13 proceeded to PCI and 8 proceeded to CABG. In patients with false negative stress tests, 28% had a past history of MI, PCI or CABG; 19% presented with acute coronary syndrome and 11% with established myocardial infarction. 135 patients had an equivocal stress test; 35 proceeded to angiography of which 57% were positive.

Conclusions: Analysis of risk factors as well as past history of ischaemic heart disease is necessary for improved interpretation of stress tests and earlier referral of the cardiac patient to coronary angiography.

O-071

Transcatheter ablation of muscular right ventricular outflow tract obstruction: a new technique

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Significant muscular (infundibular) right ventricular outflow tract obstruction may arise spontaneously or as part of a condition, such as tetralogy of Fallot. Muscular obstruction is usually excised surgically. We describe a novel transcatheter ablation technique wherein heat is selectively applied to subpulmonary muscular obstruction, causing tissue dessication with initial oedema that may actually cause a transient increase in stenoses and gradients, followed by eventual atrophy. This technique has not been previously used, to the best of our knowledge, in this setting although it has been used for the treatment of muscular subaortic stenosis in hypertrophic obstructive cardiomyopathy. We describe its application and results in 3 Maltese patients.

O-072

Cardiac catheterisation for paediatric and congenital heart disease in Malta

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Cardiac catheterisation remains an important tool in the diagnosis and treatment of congenital and paediatric heart disease. We present the overall totals and results of these catheters, both diagnostic and interventional (n>230), and illustrate with some interesting and unusual cases. These include:

Stenting of severe origin stenoses of innominate and left common carotid arteries at 11 years of age after surgical coarctation repair in early infancy, mild coarctation of the aorta stented in the descending portion and restented at a later stage more proximally (two events).

One premature infant with exomphalos and pneumonia who had stenting of the right ventricular outflow tract as a bridge to further palliation/repair.

Helix closure of a small atrial septal defect with a residual leak through the device, who later suffered a transient ischaemic attack and had the leak closed with an Amplatzer cribriform device.

One large PDA who had an Amplatzer plug deployed and was left with a residual large PDA, and who had a second Amplatzer plug inserted.

Embolisation of a right coronary artery fistula.

Three cases of right ventricular outflow tract obstruction who underwent novel RVOT ablation: one Williams syndrome, one post surgical repair of malaligned VSD and one after spontaneous closure of a malaligned VSD.

O-073

Intervertebral disc height in postmenopausal women with osteoporotic vertebral fractures

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Objective: To assess Intervertebral Disc Height in postmenopausal women with radiographically confirmed vertebral fractures.

Methods: Two hundred and fifty seven women were collected randomly from a large directory in a data base of a bone density unit. Every fifth woman in the directory was recruited from the DEXA directory.

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

Results: 257 Women were divided in five groups according to the menopausal/menstrual status. Forty seven (47) menopausal women were on HRT, 77 women were untreated menopausal women, 21 women were

on bisphosphonates, 30 women were on calcium supplements, 44 women were premenopausal and 38 women had confirmed vertebral fractures. Age and weight difference were noted across groups and statistical.

The vertebral fracture group was noted to have the lowest disc height ($1.57 \pm 0.1 \text{ cm}$) of the 3 discs D1 - D3. The D1 - D3 disc height in the HRT and premenopausal groups were similar ($2.15 \pm 0.14 \text{ cm}$) and ($2.01 \pm 0.19 \text{ cm}$) respectively. The disc heights in the other three groups (Calcium 1.77 ± 0.08 , Untreated menopausal group $1.82 \pm 0.12 \text{ cm}$, Bisphosphonates $1.88 \pm 0.12 \text{ cm}$) were significantly lower than the oestrogen replete groups but were significantly higher than the osteoporotic vertebral fractures group.

Conclusion: Postmenopausal women with vertebral fractures have significantly low disc heights. The disc heights are significantly lower than untreated and HRT treated/premenopausal women. These results suggest that the discoid shape and viscoelastic properties of the intervertebral discs may be relevant to the genesis of osteoporotic vertebral fractures.

O-074

Polycystic ovaries produce 75 times more anti-Müllerian hormone (AMH) than normal ovaries

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AMH has been identified in the adult ovary. Serum AMH levels in women with PCOS were 1.5–5 fold higher than in women with normal ovaries, the rise assumed to be secondary to increased number of follicles. Interestingly, treatment with metformin caused a significant reduction in serum AMH levels. We measured AMH in follicular fluid and granulosa cells (GCs) from normal and PCO (ELISA, DSLabs). Granulosa-luteal cells (GLC) were incubated \pm metformin (10–7 M) and cell lysate AMH protein and mRNA assessed by ELISA and qPCR. Follicular fluid AMH was mean (range) 4 (0.3–16) ng/ml (n=18). Levels declined exponentially with increasing follicle size, being undetectable in follicles > 9mm. AMH in granulosa-conditioned medium ranged from undetectable to 1.7 ng/ml (n=17) with levels again falling with follicle size, becoming undetectable above 10mm and in GLC. AMH in GCs from anovPCO was on average 100 times higher than from normal and ovPCO (p < 0.001): mean anov PCI 27.4 ng/ml (n=6, range, 17.2–42.7), ovPCO 1.4 (n=12, 0.025–7.6) and normal 0.29 (n=14, 0.025–1.7). FSH (5 ng/ml) significantly reduced AMH in GCs from PCO (p=0.008)(n=8), but not normal ovaries. Both AMH mRNA and protein were significantly reduced by metformin (n=4, p < 0.05).

In summary, AMH production falls as follicles grow. Levels of AMH are 100 times higher per granulosa cell from anovPCO compared to normal. FSH reduced AMH production and metformin down-regulated AMH protein and mRNA levels.

These data indicate that removal of AMH is essential for follicle selection and implicate raised AMH in the mechanism of anovulation in PCOS.

O-075

Use of antenatal dexamethasone in late pregnancy and its effect on incidence of neonatal respiratory distress after elective caesarean sections

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Background: Delivery by elective caesarean section at term has been associated with a higher incidence of neonatal respiratory distress compared to normal vaginal delivery. A previous multicentre randomised study showed that antenatal betamethasone and delaying delivery until 39 weeks both reduce admissions to Special Care Baby Units with respiratory distress after elective caesarean section at term

Aim: To assess whether steroids reduce respiratory distress in babies born

by elective caesarean section at term.

Method: A prospective pragmatic randomised controlled study, carried out in the Obstetrics and Gynaecology Department, St Luke's Hospital. Women who are planned to deliver by elective caesarean section after 37 or more completed weeks of gestation, are pragmatically randomised with those firms who will have a policy to give treatment to consented mothers compared to firms who will carry on with their practice as is currently usual. Treatment includes two intramuscular doses of 12mgs dexamethasone given 12 hours apart, with delivery occurring at least 48 hours after the first dose of dexamethasone. Statistical analysis will be carried out using a one way ANOVA to compare the different groups, and significance levels will be calculated.

Outcome variables: The primary outcome is admission to the Special Care Baby Unit with respiratory distress. Other variables assessed include age of the mother and parity, gestational age, weight of baby, apgar scores and type of anaesthesia.

O-076

The effect of sildenafil citrate on the Sultan and Modified Sultan scores in women with severe dysmenorrhoea

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Aim: To investigate the Sultan and Modified Sultan Scores after treatment with sildenafil in women suffering from severe dysmenorrhoea.

Method: A small (8 patients) double blind placebo controlled trial, using Sildenafil citrate and ibuprofen during the first 3 months, followed by placebo and ibuprofen for the next 3 months. Symptoms and quality of life were assessed with the Sultan score and Modified Sultan score before, 1hour and 2 hours after medication.

Results: During the 3 months of treatment with sildenafil, there was a statistically significant improvement in abdominal pain (p=0.017), pelvic heaviness/pain (p=0.047), lethargy (p=0.026), number of days off work (p=0.024), the Sultan and Modified Sultan scores (p=0.012), compared to baseline. Comparing the 3 months of treatment with placebo to baseline, there was a significant improvement in abdominal pain (p=0.016), pelvic heaviness/pain (p=0.016) days off work, the Sultan and Modified Sultan scores. When comparing sildenafil to placebo there was a statistically significant improvement in back ache (p=0.046) and pelvic heaviness/pain (p=0.023)

Conclusion: In this small study, sildenafil appears to positively improve the Sultan and Modified Sultan scores. Certain symptoms such as backache and pelvic heaviness/pain improved significantly. One possible explanation may be that sildenafil's vasoactive influence, especially in the genital region may be responsible for the improved blood flow. The positive impact on the metabolism and oxygenation of the tissues concerned, may be responsible for the observed improvement of symptoms.

O-077

Dydrogesterone: a possible preventative treatment for preterm delivery

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Two recent trials indicated that progesterone may be useful in preventing preterm labour in high risk patients. Both treatments have their problems especially in assuring compliance.

A possible alternative is dydrogesterone which is a progestin in oral form. Dydrogesterone is used in cases of miscarriage with significant success. The rationale of this study is that preterm labour is a continuum of pregnancy loss similar to miscarriage differing in that it occurs at a later stage. Dydrogesterone has also been implicated in reducing the incidence of pre-eclampsia a common cause of preterm delivery.

Methods: Patients were recruited from two firms which have a significant input from the miscarriage clinic and SANDS (Stillbirth and Neonatal Death

Society). These were patients with recurrent miscarriage, neonatal death related to preterm labour or preterm delivery due to medical conditions such as pre-eclampsia. Also included were a number of women with multiple pregnancies. These women opted to continue dydrogesterone beyond 22 weeks until 34 weeks in an effort to avoid preterm delivery.

Results: The high risk group parameters were compared to a group of contemporaneous women at low risk and the background population. Preterm delivery occurred in 5 out of 58 (8.6%) women at high risk of preterm delivery compared to 7 out of 120 (5.8%) in the low risk group. The occurrence of preterm delivery in the Maltese population is 5.4% similar to the low risk group.

Conclusion: Dydrogesterone appears to attenuate the incidence of preterm delivery in the high risk group assessed in this study. The above results may be due to the immunomodulatory properties exerted by dydrogesterone possibly preventing preterm labour and reducing the onset of pre-eclampsia.

O-078

The emotional well-being of Maltese men and women during the transition to parenthood

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Background: There is an impressive amount of literature suggesting that the stress of the adaptation to parenthood can lead to non-psychotic depression in mothers during the antenatal and the postpartum period. On the other hand literature examining prenatal and postnatal mental health in men is still in its infancy.

Aims and methods: A longitudinal study using a mixed methodology design is underway to explore ways how midwives may educate and support the needs of men and women during their adjustment to parenthood and to examine the pregnancy and the postpartum period experience of Maltese parents. Maltese first-time parents were randomly recruited from the Antenatal Clinic, Karen Grech Hospital, between February- September 2005, by means of an interview (mean: 19 weeks). Four hundred and forty-two first-time parents (221 men, 221 women) were assessed using a number of self-report questionnaires. Data was collected in three phases, during pregnancy, at 6 weeks and again at 6 months postpartum. This paper presents results on the emotional well-being of men and women on using the Edinburgh Postnatal Depression Scale.

Results: Highlight that both men and women are suffering from emotional distress during the transition to parenthood. The immediate postpartum period, is the most stressful time for men and women, however parents were found to be still stressed at 6 months postpartum.

Conclusion: Men and women appear to be ill-prepared for the impact of parenthood on their lives.

O-079

Geriatric and General Medicine: together or apart?

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Geriatric medicine is that branch of internal medicine that is concerned with that group of older people whose health is compromised by multiple pathology, disability, frailty and/or psychiatric co-morbidity. A number of sub-specialties have now been recognised (e.g. continence, falls, stroke). In most countries of the world geriatricians train first as internists and then in geriatric medicine. In the UK almost all geriatricians are also recognised specialists in general medicine. In addition the majority but not all practice as internists taking part in the general medical hospital, receiving emergency admissions of all ages and continuing their care in hospital. This approach is supported by the British Geriatrics Society because it places geriatric medicine expertise firmly in the acute hospital. This is a departure from the origins of geriatric medicine in the UK. In the early days of the specialty almost geriatricians worked in separate hospitals that usually had limited investigative facilities and were not equipped for emergencies.

The precise role of the geriatrician in the acute hospital varies from hospital

to hospital. In addition to 'take' the geriatrician may visit admissions units daily, provide immediate expertise to surgery and orthopaedic wards and run stroke units as well as providing specialist geriatric medicine care to their own patients. It is now common to find hospital teams of five or more geriatricians with perhaps 80% undertaking acute and rehabilitation duties whilst others concentrate on community aspects of care. With increased numbers of consultants it is possible to provide early interventions for all frail older people who need specialist involvement including those admitted to the acute hospital.

O-080

An evaluation of prescribing habits in a chronic care institution for the elderly

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Aim: To evaluate whether prescribing habits and related documentation in a chronic care institution reached recommended optimal levels.

Methods: All prescription charts at St Vincent de Paule Residence were examined. Data collected included the amount and types of both regular and 'as required' medications. Prescription documentation was assessed by noting whether (a) basic patient details including allergies were entered appropriately (b) all drug entries were written and signed in an approved manner by an identifiable doctor (c) stopping or altering a medication was carried out in the recommended manner.

Results: 280 charts were analysed. The mean number of drugs per patient was 6.2 (0 - 15). 35.3% were on hypnotics, 24.0% on anxiolytics and 19.8% on neuroleptics. 20.5% of 'as required' prescriptions were for psychoactive drugs. 34.5% of oral hypoglycaemic prescriptions were for long-acting preparations whilst 56.1% of antiparkinsonian medications were anticholinergics. Only 6.9% of prescriptions were written out by the ward doctor whilst 24% remained unsigned. The allergies section was omitted in 82.9% of charts. The starting or stopping date of a medication was not documented in 32.7% and 71.2% of cases respectively. Alterations in dose or frequency without re-writing the prescription were noted in 5.7% and 6.3% of cases respectively.

Conclusions: Poly-pharmacy, a high prescription rate of psychoactive medications and the common usage of drugs which are not recommended in the elderly were identified at SVPR. Several omissions were also noted in prescription documentation. An evaluation of medication charts helps indicate which prescribing habits need correcting to achieve optimal levels in a chronic elderly care institution.

O-081

Does a Parkinson's disease class improve the knowledge of Parkinson's disease in patients and their carers?

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Objective: To evaluate the knowledge of Parkinson's disease patients and their carers on the disease before and after a series of educational classes.

Design: An explorative interventional study.

Setting: The Geriatric day hospital at Zammit Clapp, Malta.

Participants: 10 cognitively intact Parkinson's disease patients aged 60 years and over together with their informal carers.

Method: 10 weekly one hour lectures were delivered to all participants. They were asked to complete a 16 question True/ False format questionnaire (in English or Maltese) on Parkinson's disease before and after the 10 week course of teaching.

Results: Complete data sets were available for 7 patients and their carers. Using the Mann-Whitney U-test, the mean score of the patients was 11.9 and 11.3 (out of a potential total score of 16) before and after the course respectively (p=0.53), while the mean score of the carers was 12.0 and 11.1 before and after the course respectively (p=0.80). Grouping both patients and carers together, the mean score was 11.9 and 11.2 before and after the

course respectively ($p=0.43$).

Conclusion: At this stage, there was no documented improvement in the knowledge of Parkinson's disease through an interdisciplinary Parkinson's disease class for patients and their carers attending a geriatric day hospital. Larger studies are however warranted in order to further test this hypothesis.

O-082

Evaluation of the Parkinson's class programme provided at a rehabilitation hospital for the elderly

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Introduction: Treatment in Parkinson's disease mainly focuses on the relief of key symptoms of rigidity, bradykinesia and tremor but other problems consequently experienced such as difficulties with mobility, balance, activities of daily living, communication, eating, swallowing, tiredness and depression progressively affect dependency levels. A comprehensive service consisting of a ten-week programme of one-hour weekly sessions and run on a multidisciplinary basis was designed to help improve patients' quality of life; to advise on coping skills and provide support whilst addressing important specific difficulties encountered with several common activities; and to increase awareness of Parkinson's through information and education.

Objective: To evaluate and further develop the service provided to patients with Parkinson's disease and their informal carers.

Method: From forty-five patients referred by the interdisciplinary team at Zammit Clapp hospital, fifteen patients were recruited to the programme. On completion of the programme, participants were surveyed through a self-reported questionnaire on the information, exercise sessions and handouts provided; the knowledge gained; activities carried out; level of carer participation; support provided by staff; and facilities.

Results: All participants said the information provided was well explained and helpful but that the input provided by team members required repetition. Activities were considered to be relevant and stimulating. However, 67% of patients felt that ten sessions were not enough and that classes should be held regularly. Seventy seven per cent of patients were satisfied with the organisation of the programme.

Conclusion: The service provided was found to be effective and assisted in improving patients' quality of life.

O-083

Official approved translation of the EQ-5D health questionnaire into the Maltese language

MA Vassallo

Zammit Clapp Hospital, EuroQol Group Foundation, Erasmus University, Rotterdam, FACIT Project, Evanston Northwestern Healthcare, Evanston, Illinois.

Aim: To have an officially approved translation of a generic quality of life questionnaire, the EQ-5D (EuroQol-5 dimensions), into the Maltese language.

Method: The English version of the EQ-5D was independently translated into Maltese by two experienced translators creating two Maltese versions. A consensus version was obtained from the two translations and sent back to the EuroQol Business Management together with a report on the translation process. The FACIT back translated the first consensus version into two English versions by two independent translators and these were compared to the original version. A second consensus version was produced after incorporating the necessary changes and this was submitted to the EuroQol Business Management. The second consensus version was tested on 8 lay respondents, native speakers of the Maltese language. The respondents were a mix of healthy individuals and patients. The healthy individuals consisted of 4 individuals aged 33-73 years with a M:F ratio of 3:1. The patient group consisted of 4 individuals aged 51-67 years with a M:F ratio of 1:3 with an

average of one chronic illness. The questionnaire was self-completed by the respondents. The respondents were timed during the completion of the questionnaire. When the questionnaire was completed feedback was obtained from the respondents about any difficulties with understanding or answering the question/instruction, ambiguous wording, whether the language used was easy to understand and whether the respondent would ask the question or formulate the instruction in another way. Based on the comments from lay subjects a third consensus version was produced which was sent to the EurQol translation review team for a final version of the EQ-5D in the Maltese language.

Conclusion: An officially approved Maltese version of the EQ-5D has been produced and the next step would be to validate it on a larger sample of the Maltese population.

O-084

Do older people perceive their visual loss?

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Background: Visual impairment in old age is a major health problem that affects an increasing number of older people. As most of the common eye problems progress over time, older people might adapt to these conditions and may not be fully aware of their visual loss. Until the cumulative effects of the visual impairments result in the loss of physical, social and psychological functioning, most of the visual impairments may thus remain undiagnosed.

Aim: To test the awareness levels of degree of visual loss of older inpatients in an assessment and rehabilitation geriatric hospital.

Methods: In this semi-qualitative study, 10 patients, chosen on a random basis from English-speaking individuals with an abbreviated mental score higher than 6, were assessed with the National Eye Institute Visual Function Questionnaire-25 (NEI VFQ-25) and the Snellen distance visual acuity chart between 6th March 2006 and 1st April in Zammit Clapp Hospital, Malta. The VFQ-25 results were averaged on the sub-scales of general health, general vision, ocular pain, near activities, distance activities, social functioning, mental health, role difficulties, dependency, colour vision and peripheral vision. Both the VFQ-25 results and the Snellen Chart results were classified as poor, moderate and good functioning. The overall VFQ-25 results were then compared to the results of the Snellen Chart with chi-squared test

Results: The comparison of the VFQ-25 results and the Snellen Chart results showed an evidence of significant difference between these scores. Comparison of general vision sub-scales with the near activity, social functioning, role difficulty and dependency sub-scales did not show any evidence of significant difference.

Conclusion: This study showed that older inpatients were not aware of their visual problems although they experienced functional problems. This finding is especially important in adapting screening tests for visual impairment in older people.

O-085

Regulating doctors in the United Kingdom

D Hatch

Chair, Assessment Committee, General Medical Council, UK.

When established in 1858 the General Medical Council (GMC) confined its disciplinary role to protecting the public from doctors accused of 'infamous' behaviour. In 1980 it introduced health procedures to deal with sick doctors and since 1997 it has also regulated poorly performing doctors.

Performance is what a doctor actually does, whilst competence is what he/she is capable of. Whilst an incompetent doctor cannot perform reliably, a competent one may or may not do so depending on many factors, including health. Early detection and local remediation provide the best outcome, and the National Clinical Assessment Service is a government organisation whose advice employers are now required to seek in dealing with problem doctors. Failure of local processes indicates referral for performance assessment by the GMC. This is in two parts; a peer review visit to the doctors place of work by trained assessors (two medical and one non-medical) and a test of competence. The peer visit includes environmental analysis, observation of actual practice, structured interviews with colleagues, assessment of clinical

records and both case based and portfolio based discussions with the doctor. The test of competence comprises knowledge and skills tests. The process is kept up to date in association with the medical Royal Colleges.

Recent high profile cases have damaged public confidence in medical regulation based on adverse incident reporting, and a system of five yearly re-certification is currently under consideration.

O-086

The influence of the anaesthetic technique on the surgical outcome of patients after fractured hip surgery

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Introduction: Several factors have been associated with increased morbidity and mortality after surgery for hip fractures. Age, co-existing medical illnesses, the timing of surgery after trauma, the type of anaesthesia and the period of post-surgical immobilization are all factors which are known to play a role in the outcome.

Aim: The aim of this retrospective and consecutive study was to assess the impact of the anesthetic technique on the various aspects of the surgical outcome.

Method: After obtaining ethical approval, 123 patients' files from a total of 209 emergency admissions between June and December 2003 for hip fracture surgery, were traced from the records department. The type of anaesthesia used, either general or regional anaesthesia alone or in combination, common complications, mortality and length of hospital stay were recorded.

Results: 75% of hip surgery performed at St Luke's Hospital Malta, were emergency procedures. 52% were dynamic hip screw insertions. Average age was 72 years, 38.21% of patients were between 80-89 years of age. 47% of patients received general anaesthesia while 50% received regional block. The 30 day mortality after surgery was 13.8% after general anaesthesia and 8% after regional anaesthesia. The one year mortality was 29.3% after general anaesthesia and 14.7% after regional anaesthesia. There was no difference in the duration of hospital stay between patients receiving regional or general anaesthesia (14.3 days versus 13.04 days).

Conclusion: Regional anaesthesia reduces postoperative mortality and morbidity, but since the etiology is often multifactorial in nature, using unimodal interventions such as regional anaesthesia will not necessarily decrease mortality.

O-087

Genomics in cardiac surgery

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Cardiac surgery under CPB is always associated with a broad array of inflammatory, neuroendocrine and metabolic changes in the whole organism which may progress to hyper inflammatory response known as "post-pump syndrome". Up to 20% of all patients from "low risk group" developed postoperative complications directly related to CPB usage. With the current clinical and laboratory methods we are still not able to identify that patient who is under risk of developing post operative complications. Modern medicine needs new biomarkers which are able to provide potential for linking laboratory findings to the real clinical situation and to provide complete information about the extent of injury, mechanisms of injury, response and repairing processes and interplay between them with simultaneous measurements of entire cellular classes or molecules. This became possible with the advancement brought by the microarray technology. Dissection of the molecular mechanisms based on expression patterns of tens of thousands of genes, achieved by microarray technology can serve as fingerprint for the improvement of knowledge regarding CPB influence on the whole body inflammatory reaction and help to overcome limitations of current diagnostic methods and scoring systems applied in intensive care medicine. Microarray technology can open the direction to better understand processes that occur under the CPB. It will also give the

opportunity to select appropriate method of perioperative treatment

O-088

The introduction of a nurse-led sedation protocol in intensive care leads to a reduction in mortality in patients undergoing prolonged mechanical ventilation

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Introduction: Mechanically-ventilated intensive care patients often need to be sedated to tolerate ventilation. However, over sedation can itself lead to an increase in morbidity and mortality by delaying weaning and prolonging ventilation. There is also some evidence that sedatives may alter the patients' immune response. The introduction of a regular assessment of Department of sedation coupled with a protocol that allows nurses to adjust the dose of sedatives accordingly has been shown to improve outcome.

Aim: To show that a nurse-led sedation protocol introduced into our local intensive care unit (ITU) leads to a decrease in mortality.

Methods: The study was conducted in three parts. The first part consisted of an audit of current sedation practice and outcomes and was performed over a six-month period. All patients undergoing prolonged (>24 hours) mechanical ventilation were included. The second part involved an educational programme directed at nurses and doctors explaining the rationale behind the introduction of a sedation protocol. The third part saw a re-audit performed after the protocol had been introduced to demonstrate that things had indeed changed and that outcome had improved.

Results: A total of 170 patients were assessed. The two groups were well matched with respect to size, age, sex and APACHE score. The patients in the group managed by a sedation-protocol spent more time optimally sedated i.e. comfortable but rousable and cooperative. The mortality was significantly reduced (26.5% vs. 49.4%, $p=0.003$) in this group. This reduction was not clearly related to faster weaning from ventilation.

Conclusion: The use of a nurse-led sedation protocol in mechanically-ventilated intensive care patients results in better sedation and improved mortality.

O-089

Outcome of patients admitted to intensive care with meningococcal septicemia/ meningitis

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Introduction: Meningococcaemia results in a fulminant infection and causes substantial morbidity and mortality worldwide.

Aim: The purpose of this retrospective and consecutive study was to document the outcome of the patients admitted to the intensive care unit of St Luke's Hospital Malta over a two year period from January 2004 to December 2005, as well as to identify any predictors associated with worse outcome or death.

Method: Patients' notes and intensive therapy charts were obtained from the records department. Dermographic data, type of clinical presentation, time that elapsed between the onset of symptoms and the first dose of antibiotics, investigation results, length of stay in the intensive therapy unit and mortality rate were recorded. The survivors were re-assessed at the time of the study to quantify the degree of residual morbidity and quality of life related to their meningococcal disease.

Results: During the 2-year period 2004-5, 10 patients were admitted to the ITU. Of these 6 were in 2004 and 4 in 2005. Three patients were admitted with meningococcal meningitis while 7 had meningococcal septicemia. Of these, 3 patients died and 7 patients survived and eventually discharged home.

Summary: This study shows a relatively low incidence of meningococcal disease requiring adult ITU admission (3 years and older). The mortality

rate was 30% (3/10) whilst the morbidity of the survivors and their quality of life ranged from full recovery to various grades of organ dysfunction. Factors associated with worse outcome or death can be extrapolated from our data.

O-090

Improving service delivery in an outpatient setting

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Problem: increasing waiting lists, inappropriate referrals and mismatched scheduling led to suboptimal clinic use. Better use of clinic resources was identified as a priority to improve patient care. At the time of initiation of this project, no systems existed for prioritization or analysis of referral data, or clinic throughput.

Design: prospective review of referrals during 2004-6 in clinics at the interface of primary and secondary care. The aim was to identify causes of the problem, introduce changes and reassess regularly.

Setting: Two MCC/Schedule V Clinics (Floriana/Gzira) prospectively collated referral data; observation of factors impinging on patient throughput.

Key measures for improvement: waiting lists, inappropriate referrals, availability of patient notes, patient throughput and scheduling, monitoring of non-attenders.

Strategies for change: monitoring of referrals for prioritization, vetting for inappropriate referrals, introduction of protocol, amendments to appointment letter with reminders re investigations, medication and documentation; availability of St Luke's Hospital notes for all patients; introduction of records for all patients, use of telephone follow-up, and one-stop appointments, management of non-attenders.

Effects of change: reduction in waiting lists from over three months (Jan 2004) to four weeks (July 2006); early redirection of inappropriate referrals; improved patient scheduling and throughput; improved record keeping, reduction in non-attenders.

Lessons learnt: appropriate proactive management strategies can result in more appropriate use of limited resources; further improvement will require interdepartmental and intercollegial collaboration, as well as improved support services.

O-091

Clinic waiting time at the lipid clinic, St Luke's Hospital

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Waiting time in clinic is defined as the interval between the time of appointment and the actual time of encounter with the health care professional.

Objective: To determine the clinic waiting time (CWT) at the lipid clinic, to identify demographic and geographic variables that may affect it, and to compare the CWT with a standard set in the Quality Service Charter.

Design: Cross-sectional study.

Participants and setting: New cases and follow-up cases attending the lipid clinic at St Luke's hospital between September 2003 and July 2004 and seen by the consultant.

Data collected: Date of clinic; time of appointment as appears on the patient administration system printout for the clinic; time of entry in doctor's office; age; sex; locality of residence; new case or follow-up case.

Data analysis: Mean and median CWT was determined for both sexes, new cases, follow-up cases, and region of residence.

Results: The mean CWT was 31 minutes (median 15 minutes). For appointments between 8:00 and 10:00 hours the mean CWT was 44 minutes (median 37 minutes) and for appointments after 10:00 the mean CWT was 10 minutes (median 0 minutes). The proportion of patients seen within 30 minutes of their time of appointment was 0.6. Of these, more than one half

(0.55) were seen before the time of appointment. The proportion of patients with a CWT longer than one hour was 0.2 and was twice as much for new cases than for follow-up cases (0.4 versus 0.2). This was constant for the various geographic regions.

Conclusion: Clinic waiting times at the lipid clinic compare favourably to those reported for the outpatients in general. New cases have the longest CWT. There is a positive correlation between number of appointments over time and the CWT, but no correlation between region of residence and CWT longer than one hour

O-092

An evaluation of the discharge planning process at Zammit Clapp Hospital

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Older people are being discharged from hospital to the community with higher levels of dependency. Discharge planning is an essential component of service delivery and has substantial implications for the use of health and social care resources. Quality practices in health care result from structured reflection on what was done, what was achieved and what could be done better, then putting constructive actions in place to change practices.

This study was carried out to assess the extent to which patients' and carers' have been involved and have been informed about the discharge process and to assess their level of satisfaction with the discharge planning process at Zammit Clapp Hospital, an acute and rehabilitation hospital for the elderly in Malta.

The study consisted of a convenience sample of 50 patients and 50 carers. A mixed research design consisting of quantitative and qualitative data was used. Interviews were carried out by the researcher one-week post discharge from Zammit Clapp Hospital.

The main findings suggested that despite the fact that an adequate amount of information was given to patients and carers some areas in information exchange and education sessions merit improvement. Post discharge needs were assessed and discussed with patients' and carers' while at ZCH. The involvement and expectations of carers in the discharge planning process and outcome differed from that of patients. Overall patients were satisfied with the discharge planning practices and services at ZCH. In retrospect carers said that they were well prepared for caring for the patient while in hospital.

O-093

Emerging ethical themes in European Research. Ethical aspects of Research Projects under FP6

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Aim: All research activities have to conform with ethical norms and standards; this is particularly so if they are to be eligible for EU funding. An overview of the relevant EU standards for FP6 is presented, together with emergent themes that should be important for FP7.

Resume: Current standards related to European research are presented with special reference to the use of human biological samples, personal data and gene-banking. Research involving persons (including those unable to give consent, children, pregnant women and healthy volunteers) is addressed, as well as personal data protection. The use of animals, including transgenic animals, and non-human primates is another area given great importance in European research. Cooperation with developing countries, the place of national ethical consent, the identification of conflict of interest and its management, and the ethical implications of research results are also addressed. The use of human embryonic stem cells and 'no-go areas' under FP6 is described. Some newer emergent areas are described.

Conclusion: an awareness of the relevant ethical norms and legislation, as well as the emergent themes is necessary for many research areas eligible for EU funding. This should be of interest to a wide audience.

O-094

Should pharmacies be involved in surveillance for influenza-like illness?

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Introduction: Over the counter medicines (OTCs) are commonly used as self-treatment for influenza-like illness (ILI). Monitoring sales of OTCs might give earlier indication of the onset of the influenza season. CDSC-NI set up a pilot pharmacy-based surveillance system in Northern Ireland (NI) between October 2005 and April 2006. The aim was to determine whether monitoring sales of cough and cold medicines would provide earlier warning of the onset of influenza seasons.

Methods: Weekly sales data were sent to CDSC-NI for all OTC medicines sold from 47 pharmacies representing 12.5% of all pharmacies in NI. Cough and cold medicines were monitored as a proportion of total OTC sales. CUSUM charts and confidence intervals were used to detect significant increases in sales when compared to Serfling-type regression models and generate alerts. Trends in OTC sales were compared with ILI rates from the Northern Ireland General Practice sentinel surveillance scheme.

Results: Sales for paediatric influenza medications peaked during week 6 of 2006, two weeks prior to ILI reports. The first alert was generated two weeks before the first detectable increase in sentinel GP ILI rates. The onset of the flu season could not be detected by monitoring sales of adult cough and cold medicines as the increase in sales was too small to be detected.

Conclusion: Monitoring sales of children's flu medications can give advanced warning of the onset of influenza seasons. Surveillance of paediatric cough and cold medicine sales could be considered as an additional surveillance system for influenza like illness.

O-095

Paramedics' and pharmacists' attitudes towards changes in working times in St Luke's Hospital

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Aims: In view of the increased focus on efficient utilisation of resources and the likely future changes in hospital management, this study sought to investigate the implications of changes in working times for paramedics and pharmacists at St Luke's Hospital, to explore the effects on their personal commitments, to assess current working pattern satisfaction and to identify the influencing factors for alternative working pattern implementation.

Methods: A descriptive, exploratory research design included a self-administered questionnaire distributed to 330 paramedics and 42 pharmacists followed by a focus group with representatives from each profession. Another focus group with line managers was then conducted followed by elite interviews with the Director of Human Resources and two Union Representatives. Descriptive and inferential statistics were used for quantitative data and content analysis for qualitative data.

Results: Overall, paramedics and pharmacists were satisfied with current working patterns particularly when working daily hours and reduced hours. Flexible working hours was the most preferred alternative pattern, also discussed significantly in the focus groups and elite interviews. Work pattern preferences would be influenced by lifestyles, family commitments and health. The most influential factors for the implementation of new work patterns included participation in discussions, staffs' opinions and the information given.

Conclusions: More flexible working patterns would provide employees with time for commitments but also maximise utilisation of resources and provide a more efficient service. Employees should be actively involved to prevent resistance to changes in order to ensure the provision of a better service thus meeting the patients' needs.

O-096

A first study on the frequency and phenotypic effects of HFE gene mutations in the Maltese population

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Haemochromatosis heterogeneity has been reported in south European populations. However, no genetic studies have been carried out amongst subjects of Maltese descent to determine the allelic and genotype frequencies and assess their phenotypic expression. In this study, 250 anonymous DNA samples from randomly selected newborn subjects, 101 Beta-thalassaemia patients, and 32 patients with a clinical diagnosis of hereditary haemochromatosis were selected. The C282Y mutation was found to be absent in all the subjects tested. The overall allele frequencies of H63D and S65C were 18.5% and 0.6% respectively. Six subjects were found to be homozygous for H63D whereas three subjects were found to be double heterozygote for H63D and S65C. No significant difference was found in the HFE allele frequencies between the three categories of the individuals studied. These results indicate that, unlike most European counterparts, C282Y is not the cause of haemochromatosis in the Maltese islands. The study also shows no significant difference in ferritin levels between different H63D genotypes amongst patients with iron loading disorders, implying that other genetic and/or environmental factors have an important role in the pathogenesis of haemochromatosis in Maltese patients. The search for new HFE and HAMP mutations proved negative; however a genetic framework for S65C is described for the first time.

O-097

The value of a routine duodenal biopsy at gastroscopy in diagnosing Coeliac disease

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Background: Coeliac disease is thought to be a common and under diagnosed medical condition which is often associated with considerable morbidity and mortality. The presenting symptoms associated with Coeliac disease are often non-specific and clinically silent, as are some of its complications, like osteoporosis. Coeliac disease is best diagnosed by finding increased epithelial lymphocytes and partial/total villous atrophy on histological examination of biopsies taken from the second part of the duodenum (D2) at gastroscopy. Unfortunately some cases with histologically proven Coeliac disease will have a normal endoscopic mucosal appearance of D2.

Aim: To determine if taking a duodenal biopsy on all patients at gastroscopy will diagnose patients with coeliac disease who would otherwise have been missed.

Study design: A prospective study in a teaching hospital endoscopy unit during years 2004 and 2005

Method: Altogether 923 consecutive patients attending for gastroscopy were included in this study. At least two distal duodenal biopsies were taken if possible, unless a contraindication was present.

Results: In 234 patients a duodenal biopsy was clearly indicated. Duodenal biopsies were also performed on 450 patients from the remaining 689. 5 patients from this group were diagnosed as suffering from coeliac disease, 3 of whom had a normal duodenal appearance at endoscopy. In addition 3 patients were diagnosed with giardiasis while in another patient the biopsy was suggestive of Crohn's disease. There were no complications from the procedures.

Conclusion: Taking 2 duodenal biopsies on all patients at gastroscopy unless contraindicated will diagnose new cases of coeliac disease. The cost of opportunistic screenig for coeliac is less than Lm2000 per case diagnosed.

O-098

Analysis of waiting time for cadaveric kidney transplantation

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Kidney transplantation is the most cost-effective form of treatment for end-stage renal disease patients. In Malta, the number of patients starting dialysis have increased dramatically over the past 15 years, with an ever-increasing majority of patients being eligible for a kidney transplant.

The aim of the study is to analyse the time period spent by dialysis patients waiting to receive a cadaveric transplant. 50 consecutive cadaveric transplant recipients under the care of one consultant nephrologist were retrospectively studied.

Results: The mean waiting time in months steadily increased over the 12-year study time frame from 16 in 1993-94 to 58 in 2005-06. Blood group A recipients wait significantly more than their blood group O counterparts before receiving their allograft (mean of 76 vs 43 months).

Conclusion: The waiting list is currently 58 months. Similar to many developed countries, the waiting period has dramatically increased over the last decade or so. The main reasons include acceptance of more potential kidney transplant recipients onto the waiting list and a shortage of organ donors. Possible solutions to expand the donor pool, and hence shorten the kidney transplant waiting time, are discussed in detail.

O-99

Effect of switching from subcutaneous to intravenous erythropoietin in haemodialysis patients

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Recombinant erythropoietin (Epo) is the mainstay of treatment of renal anaemia in patients with chronic kidney disease. In April 2003, it became necessary to switch the route of administration of Epo from subcutaneous (sc) to intravenous (iv). We audited this change to assess the effect on Epo requirements.

Method: Our population consisted of 54 prevalent haemodialysis patients under the care of one consultant nephrologist. Epo and iron doses were adjusted according to an established protocol designed to achieve haemoglobin (Hb) of 11g/dl in the majority of patients by setting intervention thresholds.

Results: Complete data were available on 39 patients.

	3x weekly sc	3x weekly iv
Hb (g/dl)	11.09	11.19
Epo dose (iu/day)	587	760

Conclusions: In these unselected HD patients, a considerable and costly 29.5% increase in Epo dosing was required after switching the route of administration.

O-100

Consumption of medicines among adolescents in Malta

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Aims: Research on adolescents has mainly focused on the use of alcohol, tobacco and illegal drugs but little has been done to investigate medicine use among this age group. The aim of this study was to investigate self-reported medicine use among adolescents.

Method: A self-administered questionnaire was used to survey medicine use by fourth-form Junior Lyceum students. Data were collected among 474 boys and girls of average age 15 years who were selected by stratified random sampling. The questionnaire investigated the prevalence of self-reported symptoms and medicine use during the previous 3 months for ear problems, hay fever and cough and cold; gastrointestinal problems; headache; and menstrual pain. Students also gave information on their use of eye drops, vitamins, topical skin medication, painkillers for sport injuries and antibiotics.

Results: A total of 52.0% of students experienced 3 or more symptoms and a total of 90.3% took between 1 to 9 different medicines during the previous 3 months. Statistically, girls used a significantly greater number of different medicines than boys (p < 0.01). The pharmacy was the most common source for obtaining medicines in the majority of responses (26.8%-76.9%). Of concern is that, 24.5% of the students reported that they had taken medicines without adult guidance.

Conclusion: A high proportion of 15 year-old adolescents reported medicine use in relation to common health complaints. A considerable proportion took medicine without any adult guidance. It is suggested that more information about medicines be built into school health education programs in the future.

O-101

Single-stage management for patients with uncomplicated acute gallstone pancreatitis - are pre-operative MRCP and ERCP really necessary?

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Aim: In our unit, patients with uncomplicated acute gallstone pancreatitis are offered acute single-stage management with laparoscopic cholecystectomy, routine intraoperative cholangiography and if necessary, common bile duct exploration. We aim to assess the outcome of these patients and the requirement of pre-operative common bile duct imaging and clearance.

Methods: Over a ten-year period 96 patients with uncomplicated acute gallstone pancreatitis were followed up in a prospective study. All had evidence on ultrasound of cholelithiasis. The median age was 52 years (IQR = 29). The male: female ratio was 1: 4. Jaundice was present in 30% of cases.

Results: The full cohort of patients was successfully managed laparoscopically. Twenty-four patients (25%) had a positive operative cholangiogram. Trans-cystic exploration and basket trawling was performed in 23 subjects. One patient required a formal choledochotomy, clearance and T-tube placement. No peri-operative deaths were recorded and major peri-operative morbidity was recorded in 2 patients - 1 patient had an iatrogenic small bowel perforation which was dealt with through a mini-laparotomy at the end of the biliary procedure, another patient developed post-operative pancreatic abscess which was managed conservatively. Age and gender were not useful predictors of choledocholithiasis. Likewise, there was no statistically significant link between jaundice in pancreatitis and choledocholithiasis (p=0.07) - 18 jaundiced subjects (62% of this subset) had normal cholangiograms. Although statistically significant (p<0.01), ultrasound evidence of bile duct stones had a positive predictive value of only 48%.

Conclusions: Residual choledocholithiasis is absent in 75% of patients with acute gallstone pancreatitis. In patients with ductal stones laparoscopic single-stage management is safe and effective, rendering routine pre-operative MRCP and/or ERCP unnecessary.

O-102

Incidence of breast cancer in women referred for screening to the breast clinic St Luke's Hospital

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Background: Asymptomatic patients who are referred for breast screening are seen at a dedicated session at the breast clinic at St Luke's hospital. This decreases the load from the symptomatic clinic. Although there is no National breast screening programme in Malta, mammography is offered to those at risk. All of these patients are referred by a doctor.

Aim: To outline the demographics, risk factors status, and the incidence of breast malignancy in patients who are referred to the breast clinic for screening mammography.

Method: The medical records of patients referred to the breast Clinic for a screening mammogram were reviewed. Demographic data, family history of breast disease, and other risk factors for breast carcinoma were noted. The results of radiological investigations and any cytology specimens taken were recorded. For patients who underwent surgery, the type of procedure and the histological findings of removed specimens were analysed. Analysis of the risk factors, symptomatology and family history in the affected subjects were done, and compared to the total study population.

Results: The incidence of malignancy in the study population, the stage and grade of disease at diagnosis and the Nottingham Prognostic index for affected subjects will be reported.

O-103

Modified Mathieu procedure for hypospadias repair

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Introduction: The classical aims of hypospadias surgery are 1. An appropriate urinary stream from the tip, 2. correction of chordee and 3. good cosmesis. To these one might add the preservation of sensation. Any procedure which limits scarring and disruption of the blood supply as well as saving the foreskin, would be contributing to this.

Materials and Methods: The procedure chosen for each particular case of hypospadias repair depends very much on the specific anatomy available. As such a variety of operative techniques are available to the Paediatric Surgeon. The Mathieu repair is one such technique. However the loss of the foreskin and pericoronal scarring may lead to a loss of sensation. The Modified Mathieu Repair, which is presented here, preserves the general principles of the Mathieu technique whilst allowing preservation of the foreskin and reducing the extent of the dissection. A series of ten cases of hypospadias repair using the Modified Mathieu technique and performed over a two year period at St Luke's Hospital, are presented here. The selection criteria, operative technique and results after an average follow-up of 10 months are discussed.

O-104

A lower than expected incidence of HPV DNA was detected in Maltese benign and malignant breast tumours

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Background: Human Papillomaviruses (HPVs) are considered quantitatively as the most important group of viruses related to benign and malignant neoplasia in humans. A recent study reported the presence of HPV in malignant breast tissue suggesting that HPV may infect the epithelium of the nipple and areola and proposing a possible association with breast malignancy.

Aims: The purpose of this study was to analyse benign and malignant breast tissue to check whether there was a significant incidence of HPV DNA found in Maltese breast tumours and to assess whether any difference occurs between this incidence in malignant and benign breast tumours.

Methods: Tumour tissue was isolated by deparaffinisation from thick sections of tumour material identified by pathological examination. DNA was extracted by a previously published method. The polymerase chain reaction (PCR) was performed on this DNA using actin primers (to control for DNA quality and PCR efficacy) and with three different sets of HPV primers (to detect most common strains of HPV).

Results: No HPV DNA was detected in any breast tumour in the initial sample of 20 tested, analysis of a larger sample is in progress. This despite clear actin amplification in all samples and HPV clearly detected in cervical tumour DNA

Conclusion: Maltese breast tumours appear to show a lower incidence of HPV DNA positivity than in some published studies.

O-105

A review of radical cystectomies carried out in Malta over the past 8 years

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Aim: This review aims to demonstrate whether there is a trend towards earlier cystectomy for bladder cancer and whether this actually translates into improved survival and morbidity within our practice.

Background: Bladder cancer accounts for almost 9 percent of all cancers diagnosed in Malta in males and just over 2 percent in females. The incidence is reported at 8.7 new cases per 100,000 population per year, an incidence comparable only to Italy in the EU. Those which are high risk superficial or muscle invasive are treated by either radiotherapy or total cystectomy. There is a global trend towards cystectomy as the preferred primary treatment for these cancers, with primary radiotherapy being reserved for surgically unfit patients or those opting for bladder conservation.

Method: We are presenting a review of 55 cystectomies carried out in the Urology Unit at St Luke's Hospital over the past eight years. Data was collected in a retrospective manner by review of patients' case notes, histology and radiology reports, as well as from the National Cancer and Mortality Registries.

Results: We present survival figures for a follow-up period ranging between 6 months to 5 years. Survival figures are also analyzed with respect to tumor grade and stage, number of recurrences prior to definitive surgery, previous administration of radiotherapy, as well as patient risk factors. Disease-specific survival, recurrences and morbidity are also studied.

O-106

Living-donor renal transplantation: our local experience

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Background: Renal transplantation offers the best therapeutic modality in end-stage renal failure. The number of patients in need of a renal transplant has increased significantly. Cadaveric renal transplantation has remained fairly constant. To bridge the disparity, there has been an increasing interest in living-donor renal transplantation.

Aim: This paper seeks to assess the feasibility, outcome and establish local criteria of performing living-donor renal transplantation.

Method: This was a retrospective analysis of living donor renal transplantation performed at St Luke's Hospital under one consultant surgeon (ARA) between October 1998 and August 2006. All patients were discussed by the renal committee. Method of patient selection, preoperative imaging, postoperative complications, renal function, and mortality were analyzed.

Results: A total of 15 patients underwent living-donor transplantation. The median age of recipient was 27years (range 16-61). There was only one

recipient mortality due to overwhelming sepsis, the rest were well after a median follow-up of 36 months postoperatively. The serum creatinine had fallen from a median of 785µmol/l (range 1168-446) pre-operatively to 138µmol/l (range 285-96) at one year post-operatively. There were 2 cases of acute rejection, 2 other of borderline acute rejection and 2 further cases developed chronic rejection. No donor mortality.

Conclusion: Living-donor renal transplantation can safely be performed even in such a small institution such as Malta.

O-107

Juvenile Huntington's disease in Malta

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Huntington's disease is an autosomal dominant progressive neurological condition characterized by involuntary movements and dementia. The age of onset is related to the number of (CAG)_n trinucleotide repeats in the Huntington gene. Rarely, the disease manifests itself first during childhood or adolescence as juvenile Huntington's disease, and occurs when gene amplification occurs increasing greatly the number of repeats. Over the 11 year period from 1994 to 2006, three cases of Juvenile Huntington's disease were recorded from among the families with Huntington's disease referred to the genetic clinic for genetic counselling, pre-symptomatic DNA testing or diagnostic DNA testing. The affected individuals were three boys of ages 10, 14 and 21 years at the time of confirmation of the diagnosis by DNA tests. They were from three different families with strong family histories of Huntington's disease. The presenting features of the juvenile cases were distinct from those of adult-onset Huntington's disease. The most characteristic initial manifestations were behavior disorders and a characteristic speech in which words were uttered very rapidly in short phrases separated by short pauses. The speech disorder may be one of the earliest manifestations of motor dysfunction. The other motor manifestations were rigidity and myotonia. Choreiform movements developed later in the course of the disease in one of the youngest of the affected young individuals. All three individuals were males, had over 60 (CAG)_n repeats and had inherited the gene from their fathers, with amplification of the trinucleotide repeats occurring in the process. Diagnosis of juvenile Huntington's disease presents the ethical problems of informed consent and genetic testing in minors, and the delicate procedure of post-test counseling.

O-108

Two-photon imaging of cell-specific fluorophores in transgenic mice - an exploratory tool to study mechanisms of white matter injury

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Relatively little is known about specific pathways leading to structural and functional disruption of axons and glial cells in white matter. Because focal cerebral ischemia in humans damages both gray and white matter, an understanding of white matter injury is important in devising potential therapeutic approaches. We have developed a novel brain slice model from transgenic mice under control of cell-specific promoters to understand interactions between oligodendrocytes and axons under high resolution two-photon microscopy. Our data extends over previous findings the vulnerability of oligodendrocytes and axons both in culture and in slice preparations to glutamate toxicity during stroke and hypoglycemia. Conditions as different as stroke, trauma, perinatal brain injury, and multiple sclerosis may share common mechanisms of white matter injury.

O-109

Are chondroitin and glucosamine in combination effective in the treatment of osteoarthritic pain?

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Aim: As non-steroidal anti-inflammatory drugs today are contraindicated for osteoarthritic pain in elderly patients with cardiovascular disease due to their adverse effects, a review of the evidence was performed regarding the use of oral forms of chondroitin and glucosamine in combination as an alternative treatment.

Method: An internet review for available evidence was carried out of secondary sources (reviews or meta-analyses of primary studies in the Cochrane Database of Systematic Reviews and the Database of Abstracts of Reviews of Effects) and of primary sources (randomised controlled trials in Medline through PubMed and in the Cochrane Central Register of Controlled Trials), followed by a critical evaluation of the results for validity, reliability and applicability.

Results: Three relevant randomised controlled trials with valid, reliable and applicable results were identified.

Conclusion: Chondroitin and glucosamine in combination were found to significantly reduce pain in mild to moderate OA of the knee measured by the global pain visual analogue scale, and in moderate to severe knee OA measured by the WOMAC Scale, while significantly improving disability in mild to moderate knee OA as measured by the Lequesne Index.

Discussion: If the results are generalisable to osteoarthritis of all joints, there are good indications that combined chondroitin-glucosamine in purified therapeutic doses should help care for osteoarthritis patients safely and at modest expense. In order to facilitate any possible recommendations for their use in clinical practice, long-term and larger studies are needed to elaborate more definite results and investigate their preventive use as disease-modifying osteoarthritis drugs.

O-110

A survey of Paget's disease of bone in Malta

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Paget's disease of bone is commonly encountered in the Maltese population. A survey has been conducted on 20 patients with this condition seen at the Medical Outpatient Department/St Luke's Hospital during the first 6 months of 2007. Various aspects of the disease have been analysed: age and sex distribution, familial aggregates, mode of presentation, complications, pattern of bone involvement and a semi-quantitative assay of disease activity as measured by radioisotope bone scintigraphy and serum alkaline phosphatase levels. These characteristics are being compared to previously published surveys of Paget's disease in other countries.

O-111

Biological therapy in rheumatic disease: five year experience in Malta

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Advances in understanding the pathogenesis of many rheumatological disorders over the past decade have resulted in remarkable advances in therapeutic options for many patients suffering from these disorders. The pro-inflammatory cytokine tumour necrosis factor alpha (TNF-alpha) has been shown to be a key mediator in a number of inflammatory disorders, and the development of TNF-alpha inhibitors has proved to be a major therapeutic advance. Initially licensed for use in rheumatoid arthritis, TNF-alpha inhibitors have been subsequently approved for a number of other inflammatory arthritides as well, including ankylosing spondylitis and psoriatic arthritis. Case reports and case series have suggested favourable results with these agents in other connective tissue diseases, including various types of vasculitis. Another interesting area in the field of

connective tissue disorders has been the role of B lymphocytes. Rituximab is a monoclonal antibody that binds to the protein CD20 which is found on the surface of B-lymphocytes. Rituximab has been shown to be effective in patients with rheumatoid arthritis, systemic lupus erythematosus as well as a number of other connective tissue disorders. Three monoclonal antibodies are available within the Maltese National Health Service – the TNF-alpha inhibitors etanercept and infliximab, and the anti-CD20 antibody rituximab. Etanercept was the first biological agent to be introduced in Malta in 2001. At present over 40 patients with various rheumatic disorders are being treated with these agents, over 30 of them being looked after by the author. This paper summarizes the local experience that has been gained with these agents over the past five years.

O-112

Community mental health services in Malta and their development: a review

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Epidemiological research has clearly shown the high prevalence of psychiatric disorder in the community, with one year rates of 30% at primary care level and 8% at secondary care and with up to two thirds of GP attenders suffering from mental health problems. This leads to high morbidity, suffering, reduction or loss of function, burden and marked family distress.

Community mental health services have developed greatly in the developed world and Malta has gradually followed suit. The last years have seen much effort and emphasis given to the development of community psychiatric services and their has been steady progress.

A pilot area of service commencing eleven years ago facilitated the identification of difficulties and challenges in our local context and we learnt much. Following this a strategy document was developed with the participation of all stakeholders.

This has lead to gradual implementation of budding services at primary, secondary and tertiary care levels in the community with the development of multiple teams. This is accompanied by a sense of achievement, excitement and hope but much still needs to be done.

A review of the developments in our community services is done with an exploration of the lessons learnt and our future needs and challenges

O-113

The impact of having a family member facing mental health problems on the caregiver and the family: how can social and psychiatric services be of help?

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Context: With nearly 10,000 patients listed on the Psychiatric Outpatients register and another 400 receiving in patient treatment at Mount Carmel Hospital, circa one person in every eight families faces mental health problems in Malta. In this context, the National Family Commission set up a multidisciplinary research group to assess the prevailing situation with a view to making appropriate recommendations.

Aims: This study seeks to elicit the impact on the caregiver of having a family member facing mental health problems, as well as the effect on children within the family. It also attempts to consider some services available to family caregivers of patients with mental health problems, and to explore research evaluating the effectiveness of these different services.

Methods: As a research tool for the study, the group opted to administer The Involvement Evaluation Questionnaire - European Version (IEQ-EU) by Shene, Wijngaarden and Koeter (1997). The psychometric properties of the

IEQ are well established with the questionnaire available in nine languages where some of the translations have been developed, validated and used in the BIOMED-financed Epsilon study of schizophrenia in five European countries. A further 36 questions were devised by the research group in order to educe the caregiver's views regarding the quality of service and help being offered to the patient and family by the Psychiatric Outpatients Service and the kind of help and support they would suggest

Conclusion: The results of the study shed interesting light on a wide range of issues, presenting a comprehensive profile; data relating to levels of care and encouragement, relationships, preoccupations, financial implications, psychological repercussions; and effects on children. It concludes with recommendations based on the interviewees' responses regarding services used in this sector.

O-114

Establishing whether a community mental health team has managed to reduce the number of psychiatric admissions to hospital

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A project for community-based psychiatric services has been set up since June 1995 and caters for a pilot area consisting of Qormi, Zebbug and Siggiewi. Three of the main objectives of this project were (1) to reduce inappropriate hospital admissions; (2) to decrease involuntary admissions; (3) to decrease the number of crisis referrals (unplanned admissions). In this study, trends in the number of admissions, including whether these were planned or unplanned, as well as in the length of stay, over a ten-year period have been evaluated. This study is based on data of patients seen at one of two clinics held at Qormi Health Centre, and in particular that on a Monday morning. Initial data indicate that of about 300 patients being seen circa 100 patients had psychiatric admissions to hospital. Then the actual number of admissions and the length of stay for each patient were estimated. This information was subsequently subdivided in two subsets, June 1995 - May 2000 and June 2000 - May 2005 and statistical tests were used to evaluate the data gathered in order to establish whether there was any change in the pattern of such admissions as a result of the team's intervention.

O-115

Establishing whether there is a correlation between the psychiatric diagnosis, the number of admissions and the length of stay spent at hospital

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In this study we strive to establish whether there is a correlation between the broad-category psychiatric diagnosis, the number of admissions and the length of stay spent at hospital. The patients included in this study are those who attend the Qormi Health Centre psychiatric clinic on a Monday. Data, regarding their ICD-10 diagnosis, number of admissions and length of stay over the span of 10 years was collected and grouped per individual. Finally statistical tests were used to analyse the raw data. This data is useful so as to determine which subgroups of our psychiatric community require most attention and care, and hence highlights the most vulnerable subgroups in society. This information is vital as it will help us focus more on these groups and as a result will help to improve the community services provided.

O-116

Maltese translation of the Camberwell Assessment of Need

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The Camberwell Assessment of Need (CAN) is a tool for the comprehensive assessment of the needs of people with severe mental illness (SMI). Four broad principles governed the development of CAN. First, that everyone has needs and that although people with SMI have some specific needs, the majority of their needs are similar to those of people who do not have a mental illness, such as having somewhere to live, something to do and enough money. Secondly, it was clear that the majority of people with SMI have multiple needs and that it is vital that all of these are identified by those caring for them. Therefore, a priority of the CAN is to identify, rather than to describe in detail, serious needs. Thirdly, needs assessment should be both an integral part of routine clinical practice and a component of service evaluation. Lastly, the CAN is based on the principle that need is a subjective concept, and that there will frequently be differing but equally valid perceptions about the presence of absence of specific need. Furthermore the CAN is patient-rated as well as carer-rated and thus it provides both a subjective and an objective view of the situation. It was decided that such a useful and valuable tool be translated and modified to cater for the local scene to enable the needs of severe mental illness to be measured. This presentation describes the process of translation from English into Maltese and back-translation into English with the adoption of the necessary modifications.

O-117

Attitudes of medical and dental professionals and students towards research

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Research is pivotal to a country's medical system: not only to improve the quality of health care but also to stay in touch with the dynamics of the system itself.

Aims: To assess attitudes of medical and dental professionals and students towards research, evaluating research conditions, resources, problems encountered. These criteria are used to compare the involvement of students and professionals in Malta with their foreign counterparts.

Methods: Two questionnaires were devised; one aimed towards professionals, the other towards students. The questionnaires were distributed both via hard copy and electronically. Filled questionnaires were collected, data was processed and partial results generated. This study is currently ongoing. Thus far, the questionnaires were only collected from professionals.

Results: Current results, based on preliminary data from 91 questionnaires completed by professionals show that 74% have carried out some form of research after obtaining professional status. Data generated includes frequency of responses per speciality, number of years of clinical practice, frequency of specific difficulties encountered by researchers during specific phases of their work; attitudes to joint research projects between medical/dental professionals, other healthcare professionals and non-medical professionals; comparison between part-time and full-time research; effect of gender on frequency of participation; involvement of students.

Conclusions: Based on current results, experienced professionals acknowledge the importance of research for advances, improvement and innovation in healthcare professions. This ultimately leads to improved treatment, and subsequently, better quality of life for patients.

O-118

Gender and performance in the MD Degree Final Examination in Medicine

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Background: The year 2004 marked a change in the structure of the clinical part of the final examination in Medicine from the traditional format to Direct Observation Clinical Encounter Examination (DOCEE). The written part of the examination together with the objective clinical assessment allows the evaluation of different skills.

Objectives: To evaluate the performance by gender in the overall examination and then separately in each part i.e. the MCQ paper, short answer questions paper, paediatrics, the clinical stations A, B and C, the knowledge assessment stations D (diagnostic) and E (emergency) and the communication station F (history taking) to identify any possible differences.

Design: Final year examination results in medicine obtained over a two year period (2005-2006) were retrieved from datasets held by the Department of Medicine. The results of 111 graduates (males n=57) were analysed for all components of the examination.

Results: In 2005, a total of 62 candidates (females n=34) took the examination; the highest grade was B+ with an overall mark of 78% and the lowest grade was D+ with an overall mark of 51%. There were 4 failures. In 2006, a total of 49 candidates (males n= 29) took the examination; the highest grade was A with distinction and an overall mark of 82% and the lowest was again D+ with a final mark of 51%. There were 5 failures.

Overall females were found to have performed better than their male counterparts where median overall mark was equal for the two groups but the mean was higher in the female group with smaller standard deviation and variance. Females were more likely to get better grading and less likely to fail (two tailed t-test P=0.17). Gender difference in performance was more marked in the clinical stations A, B and C (two-tailed t-test P=0.29)

Conclusion: There is a clear disparity in gender performance and further studies are needed to identify possible causes for this in preparation and in gender characteristics

O-119

Medical students' perspective on pharmaceutical marketing

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Aim: To survey the attitudes of fourth and fifth year medical students in Malta towards pharmaceutical marketing.

Methods: An anonymous questionnaire was distributed containing several questions designed to assess reactions to statements based on a modified five-point Likert scale.

Results: Response rate was 81 out of 110 (73.6%). The majority of respondents (78.7%) do not object to interactions with pharmaceutical companies in medical school. Almost all (96.3%) have no objection to sponsorship of educational seminars. The majority (78.0%) are not against receiving gifts from pharmaceutical companies in general, males more than females (84.0% vs 71.0%). Respondents are most willing to accept a penlight (87.7%), followed by a textbook (85%), stethoscope (81.8%), lunch (75.9%), electronic organiser (69.6%), entertainment tickets (63.7%), and least willing to accept a watch/jewellery (46.2%). Almost half of respondents (46.3%) stated that when prescribing from a choice of drugs that are otherwise identical, they would preferentially prescribe a drug from a company that provided them with gifts or incentives over one that did not. Almost a quarter of respondents (23.8%) believe that information provided about drug effectiveness from pharmaceutical companies is untrustworthy.

Conclusions: Fourth and fifth year medical students in Malta are largely unopposed to interacting with pharmaceutical companies and receiving

gifts from them, especially if medically-related, and would preferentially prescribe drugs from companies that provided gifts and incentives. Results also point towards a general mistrust of information provided by pharmaceutical companies. It will be interesting to compare these responses to those of medical students in other countries.

O-120

The course in Behavioural Sciences in the Faculty of Medicine and Surgery: a review

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The development of the medical student is not based solely on the acquisition of knowledge but also on the development of skills and appropriate attitude. This requires ability to communicate effectively with patients and colleagues, sensitivity to patient needs, patient centred care and the capability to influence patients to take the appropriate decisions and maintain behaviour change in favour of their illness or disorder.

Recent years have seen marked changes in medical school curricula to support this and greater emphasis has also been made post shipman.

The Faculty of Medicine and Surgery in Malta has moved strongly in this direction and new curricula have been developed and introduced.

Leading this change is the course in Behavioural Sciences. Developed throughout the curriculum and with considerable emphasis on student-centred learning in small groups, it focuses on interpersonal communication, teamwork, reflective experience, holistic and patient-centred care, personal development and avoidance of burn out. Recommendations from the GMC 'Tomorrow's Doctors' publication with focus on principles of good medical practice and avoidance of patient dissatisfaction, complaint and litigation are also emphasized.

The institution of this part of the curriculum is described and explored as it has developed in these past four years

O-121

Developing a specialist training programme in family medicine for Malta

MR Sammut

Malta College of Family Doctors

Introduction: Specialist/Vocational Training in Family Medicine in Malta is due to be launched in 2006 and run by the government's Primary Health Care Department. The Malta College of Family Doctors will be responsible for ensuring the quality of the academic content of the programme, of training of trainers and trainees, and of the certification of completion of specialist training.

Duration & structure: The 3-year programme (EU Directive 2001/19) will be based in family practice (50% of the time) and taught using adult learning methods by GP trainers, each paired with one GP trainee. For the rest of the time, the programme will be supplemented by carefully planned attachments with appropriate hospital specialities. The trainees will be in designated training posts throughout, and must attend weekly half-day teaching sessions.

Competence & assessment: Trainees will be required to achieve the community-based competences recommended by WONCA Europe (2002), and hospital-based competences drawn up in collaboration with the heads of the respective hospital departments. Formative assessment will be both pre-course (Phased Evaluation Programme) and in-course (Direct Observation Rating Scales, Phased Evaluation Programme, portfolio-based learning, small group activities, practice assessment). Summative assessment will include a written component (Practical Work, Trainer's Report, Modified Essay Questions and Multiple Choice Paper) and a clinical part (Video and/or Simulated Patient Surgery, Objective Structured Clinical Examination and Structured Orals).

Certification: Successful participants will be certified as having completed the Specialist Training Programme in Family Medicine, and considered to be competent, reflective and self-educating family doctors fit to practice in Malta.

O-122

A simple method for the objective assessment of thenar atrophy - a preliminary study

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Introduction: Although thenar atrophy is caused by a variety of clinical conditions, it is commonly associated with carpal tunnel syndrome. So far thenar atrophy has been assessed subjectively.

Aims: a) To test a simple, novel, objective and quantitative test for the assessment of thenar atrophy, b) Correlate this objective test with subjective evaluation of thenar atrophy.

Patients and Methods: The apparatus consists of a box with a clear glass sheet on the top uncovered surface, with a digital camera placed in the base of the box. 45 hands of 23 healthy volunteers and 23 hands with clinical evidence of thenar atrophy of 12 patients with carpal tunnel syndrome were recruited. Thenar atrophy was classified subjectively as mild, moderate and severe. Patients and subjects were asked to press their hands facing down on the glass sheet and digital photos were taken. The technique relies on the fact that the area where pressure is exerted on the palm blanches. Photos were transferred to photo processing software. After enhancement the photos were transferred to an image analysis software. The thenar area (A) and the rest of the palm area (B) were measured. The thenar ratio was calculated as A divided by B.

Results: Hands with thenar atrophy had a statistically significant lower thenar ratio than healthy hands (0.19 ± 0.09 vs 0.30 ± 0.07 ; P value < 0.0001). So far, the subjective assessment of atrophy cannot be correlated with the objective test.

Conclusion: This method can be a possible objective test for thenar atrophy.

O-123

One year mortality after proximal femoral fractures

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Aim: The most common emergency admissions to the department of orthopaedics are elderly patients with proximal femoral fractures. This study looked at the mortality rate over one year in such patients over the age of 65 years admitted to the Department of Orthopaedics, St Luke's Hospital, Malta. Various factors affecting the mortality rate were assessed.

Method: Data was collected for the periods January - June 2004 and January - June 2005. The medical records of all patients over the age of 65 years admitted to the department were reviewed. Variables assessed included: age, sex, length of time from admission to operation, fracture type (subcapital, intertrochanteric, subtrochanteric), fixation method used, patient's pre-morbid condition (American Society of Anaesthesiologists Score, presence or otherwise of dementia, past medical and surgical history), blood parameters pre- and post-operatively, the need for blood transfusion, type of anaesthesia used, intra- and post-operative events. The patient's morbidity and mortality after one year had elapsed was noted.

Results: 118 patients were collected for the period January - June 2004. Of these, records of 6 patients could not be traced and 29 patients were deceased giving a mortality rate of 0.26.

188 patients were collected for the period January - June 2005. A similar mortality rate was recorded here.

Conclusion: Various factors influence the mortality rate in elderly patients with proximal femoral fractures. Careful pre-operative assessment and optimization help to decrease patient morbidity and mortality.

O-124

Hand infections severe enough to warrant hospital admission

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Aims: 1. To audit the number of very severe hand infections requiring hospital admission - their incidence, causes and predisposing factors, site, treatment prior to admission, management in hospital, length of hospital stay and outcome. 2. To standardize the treatment of such infections which can cause substantial morbidity.

Methods/Results: Data was collected from patients and their files with proper consenting from February 2005 to date. All data was tabulated and results were analysed.

Conclusion: This is a basic research paper on which to improve our management of such infections.

O-125

Hand and wrist configurations in patients with carpal tunnel syndrome

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Introduction: Most cases of carpal tunnel syndrome are idiopathic. Several studies attempted to find an explanation for the idiopathic form of this condition; including body mass index, stature and cross-sectional area of the carpal tunnel.

Aim: To investigate whether there is a correlation between hand and wrist configurations and idiopathic carpal tunnel syndrome.

Patients and methods: Sixty patients with idiopathic carpal tunnel syndrome and sixty healthy volunteers were recruited for the study. The hand and wrist dimensions of each patient and subject were measured using standard engineering Vernier callipers.

Results: The palm width was significantly greater in the patient group. There was no significant difference in hand length between the two groups. Both wrist Department and wrist width were significantly greater in the patient group. The hand ratio, that reflects the difference of both the length and width dimensions of the hand was significantly lower in patients compared to controls (2.20±0.13 vs 2.26±0.14; P value 0.015). The wrist ratio, that reflects the difference of both the Department and width dimensions of the wrist was significantly lower in patients compared to controls (0.61±0.09 vs 0.65±0.07; P value 0.009).

Conclusion: Patients had squarer hands and wrists than controls. Our findings suggest that the anatomy of the hand and wrist may be important in the development of carpal tunnel syndrome.

O-126

A review of the relationship between obesity and total knee replacement outcome

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As the prevalence of obesity continues to rise in Malta knowing the relationship between Total Knee Replacement (TKR) outcomes and obesity becomes increasingly more crucial. Since a number of studies have linked obesity with the development of osteoarthritis of the knee and excess bodyweight would result in an increase in the stress transfer through a TKR to the surrounding bone, this would suggest a poorer outcome and higher failure rate in obese patients. However, whilst a number of studies show an adverse effect of obesity on TKR outcome, other studies have indicated no difference between obese and non-obese patients. This paper reviews various studies assessing the possible link between bodyweight and TKR outcome and suggests some simple measures that can be undertaken prior to and after the operation to possibly reduce the adverse effect obesity might have on a TKR's short and long-term outcome.

O-127

Biomechanical analysis of lumbar spine implants

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Introduction: Conservative approach versus surgery is an ongoing discussion for the treatment of vertebral fractures and better understanding of biomechanics in both cases is required. This requires the knowledge of the fracture implant properties that influence the success of the treatment with respect to stability as well as to the bone remodelling process. The mechanical properties of spinal implants are very difficult to obtain either 'in vivo' or 'in vitro'. Computer simulation is forming a very important tool in biomechanics since it can simulate the behavior of the spine in situations where other methods fail. The point in case is the implant - bone interface.

Method: The computer simulation by means of Finite Element Analysis investigates the behaviour of implanted spinal systems consisting of pedicle screw / nut / locking sleeve and rod construct. The vertebra is modelled assuming isotropic properties of both cortical and cancellous bone while the space between L2 and L4 vertebra is filled with cement. Three contact pairs between screw, nut and sleeve were modelled using CONTA174 and TARGE170 elements. Applied internal loads in passive ligamentous spine for neutral standing with 0N load in hands consisted of axial compression, shear force, and sagittal moment. The static non-linear solution was computed by means of PCG equation solver using full Newton-Raphson solution procedure with force convergence control set to 0.002 tolerances.

Results: The screw is undergoing bending as expected and the bone-implant interface exhibits the variation of stress/strain along the length of the screw. Further investigation will be required at these locations.

O-128

A profile of genetic diseases in Malta

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Genetic diseases are important causes of morbidity, but their frequency and significance in clinical practice are not adequately appreciated.. Epidemiological studies on genetic disorders in Malta are very limited. This paper is an overview of genetic disorders in Malta, diagnosed over a period of twenty years in individuals attending the genetics clinic at St Luke's Hospital from 1985 to 2006. It assesses the magnitude of the problem of genetic diseases and provides a profile of their pattern of distribution in Malta. The various disorders were classified as chromosomal, monogenic, polygenic, teratogenic, and syndromic. This study evaluates the importance of the genetics services being provided, the reasons for referrals, the types of services requested, and the outcomes in terms of results, benefits and limitations of the service. It allows us to determine the types and profiles of individuals who are referred to the genetic clinic, the benefits they derive from it and the limitations experienced. . It analyses also the impact and importance of the genetic diagnostic and counseling service on community health, the changing trends in genetic diagnostic technology, the counseling services provided, and the future possibilities and needs for further expansion of services.

O-129

Linkage to a region on chromosome 11p12 in two Maltese families with severe osteoporosis

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Aims: Osteoporosis is a metabolic bone disease with a strong genetic component. A family based linkage study was performed for the possible identification of chromosomal loci that might contain genes responsible for an increased susceptibility for osteoporosis in the Maltese population.

Methods: A whole genome linkage scan using 400 microsatellite markers

was performed on 27 members from two Maltese families with a highly penetrant form of osteoporosis. The phenotype was defined by lumbar and femoral z-scores calculated after measurement of bone mineral density (BMD) by DEXA. Both males and females were among the affected individuals. Multipoint parametric and non-parametric linkage analyses were performed by EasyLinkage v4.0 using GENEHUNTER v2.1, assuming dominant and recessive modes of inheritance with variable penetrance.

Results: Evidence of linkage was observed to a marker at 11p12 where a non-parametric LOD score (NPL) of 4.99 was obtained. A maximum heterogeneity LOD (HLOD) score of 2.74 ($p=0.0091$) for this region was obtained for the dominant mode of inheritance with 90% penetrance and a phenocopy rate of 1%. When performing fine mapping at this region both the NPL and HLOD scores increased to 7.00 and 3.32, respectively. Direct sequencing of the coding and promoter regions of the TRAF6 gene located within this region revealed a number of sequence variants that are being further investigated.

Conclusions: These results suggest that a major gene responsible for osteoporosis might be present in region 11p12. Identification of such genes is important for the early identification of individuals at risk and for the development of effective treatments.

O-130

Translation of IGBP-1 mRNA contributes to the regulation of expansion and differentiation of erythroid progenitors

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Erythroid progenitors can be expanded in vitro in the presence of erythropoietin (Epo) and stem cell factor (SCF), while they differentiate to enucleated erythrocytes in presence of Epo only. Our study aims to identify (i) signaling pathways that control expansion of erythroid progenitors and (ii) genes regulated by these signaling pathways. SCF strongly activates phosphatidylinositol 3 kinase (PI3K). SCF induced delay of differentiation can be released by inhibiting PI3K. An important PI3K-dependent process in cell fate is regulation of mRNA translation. PI3K controls the activity of mTOR (mammalian target of rapamycin), resulting in phosphorylation of eIF4E (eukaryote Initiation Factor 4E)-binding protein (4E-BP). Fully phosphorylated 4E-BP releases eIF4E, which can subsequently bind eIF4G, forming the eIF4F cap-binding complex. Translation of mRNAs with a structured UTR (untranslated region) require optimal availability of eIF4E. SCF, but not Epo can induce full phosphorylation of 4E-BP and efficient formation of the eIF4F complex. Overexpression of eIF4E inhibited erythroid differentiation, indicating that SCF-induced eIF4F activity contributes to progenitor expansion. A major step in mRNA translation controlled by eIF4F is polysome recruitment. To identify genes whose expression is regulated by signaling-induced polysome recruitment, we compared total and polysome-bound mRNA from factor deprived and Epo plus SCF restimulated progenitors using micro-arrays. Polysome recruitment of 13/15 targets is dependent on PI3K activation and eIF4E expression. Constitutive expression of these targets in erythroid progenitors revealed that IGBP1 (Immunoglobulin binding protein 1) was able to inhibit erythroid differentiation. Constitutive IGBP1 expression maintains phosphorylation of 4E-BP in differentiation conditions, possibly contributing to inhibition of erythroid progenitor differentiation.

O-131

Haemoglobin F Malta I: Interactions in vivo that regulate gamma to beta globin gene switching

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The biochemical mechanisms of globin gene switching remain elusive

however considerable insight is gained in vivo expression profiling in the context of specific regulatory DNA sequence diversity. The quantification of normal and abnormal globins of HbF-Malta-I (or alpha2Ggamma2, 117(G19)His>Arg) heterozygotes which are in tight linkage disequilibrium with Hb Valletta (or alpha2beta2 287(F3)Thr>Pro), together with haplotyping of homozygotes and heterozygotes including the Xmn-I dimorphism in the Ggamma promoter and the (AT)xTy polymorphism 5' to the Beta globin genes had suggested that the Xmn-I dimorphism was largely inactive in the normal newborn whilst the HbF levels and the proportion of Ggamma globin in anemic adult beta-thalassemia homozygotes and compound heterozygotes differed significantly. Here, we document the occurrence of seven newborns who were heterozygous at three globin loci permitting quantification by RP-HPLC of the six globin products in the context of genotypic variation at the Xmn-I and (AT)xTy sequences. Results were compared with newborn HbF-Malta-I-Hb-Valletta heterozygotes and anemic adult beta thalassemia homozygotes/compound heterozygotes. The globin quantification together with haplotype data were analysed using the general linear model by SPSS version 12. The data excluded significant effect of the Xmn-I dimorphism alone on relative Gamma/Beta globin gene expression in the newborn. Conversely, the (AT)xTy with BP1 binding sites of 19 (AT)7T5, 21 (AT)7T7, 23 (AT)9T5, or 25 (AT)11T3, nucleotides in trans over-ride Xmn-I. In contrast, it is the Xmn-I dimorphism that over-rides the (AT)xTy diversity in the anemic adult beta thalassemia homozygotes or compound heterozygotes. The GgammaFMalta-I/GgammaO ratio of the newborn heterozygotes with Hb F Malta-I and the AgammaT/AgammaI ratio of the newborn heterozygotes with HbF-Malta-I and HbF-Sardinia suggested that the developmental regulation of the Xmn-I site may be subject to cis/trans interplay with the (AT)xTy sequences.

O-132

An update of beta-thalassaemia carrier screening in Malta

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Background: Beta-thalassaemia is the most common single gene disorder in the Maltese population with a carrier rate of 1.8%. A national screening program was initiated by the Health Department in 1991 with the goal of identifying couples at risk and providing the necessary medical management and counseling. This study is an appraisal of the results achieved after a 15-year period.

Procedure: Data of the total number of subjects tested for beta-thalassaemia was collected. It included haematological data of antenatal mothers and their partners (when required), as well as DNA mutational sequence analysis reports of newborns which were identified at risk of being affected by beta-thalassaemia through the antenatal screening process.

Results: On a yearly basis an average of 3852 antenatal mothers were screened for beta-thalassaemia. Of these an annual average of 78 mothers were found to be consistent with beta-thalassaemia trait. After testing the partners of these cases, 1-2 couples annually were found to be at risk of having a child with beta-thalassaemia. These were counseled in view of their 25% chance of having an affected child. During the past fifteen years three new cases of beta-thalassaemia were identified through antenatal screening.

Conclusion: Results show that prenatal diagnosis has been successful in identifying the majority of Maltese families at risk of beta-thalassaemia and the thalassaemia birth incidence has decreased considerably. This approach may represent a model for other comprehensive screening programs for significant genetic disorders such as familial Mediterranean fever and Phenylketonuria. However, education programs for the affected families and the general public are much needed.

Poster Presentations

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Poster Session 1

Posters P-001 – P-063 will be adjudicated at 16:30 on Thursday 30th November 2006

Poster Session 2

Posters P-064 – P-125 will be adjudicated at 16:30 on Friday 1st December 2006

All posters will be presented in the Reading Room, above the main hotel foyer

Poster Presentations

P-001

Bilateral hydrothorax and hydromediastinum after a subclavian line insertion

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The author presents this case report of bilateral hydrothorax and hydromediastinum secondary to an uncomplicated insertion of a right triple lumen subclavian catheter in a patient ventilated in the intensive care unit following neurosurgery for a compound skull fracture.

This complication was identified six days after the line was inserted by observation of a swelling on the right side of the neck and chest wall, routine plain radiography and computed tomography of the chest. The subclavian line was subsequently removed, bilateral chest drains were inserted and eventually the patient made a good recovery.

P-002

General anaesthesia and acute intermittent porphyria: a case presentation

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We present a 35 year old lady known to suffer from ACUTE INTERMITTENT PORPHYRIA who was referred for General Anaesthesia for laparotomy in view of persisting abdominal pain. This clinical diagnosis of porphyria had been previously confirmed by elevated urinary porphyrins on more than one occasion. Prior to our encounter with the patient, she had been administered GA on four separate occasions over a number of years. Following each and every GA she was complaining of severe abdominal pain. We describe each GA and the drugs that were given on each occasion:

Our anaesthetic technique varied with the knowledge that the patient has acute intermittent porphyria and we summarise every drug that was given before, during and after our anaesthetic. We also discuss the monitoring used during the whole procedure.

Our patient did not show any signs of distress throughout anaesthesia and she made an uneventful recovery with no complaints of abdominal pain or of any other sort

P-003

Reverse engineering applied to a lumbar vertebra

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Introduction: By applying the concept of reverse engineering to biomechanical applications, numerical techniques are able to find a compromise between the drawbacks of traditional 'in vivo' and 'in vitro' testing through computer simulation. The simulation requires the construction of a virtual model, usually done via a 3D scan. The scan would create a point cloud of the bone's geometry from which a 3D solid model could be created. The virtual behavior of the model would then be controlled by means of defined boundary conditions through software applications.

Method: CT or MRI scans would present the best point cloud, 'in vivo',

but the Finite Element Analysis (FEA) software package available requires converting DICOM data to IGES format. Since the software for successful transfer was not available 3D laser scanning of an 'in vitro' sample was to be used. The third lumbar vertebra, loaned from the anatomy department, was significantly damaged. The vertebral body was deteriorated at its sides and most processes of the neural arch were missing and had to be reconstructed. The poor scanning method failed to target all areas of the bone; thus calling for manual reconstruction of the vertebra foramen. The virtual geometry was manipulated using various Computer Aided Design (CAD) applications and through various data exchange formats. FEA software was then used to add final touches to the vertebra's geometry. Isotropic and orthotropic sets of material properties were defined separately, boundary conditions were set and the Finite Element Method (FEM) was employed on both occasions.

Results: The stress and strain contours in the cortical shell and cancellous core of the vertebra were derived from the displacement values of each node in the virtual model. A comparison between the isotropic and orthotropic models was made and conclusions were drawn.

P-004

DNA modifying agents and co-culture techniques applied to cord blood mononuclear cell fraction enhance the expression of neuronal antigens

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²*Department of Biology, University of Malta,*

³*Department of Pathology, University of Malta.*

Background: Cord blood is nowadays recognised as a readily available and often banked source of stem cells. The plasticity of adult stem cells (of which cord blood form part) is being ever more clearly recognised resulting in a growing interest in the possibility of trans-differentiation opening up new therapeutic possibilities of cell transfer.

Aims: The purpose of this study was to analyse the potential for cord blood-derived cells to express neuronal antigens (as indicators of a shift towards neuronal differentiation) and to assess how to best enhance this tendency to trans-differentiation using chemical mediators and co-culture techniques.

Methods: Cord blood was obtained from term placental deliveries, after having obtained informed consent. The mononuclear cell portion was isolated using density centrifugation techniques and was cryopreserved until further use. When sufficient cord units had been processed, cells were divided into aliquots and exposed for a week to combinations of chemical modifiers including retinoic acid (known to cause neuronal antigen expression - positive control), DNA demethylating agents, histone deacetylase inhibitors and medium from neuronal and other cells. Neuronal filament expression was detected by fluorescent antibody staining and flow cytometry.

Results: DNA demethylating agents and neuronal cell conditioned medium enhanced neuronal filament expression whilst demethylating agents and other cell conditioned medium blocked neuronal antigen expression.

Conclusion: Neuronal antigen expression can be enhanced in cord blood-derived cells by demethylating agents and neuronal cell-conditioned medium

P-005

Isolating, growing and expanding cord blood mesenchymal and haematopoietic stem cells

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Background: Cord Blood is providing a readily available source of diverse kinds of stem cells with great renewal capability which is being banked internationally in public cord blood banks and which is providing the possibility for the promise of stem cell therapy without the controversies related to embryonic stem cells. One of the limitations of using cord blood for transplantations is the cell number which only allows satisfactory engrafting in children

Aims: The purpose of this study was to isolate different populations of stem cells from cord blood, including different types of mesenchymal stem cells (MSCs), particularly unrestricted somatic stem cells (USSCs), as well as Hematopoietic stem cells (HSCs), growing them in culture, quantifying their growth potential and attempting in vitro expansion using a number of two and three dimensional techniques.

Methods: Cord blood was obtained from term placental deliveries, after our having obtained informed consent, by the delivering midwives, to whom we are greatly indebted for their sterling work. The mononuclear cell portion was isolated using density centrifugation techniques. Cells were seeded in tissue culture flasks and grown in culture media together with dexamethasone. Haematopoietic stem cells were grown in semi-solid media after long-term culture.

Results: Different Stem cell populations were isolated including CD34+ve HSCs and USSCs and these were identified by morphology as well as by flow cytometry. Clonogenic capability was shown.

Conclusion: Different stem cell populations were successfully isolated from cord blood mononuclear cell fraction.

P-006

Isolating, growing and expanding skin cells, using cadaveric skin and bone collagen as templates for skin reconstruction

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Background: Skin replacement in burns is an important part of the therapeutic procedures carried out for such patients. In the case of extensive burns, cadaveric skin from unrelated cadavers appears to be a short term option. However long term permanent replacement requires skin made with the patient's own cells. Limiting factors for rapid growth of replacement skin include a suitable infrastructure which will not cause rejection.

Aims: The purpose of this study was to isolate skin cells from patient-derived skin which was to be discarded and using these skin tags to grow and amplify keratinocytes and attempt to reproduce larger pieces of replacement skin using infrastructural frameworks from cadaveric skin and bone collagen amongst others.

Methods: Skin (primarily foreskins from circumcisions) was obtained after having received informed consent from the patient's parents. Epidermis and dermis were dissociated by overnight dispase digestion and keratinocytes were further isolated using trypsin before seeding into tissue culture plastic with appropriate speciality medium.

Dermis was used to culture fibroblasts separately to prevent them taking over the keratinocytes culture. Both cell types were integrated into skin scaffolds.

Results: Successful isolation of both cell types was completed – results of skin cultures using different scaffolds is shown.

Conclusion: Skin fragments for suitable grafting in case of severe burns can be generated by amplifying keratinocytes from small segments of skin.

P-007

Linkage analysis in two Maltese families with a high incidence of Coeliac disease

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Aims: Gluten-sensitive enteropathy, or coeliac disease, is an autoimmune disorder characterized by inflammation, villous atrophy and hyperplasia of the small intestinal mucosa. Coeliac disease is a complex disease caused by both environmental and inherited factors. A small number of family based linkage studies were carried out so far, where the HLA locus on chromosome 6 and other chromosomal regions were linked with the disease. In this study, linkage analysis was carried out in two extended Maltese families with a high incidence of coeliac disease.

Methods: A whole genome linkage scan using 400 microsatellite markers was performed in twenty four family members, seven of whom were diagnosed as coeliac by biopsy. Multipoint parametric and non-parametric linkage analyses were performed by EasyLinkage v4.01 using GENEHUNTER v2.1, assuming dominant and recessive modes of inheritance with variable penetrance. Disease allele frequency was assumed to be 0.001.

Results: The most significant NPL was of 3.23 ($p=0.0039$) and LOD of 1.49, to marker D20S478, found very close to the tissue transglutaminase gene. In one family, highest NPL (5.27; $p=0.0039$) and LOD (1.46) scores were observed to marker D10S1731. Suggestive linkage was also observed to two other regions on chromosomes 9 and 11. No evidence of linkage was observed to the HLA region in these families.

Conclusions: These results suggest that non-HLA genes might be responsible for the onset of coeliac disease in these Maltese families. Further investigations of the indicated loci are being performed by fine-mapping and sequencing of candidate genes.

P-008

Introduction of flow cytometric applications for diagnosis of haematological neoplasms in Malta

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Aim: To demonstrate the importance of flow cytometric applications as a tool for diagnosis, prognosis and monitoring of treatment in haematological malignancies.

Method: Flow cytometry involves the identification, classification and quantitation of cells according to their physical and antigenic characteristics. Flow cytometry facilitates determination of the stage of maturity of the cell. It determines the lineage of the cell whether myeloid, B-lymphoid or T-lymphoid. It detects aberrant expression of certain antigens on cells and also identifies biphenotypic neoplasms.

Since the introduction of flow cytometry at the Haematology Laboratory in Malta, 49 patients were diagnosed with a haematological malignancy. Out of the 49 patients, 26 patients were diagnosed with Acute Leukaemia, with 16 patients diagnosed of Acute Myeloblastic Leukaemia (AML) and 10 with Acute Lymphoblastic Leukaemia (ALL). Three (3) of the AML patients and 2 of the ALL patients showed aberrant antigenic expression. Twenty three (23) patients were diagnosed with Chronic Lymphoproliferative Disorder, which included B-cell lymphocytic leukaemia 18 patients, T-cell lymphocytic leukaemia 2 patients and Mantle Cell Lymphoma 3 patients. Twelve of these patients are also being monitored regularly for minimal residual disease.

Conclusion: From the data obtained it can be concluded that flow cytometry is an effective tool for achieving a rapid and specific diagnosis, whilst having also prognostic implications. It is also a valuable tool in patient monitoring since it is widely applied for the detection of minimal residual disease at different stages of treatment.

P-009

Incident reporting at the Pathology Department: a retrospective study

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Aims: An incident is defined as an unplanned event with the potential to cause injury (accident) or damage to personnel, materials, equipment, or property. Incidents in the Pathology Department were analysed and defined in order to attempt to put systems in place to prevent recurrence. It was also observed that the number of incidents in the Pathology Department decreased from 2004 to 2006 by 55%.

Methods: All incidents occurring at the Pathology Department between January 2004 and August 2006 were recorded and analysed using a standard data form. Incident investigations were also carried out to provide detailed information on each event. Incidents were classified according to their nature.

Results: A total of 80 incidents were recorded, of which the commonest was exposure to blood (36.3%) and the least common were incidents involving chemical exposure (2.5%). Near misses amounted to 18.8%.

Conclusion: Incidents are decreasing since 2004 possibly indicating good laboratory safety procedures and better understanding and adherence to departmental safety policies. Laboratory safety audits were also introduced.

P-010

Compatibility testing at St Luke's Hospital: used or abused?

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Blood Bank, St Luke's Hospital

Aims: From January to August 2006 St Luke's Hospital Blood Bank performed over 30 thousand compatibility tests, among other services it provides. The usage of blood and the costs involved were determined.

Methods: Data on the laboratory information system (Progesa) were analysed.

Results: Of the total number of compatibility tests performed, 66.4% of units requested were not issued or were returned back to the blood bank. The cost involved to perform a compatibility test varies with the number of units requested. This involves a patient blood group that costs LM 1.25 and for each unit cross-matched the cost increases by LM 1.35.

Conclusion: When taking into consideration the time it takes to perform the test and the costs involved, changes to the current service provision ought to be considered. The introduction of techniques such as "Type and Screen" and "Group and Hold" may streamline the service and reduce the costs.

P-011

Managing obesity in Family Practice

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Recent data shows that Malta is amongst the leading countries in Obesity and Overweight prevalence across all age groups and sexes. What is more alarming is that recent studies suggest that rates of Obesity and Overweight are increasing. Physician intervention to encourage and assist obese patients to lose weight is warranted for health, social and even financial reasons.

Obesity experts from around the globe have developed various guidelines to help family practitioners assist their obese patients with losing weight. As primary care physicians look for ways to implement these guidelines with positive results, an understanding of weight management will be helpful. Diet and exercise combined have been shown to achieve the best results, both short- and long-term. Behavior modification, medications and surgery have an important role to play with careful patient selection. In this paper we address a number of weight management issues and how they can be tackled by family practitioners.

P-012

Clinical trials on medicinal products in Malta after EU accession

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Following EU Accession, Malta has to adopt EU Directives as part of its own legislation. Three such directives concern the conduct of clinical trials in European countries – 2001/20/EC, 2003/94/EC and 2005/28/EC. These directives, and the respective guidelines explaining their implementation, have considerably changed the way clinical trials are conducted. While the participation of Malta in clinical trials is to be encouraged for various reasons, these have to be regulated according to the legislation set out by the European Union. In themselves, what these Directives strive to achieve are mainly the safety of the study subject and the protection of the investigators from serious consequences. This poster aims to give a brief overview of these changes to prospective investigators and hospital administrators.

P-013

Location of residence and access to the medical consultant clinic at Qormi health centre

C Azzopardi

Department of Primary Health Care, Malta.

Distance from residence to the point of delivery of a community service may be perceived as a barrier to referral and access to that service.

Objective: To examine the effect of distance from the place of residence to a health centre on the referral rate to the medical consultant clinic (MCC), and to identify any geographic barriers to attendance at the MCC as determined by the mode of transport to the clinic.

Design: Cross-sectional study.

Participants and setting: New case referrals to the MCC at Qormi health centre between January and June 2005.

Data collected: Date of clinic; age; sex; mode of transport to clinic - walking (approximate duration in minutes), motorised transport (car, bus, other); reason for choice of transport - too far to walk, unable to walk for medical reason, other reason.

Data analysis: New cases per unit population over time for the villages of Qormi, Siggiewi and Zebbug respectively; proportion of walking versus non-walking new cases for the village of Qormi.

Results: The rate of new case referrals per thousand populations of Qormi, Siggiewi and Zebbug were 4, 3.3 and 4.4 respectively (Chi-squared 3.81, $p = 0.157$). All patients from Siggiewi and Zebbug used motorised transport to access Qormi health centre, with 68% opting for personal transport. 52% of patients from Qormi walked to the health centre, the majority taking up to ten minutes. The mean age (SD) of the patients who walked was 61.4 (11.2) years, and those who used motorised transport 55.7 (12.7) years ($U = 7535$, $p = 0.023$).

Conclusion: Distance to Qormi health centre is not a barrier and does not affect the rate of new case referrals to the MCC.

P-014

An audit of natural family planning training and usage

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¹Cana Movement,

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The Cana Movement has been training couples in Natural Family Planning (NFP) methods for a number of years, in its efforts to support and to strengthen the Maltese family. This audit aims to evaluate this education programme, including current use and perception of NFP methods. An anonymous postal survey was carried out among all those who took part in NFP courses between 1995 and 2004. In addition, results are compared to data drawn from the Health Interview Survey (HIS) carried out by the

Department of Health Information in 2002 on a representative sample of the Maltese population. This survey included a question on use of contraceptives or family planning methods. The great majority of the NFP respondent population (62%) had been married for 5 to 10 years, and aged mostly between 30 and 35 years. A large group of female respondents described themselves as housewives (49%). All women had achieved at least to secondary education. The top two occupational groups among male respondents were professionals (20%) and skilled labourers (19%). Most respondents (49%) reported having made extensive use of the learnt methods. There are no significant differences by age group ($p=0.223$). Similarly, 57% find NFP methods to be very reliable with no significant age difference ($p=0.129$), but this proportion peaks to 75% in 40-45 year old women.

HIS figures show an increasing proportion of respondents opting for NFP with increasing age, with a minimum of 19% of women aged between 16 and 25 years up to 34% between 46 and 55 years. Indeed, the three most popular methods in the younger two age groups: 16 to 25 and 26 to 35 years, are NFP, condoms and withdrawal, with the latter method being the most popular in the older age group and condoms being preferred by the younger group.

P-015

The applicability of the technology acceptance model to doctors in the Maltese Public Healthcare system

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Health Services Management Division, Institute of Healthcare

Introduction: Information Technology (IT) plays a key role in the implementation of major reforms in healthcare. However, good knowledge of IT and availability of these systems does not equate directly with adoption in clinical practice. The Technology Acceptance Model (TAM), by Fred Davis, identified Perceived Ease of Use (PEOU) and Perceived Usefulness (PU) as predictors of Usage and Acceptance.

Aim: To investigate the applicability of the TAM to Doctors in the Maltese Public Healthcare System.

Methods: The study population consisted of doctors employed within the Public Healthcare System. A postal survey and a focus group were used for data collection.

Results: There were 195 returned questionnaires (60% response). Computer availability was higher for consultants (61.4%) and doctors in public health (100%), but limited for junior doctors at ward level (8.1%). Less computers were available in primary care (20.8%), peripheral hospitals (14.3-33%) and out-patients (31% for consultants). Junior and Primary Care doctors had less access to e-mail accounts (64.9% and 54.2%) and the Internet (32.4% and 33.3%). Junior doctors were more likely to have had IT accreditation. The constructs of PEOU and PU predicted which doctors were more likely to use computers at their job. However adoption of the Patient Administration System (PAS) could not be predicted from Computer Usage or Satisfaction with the PAS.

Conclusions: The development of an IT strategy for health, increased access to computer systems and training programmes should be considered in the implementation of a new Hospital Information System for the Maltese Public Healthcare System.

P-016

The Medicines Authority: the competent authority in Malta responsible for the regulation of medicinal products for human use and related pharmaceutical activities

H Vella, C Carabott Castagna

Licensing Directorate, Medicines Authority

The Medicines Authority is the competent regulatory authority in Malta responsible for the implementation of the relevant EU legislation governing the regulation of medicinal products for human use and the related pharmaceutical activities. Since it was established in 2003 the Medicines

Authority has implemented a Quality Management System based on ISO standards and has integrated its operations within the EU regulatory framework for medicines. Positive outcomes from external audits have contributed to achievement of mutual respect from other EU competent authorities. There are three main areas of activities. Licensing Directorate activities cover the granting of authorisations and product licences for medicinal products to be placed on the market in Malta in accordance with the legislation. Applications are received through various procedures, including the National Procedure (including parallel importation) and various European procedures. The Medicines Authority is also responsible for the authorisation of clinical trials carried out in Malta. Post-Licensing Directorate activities cover post-marketing surveillance of medicinal products, including regulation of their advertising and promotion, pharmacovigilance, and processing of variations to and renewals of marketing authorisations. Inspectorate and Enforcement Directorate activities cover the inspection and licensing of the manufacture, distribution and sale of medicinal products (including regulation of active pharmaceutical ingredients), the inspection and licensing of public and retail pharmacies, the management of a product defect reporting system, coordination of all product recalls, the certification for export and issue of Certificates of Pharmaceutical Products and Good Manufacturing Practice certificates for locally manufactured medicinal products, and the enforcement of standards and of the provisions of Maltese and EU legislation.

P-017

The implementation of the EU Clinical Trials Directive 2001/20/EC in Malta

IC Ellul, JJ Borg, P Vella Bonanno

Medicines Authority, Gzira, Malta

Clinical trials refer to any investigation in human subjects intended to discover or verify the clinical, pharmacological and/or other pharmacodynamic effects of one or more investigational medicinal products, and/or to identify any adverse reactions to one or more investigational medicinal products and/or to study absorption, distribution, metabolism and excretion of one or more investigational medicinal products with the object of ascertaining their safety and/or efficacy.

The legal framework for the local regulations on clinical trials is set out in the European Clinical Trials Directive 2001/20/EC. The scope of this directive is to harmonise clinical trial requirements in the Member States of the European Union. It provides a framework for protecting people based on the Declaration of Helsinki and it also includes a regulatory means of Good Clinical Practice and Good Manufacturing Practice. It contains reference to issues such as the informed consent procedure, sets out special provisions for minors and disabled adults and also sets administrative provisions for clinical trials. The Directive is transposed in Legal Notice 490 of 2004. To conduct a clinical trial locally, one must submit separate applications to both the Medicines Authority and Health Ethics Committee and an authorization by the Medicines Authority and a positive opinion by the Health Ethics Committee are required. Further to this, the applicant and other concerned parties should abide by the local regulations and other requirements as deemed necessary by the Licensing Authority, including manufacture/import authorisation of the investigational medicinal products.

Since the implementation of Legal Notice 490 of 2004, 6 applications were received, of which 4 applications were approved, 1 application withdrawn and 1 application is currently being assessed.

P-018

Clinical practice guidelines: user perception

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Background: Clinical practice guidelines (CPGs) are systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances. The aims of CPGs are to achieve improvements in quality and appropriateness of care and to maintain cost-effectiveness. They should also act as educational tools helping practitioners to implement the ever-increasing amount of evidence and opinion on best current practice. CPGs at the Department of

Medicine, St Luke's Hospital, Guardamangia, Malta have been available since January 2004. Local evidence regarding doctors' perception to the CPGs till now was lacking.

Aim and objectives: To study the perception of medical doctors and final year medical students to the medical CPGs.

Design: A comprehensive evaluation was performed using a questionnaire within the target group specified below to look into:

1. awareness of attitudes towards and barriers for the use of CPGs
2. access to and presentation of available CPGs
3. usefulness of available CPGs

Target group: Senior House Officers, Registrars, Senior Registrars and, Consultants of the Department of Medicine, House Officers on rotation, Casualty Officers and Final Year Medical Students.

Results: The results of this survey are currently being analysed and will be available shortly.

Conclusions: From the comments received in the questionnaire, this study will serve to seek ways on how to improve future CPGs, how to improve user compliance and adherence, and will also be used as a basis for further studies and research on particular areas of CPGs.

P-019

Atrial fibrillation following transcatheter closure of patent foramen ovale

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Paradoxical embolism due to the presence of patent foramen ovale is an accepted mechanism of ischaemic cryptogenic stroke. Transcatheter closure of the patent foramen is the logical, safe and accepted technique for the prevention of further neurological episodes in individuals who have had transient ischaemic events or stroke. Complications are infrequent and arrhythmias are occasionally mentioned in large series. We present three individuals who developed transient atrial fibrillation that was easily controlled with three months of amiodarone therapy. Our 5% transient fibrillation rate is very similar to that documented in other series.

P-020

Isolated right ventricular outflow tract obstruction in an individual with William's syndrome

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William's syndrome is a rare condition that is associated with severe cardiovascular manifestations. We report a patient with William's syndrome who also has isolated right ventricular infundibular obstruction, an association that has not been previously reported, to the best of our knowledge. The defects usually encountered in William's syndrome include supravalvular aortic stenosis, coarctation, pulmonary branch stenosis and ventricular septal defect. Intervention for this young man has been undertaken.

P-021

The heart in science fiction

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Medicine and its practitioners are frequently used in mainstream literature and in subgenres of literature, either as protagonists or as useful backdrop. The heart is occasionally mentioned in science fiction (SF), not only as an important motif, but occasionally also enjoying a central role in the plot. In this article, I will therefore review some interesting aspects of the heart and cardiovascular system as utilised by SF authors, in both humans and in alien beings.

P-022

Low protein Z levels and the risk of thrombophilia

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Protein Z (PZ) is a vitamin K-dependent plasma protein whose significance in disease remains unknown. Low PZ levels were associated with ischaemic stroke in young adults, though this association is still not clear. PZ deficiency was also associated in women with a first episode of early foetal loss.

Aim: Detection of PZ antigen levels in patients who suffered a thrombophilic-event, including ischemic stroke, thromboembolic-events and recurrent miscarriage patients with two or more foetal losses.

Methods: 153 healthy individuals were tested for PZ levels and were included in our control group. A total of 52 thrombophilic patients were enrolled and included females with history of recurrent foetal loss; patients who suffered a thromboembolic-event; and patients who suffered an ischaemic-stroke. Patients were sampled 3 months after their thrombotic episode and none of them was on oral anticoagulation.

Results: Mean plasma PZ level in each group was comparable to that of control group. Difference in means was not found to be statistically significant ($P > 0.05$). Occurrence of PZ deficiency in each group was similar.

Conclusion: Our results are similar to those obtained by other researchers except for a lower mean PZ level in controls. PZ levels are normally distributed with a broad total range in normal individuals. No relation between PZ levels and gender nor age was found. PZ deficiency was detected in 12 females who had recurrent foetal loss, in 3 patients who suffered an ischaemic stroke and in 6 patients who suffered a thromboembolic-event. Further studies are required to clarify the relation of PZ levels and disease.

P-023

Insulin induced fatal hypoglycaemia in a type I diabetic with polyglandular autoimmune syndrome type IIS

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Hypoglycaemia is a well recognized and frequently encountered complication in insulin treated diabetic individuals. In adult type I diabetic patients, C-peptide negativity, a previous event of severe hypoglycaemia, patients' determination to reach normoglycaemia and a lower social class have been identified as risk factors for severe hypoglycaemia. In type I diabetes, the glucagon response is impaired, thereby reducing the efficiency of the counter-regulatory response. This failure of the glucagon response occurs within about five years of the onset of the disease. Type I diabetics with longer disease duration may also have an impaired catecholamine response, further predisposing to hypoglycaemia and reducing symptomatic awareness.

The association of autoimmune Addison's disease with type I diabetes in patients with polyglandular autoimmune syndrome type II further compromises the physiological response to hypoglycaemia. We present a recent case of insulin induced fatal hypoglycaemic encephalopathy in one such Maltese patient.

P-024

Lack of sunlight exposure causing hypocalcaemia in a sun drenched archipelago

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Hypovitaminosis D is associated with poor dietary intake and inadequate sunlight exposure. Elderly institutionalized patients as well as veiled women are at an increased risk of hypovitaminosis D. Several studies have shown that vitamin D deficiency in elderly people enhances bone mass loss. Severe hypocalcaemia complicating hypovitaminosis D may manifest with tetany, and increases the risk of seizures.

We present a short series of such Maltese patients, highlighting an unexpected cause of hypocalcaemia in a sun drenched archipelago.

P-025

Thyroid status in subjects on thyroid replacement treatment

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Aims and Objectives: To determine the proportion of subjects on thyroid replacement treatment (TRT) who achieve normal (biochemical) thyroid status, and to compare this to an audit standard set in the United Kingdom.

Design: Cross-sectional study.

Participants and setting: Subjects attending the medical consultant clinic at Qormi, Rabat and Birkirkara health centres for follow-up and monitoring of TRT.

Period: August 2003 to July 2004

Data collected:

1. laboratory results of routine thyroid function tests (TFT)
2. demographic data from the case notes - age, sex
3. date of TFT and date of follow-up visit
4. dose of thyroxine at the time of the TFT.

Data analysis: Results of TFTs were categorised into (i) normal thyroid stimulating hormone (TSH) level (ii) TSH outside normal reference range - high or low; free thyroxine and free tri-iodothyronine were also recorded when available.

Results: Two thirds of subjects on TRT had a TSH within the normal reference range (0.4-4 µU/ml).

Conclusion: This proportion is below the 90 per cent audit standard set in the United Kingdom for control of TRT, but is similar to results of audits published by community practices in the same country.

P-026

The incidence of inflammatory bowel disease in Malta between 1993 and 2005: a retrospective study

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Background: The primary aim of this study was to estimate the incidence of Inflammatory Bowel Disease (IBD) in Malta in a well defined population during a 13 year study period.

Method: Diagnostic criteria for Crohn's disease, Ulcerative colitis and indeterminate colitis were defined. A diagnosis of Inflammatory Bowel Disease was obtained from the histology reports of biopsies taken during colonoscopies performed at St Luke's Hospital between 1 January 1993 and 31 December 2005. No histology results were obtained from the private sector as this represents a negligible number. The date of diagnosis was defined as the date of first colonoscopy revealing signs of IBD.

Results: The standardised rates have been standardised using the direct method on the European Standard

Population. The mean incidence of Ulcerative Colitis in males was 8.16 per 100,000 per year and for females was 7.59 per 100,000 per year whilst that for Crohn's disease in males was 0.96 per 100,000 per year and for females 1.622 per 100,000 per year. Using linear regression, in Ulcerative colitis, there is an almost significant ($p=0.069$) increasing trend with time but no difference by gender ($p=0.591$). On the other hand, in Crohn's disease, there is no significant trend with time ($p=0.555$) but a significant difference by gender ($p=0.078$).

Conclusion: To our knowledge, this is the first Maltese study in which the incidence of IBD has been recorded. In Malta the incidence of Ulcerative Colitis is similar to the overall incidence of other European countries whilst the incidence of Crohn's Disease is lower; in fact the incidence of Crohn's Disease rates amongst the lowest in Europe similar to other Southern European Countries.

P-027

Monitoring thyroid function status in elderly patients on amiodarone

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Objectives: To evaluate whether elderly patients on amiodarone were having their thyroid function status monitored as recommended in the literature and to identify the frequency and type of thyroid function test abnormalities noted.

Methods: Patients on amiodarone were identified by examining the prescription charts and medical files of consecutive admissions into ZCH and residents at SVPR. Data was obtained on whether thyroid function tests had been checked at the start of the medication and every six months; the results of such tests carried out over the previous year; the clinical indication to prescribe the medication; and the course of action followed when results were abnormal.

Results: 1334 prescription charts were examined. 69 patients (5.2%) were on amiodarone. The most common clinical indication for the medication was atrial fibrillation (68.1%). As regards thyroid status, 39.1% of subjects had blood tests checked at the start of the medication but only 2.9% every 6 months. Although 75.4% had had their thyroid status checked over the previous year, 8.7% never had any thyroid function tests carried out whilst they were on the medication. In all 27.5% of subjects had thyroid gland dysfunction of which 13% had subclinical hypothyroidism, 11.6% clinical hypothyroidism and 2.9% clinical hyperthyroidism. All patients with abnormal results had been kept on amiodarone even when the arrhythmia had abated.

Conclusions: Thyroid dysfunction is a common side effect of amiodarone medication. The regular measurement of thyroid function tests, as recommended, should be adhered to in a stricter manner.

P-028

Non-alcoholic fatty liver disease (NAFLD) in Malta

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Aim: To determine the causes of liver enzyme derangement in patients referred to our gastroenterology clinic

Method: Retrospective audit, with 83 consecutive patients between August 2004 and July 2005.

Results: There were 51 male patients (61.4%) and 32 female patients (38.6%).

NAFLD was diagnosed in 45 patients (54.2%), 26 being males. The mean age was 50.4 years and the mean BMI was 31.2 kg/m². Ten patients were between 30-45 years of age. Four of these had raised triglycerides. 35 were older than 45 years. Ten of these were hypertensive; 6 had type 2 diabetes mellitus; 3 patients were hypertensive and had raised triglycerides; 2 patients were hypertensive, had type 2 DM and raised triglycerides. The other causes for derangement of liver enzymes were: a. Alcoholic liver disease (15.7%, Mean age - 52.6 years); b. Primary Biliary Cirrhosis (10.8%, mean age-59.8 years); c. Chronic Hepatitis C (7.2%, mean age - 58.5 years); d. Haemochromatosis (4.9%, mean age- 39.5 years); e. Autoimmune hepatitis (2.4%, mean age - 51.5 years); f. Gallstones (2.4%, mean age - 47 years); g. Chronic Hepatitis B and Haemochromatosis. (1.2%); h. drug-induced (1.2%). The mean BMI in the non-NAFLD group was 24.7 kg/m².

Conclusion: Our audit demonstrates that NAFLD was by far the most common cause for derangement of liver enzymes in this population. Its worldwide prevalence is estimated to vary between 3% and 24%. NAFLD is considered to be the hepatic manifestation of the metabolic syndrome. This may progress from steatosis to non-alcoholic steatohepatitis and its clinical consequences of cirrhosis and hepatocellular carcinoma. Thus it is important to understand this condition as a common burden of disease if effective strategies to control it are to be devised as part of public health initiatives.

P-029

Antibiotic resistance in the south-eastern Mediterranean: results from the ARMed Project

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Background: Antimicrobial resistance is increasing and brings with it the possibility of untreatable infections and a return to the pre-antibiotic era. Anecdotal data indicates that the threat is also significant in the south-eastern Mediterranean region yet few standardised studies have looked at this problem.

Methods: A project under the name of 'Antibiotic Resistance Surveillance & Control in the Mediterranean Region' (Acronym: ARMed) was initialised in January 2003 and is financed by the European Commission under INCO-Med of DG Research. This project extends European surveillance studies to southern and eastern Mediterranean partner countries so that both European and Mediterranean countries will benefit from the epidemiological analysis of antimicrobial resistance and improved policies on antibiotic consumption and infection control measures (website: www.St Luke's Hospital.gov.mt/armmed).

Results: The database on the antimicrobial resistance component of the project, ARMed-EARSS, now contains information from 58 laboratories serving 66 hospitals in 9 countries: Algeria, Cyprus, Egypt, Jordan, Lebanon, Malta, Morocco, Tunisia and Turkey. Methicillin resistance in *Staphylococcus aureus* ranges from 13% to 57% in the participating countries. Penicillin resistant *Streptococcus pneumoniae* are less prevalent, with Jordan, Egypt, Lebanon and Algeria being the only countries where levels exceed 20%. There is considerable heterogeneity of resistance within Gram negative isolates, particularly concerning quinolones and extra-spectrum beta-lactamases.

Conclusion: Antimicrobial resistance data from the ARMed Project indicates that resistance in the Mediterranean region shows a significant heterogeneity with the south-eastern countries having prevalences which are on the whole equal or at times higher than that identified in the northern countries of the region.

P-030

An investigation into whether a combination of inspiratory muscle training and upper limb exercise improve outcomes in COPD patients

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Introduction: Dyspnoea and decreased capability in performing activities of daily living and exercise are common complaints chronic obstructive pulmonary disease patients present with to medical professionals. One of the main causes is respiratory muscle dysfunction and dysfunction caused by weak upper limbs on ventilatory muscles. It is surprising that no studies investigating a combination of these two aspects were retrieved. A combined programme of upper limb exercises and Inspiratory Muscle Training is worthy of consideration as improved outcomes may have significant clinical implications.

Aims: To determine any differences in respiratory muscle function, upper limb endurance and activity of daily living and dyspnoea scores between the control group and two exercise groups.

Method: 45 participants were recruited and allocated to three groups: one receiving Inspiratory Muscle Training, another Inspiratory Muscle Training with upper limb exercises and a control group receiving no exercise intervention. Each subject had their lung function, inspiratory muscle strength and endurance, exercise tolerance and dyspnoea rate measured before the start of the programme and after 8 weeks. The London Chest Activities of Daily Living questionnaire was also administered. The first exercise group had 15 minutes of inspiratory muscle training at 30% their inspiratory muscle strength twice daily. The combination group had 15 minutes of breathing sessions and upper limb training each.

Results: Preliminary results after 4 weeks of training for the exercise groups show significant improvements in all outcome measures.

Conclusions: The Initial data offers positive results. If the final results are on the same line, this will surely be an innovative treatment for Chronic Obstructive Pulmonary Disease patients in conjunction with medical treatment.

P-031

C2 cyclosporin therapeutic monitoring in kidney transplant recipients

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Cyclosporin (CsA) displays a narrow therapeutic range and a wide intra-patient pharmacokinetic variability, particularly in the absorption phase. Low oral bioavailability of CsA is recognised as a significant risk factor for acute transplant rejection and overexposure to CsA increases the risk of chronic allograft nephropathy. Measurement of CsA trough blood level (Co) is currently performed but recently, 2 hours post dose levels (C2) has been proposed as a superior tool for CsA monitoring.

The aim of the present study was to analyse the feasibility of introducing C2 monitoring in Malta and to compare the results of both Co and C2. In 40 kidney transplant recipients under the care of one nephrologist (30 cadaveric and 10 living-related) receiving CsA in association with other immunosuppressive drugs, Co + C2 were measured by using a monoclonal specific antibody radiomunoassay.

The following results were obtained.

1. C2 monitoring was readily accepted by Maltese transplants recipients and its implementation both in the hospital and out-patient settings went without a hitch.
2. A clear relationship between Co and C2 blood levels was observed.
3. CsA absorption is variable and C2 correlated better with the CsA dose (mg/kg) than Co.
4. Most patients at target Co were not at recommended target C2 concentrations.

Conclusion: C2 monitoring better defines the therapeutic range and helps to identify overexposure to CsA, potentially associated with nephrotoxicity. The transplant team is now familiar with C2 target levels with dose adjustments done according to C2 level.

P-032

Familial hypouricaemia associated with renal tubular uricosuria and uric acid calculi: a case report

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A 24-year-old otherwise healthy male presented with left ureteric colic, which subsided spontaneously. Ultrasound kidneys and IVP were both normal. Investigations however revealed marked hypouricaemia (plasma uric acid 57 $\mu\text{mol/l}$). 24-hour urinary urate excretion was markedly elevated at 7.2 mmol/day. The fractional excretion of urate was 55% (normal <10%). No other metabolic or renal tubular abnormalities were recorded. 1 year later, the patient spontaneously passed a 6 mm calculus from the left kidney. The stone was composed entirely of uric acid. Plasma uric acid at this time was again very low at 71 $\mu\text{mol/l}$. A survey of both parents and two siblings revealed that the patient's mother and sister had similar hypouricaemia (plasma uric acid 51 and 107 $\mu\text{mol/l}$ respectively), although they were entirely asymptomatic.

The findings in this subjects may be accounted for by a nearly complete tubular defect in the renal reabsorptive transport mechanism of urate. This condition is probably transmitted as an autosomal dominant trait. This is the first report, to the best of our knowledge, of familial hypouricaemia, hyperuricosuria and uric acid kidney stones in the Maltese population.

P-033

Estimating the glomerular filtration rate by creatinine clearance: 24 hour urine collection or formula?

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Quantifying the glomerular filtration rate (GFR) accurately is a prerequisite for diagnosing and treating patients with kidney disease. Estimating the creatinine clearance, itself a surrogate of the GFR, using formulae based on serum creatinine, is nowadays frequently recommended by nephrology societies. This method obviously spares the inconvenience to the patient of collecting a reliably complete 24-hour urine sample.

Aim: The aim of the study was to compare the traditional 24-hour creatinine clearance (24-HCC) measured at St Luke's Hospital laboratory with the creatinine clearance derived using the standard Cockcroft-Gault (CG) formula.

Methods: 21 adult patients (11 female, 10 male), affected by different kidney disease, and with renal function ranging from normality to advanced renal failure participated in the study.

Results: Perfect agreement between the 24-HCC and CG was seen in only 19% of patients. In the majority of patients, clearance readings were lower with the CG than with 24-HCC. This finding is at variance to what is reported in the literature, where the formula tends to overestimate the 24-HCC.

Discussion: In the local setting, a widespread discrepancy exists between values obtained by the two methods used to measure creatinine clearance. Possible reasons for this finding will be discussed.

P-034

Peritoneal dialysis drop-out: a single-physician experience

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Peritoneal dialysis (PD) is a well-established form of renal replacement therapy in uraemic patients. Within the Department of Medicine's Renal Unit, a multidisciplinary team composed of physician/surgeon/specialised nurses frequently succeed in employing PD as the first-choice modality in patients admitted to dialysis. However, despite continuous yearly improvements in every aspect of care of the PD patient, high drop-out rates still represent a major problem. This report, examining the causes of permanent drop-out from PD, is a single institution, single-physician experience with a large and complete set of patients over a 15-year period (1993 - Sept 2006).

All former PD patients (n=198) who for any reason stopped PD were retrospectively studied. Data was available and complete in every single patient. Of the study cohort, 42 patients died from various causes, mostly cardiac deaths, whilst still adequately performing PD. 29 patients received a functioning kidney transplant, and a further 5 witnessed a useful return of renal function. Naturally, in both instances, PD was discontinued.

In the remaining 122 patients, the causes of permanent PD drop-out (obviously necessitating a switch to chronic haemodialysis) were as follows: first but severe peritonitis (n=33), recurrent peritonitis (n=28), ultrafiltration failure and/or lack of solute clearance (n=26), necessary abdominal surgery (n=7), PD catheter problems (n=11), inability to cope (n=8), and other (n=9).

Conclusion: PD-related infections and complications account for 50% of permanent PD drop-outs in the Maltese Islands. This report enhances our understanding of how best to improve PD patient care in the local setting. Optimal long-term management of the PD patient hinges on achievement of best demonstrated practices and prevention of complications, particularly infectious, associated with PD.

P-035

Dyslipidaemia in the Maltese chronic haemodialysis and peritoneal dialysis population

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Aim: To determine the prevalence of dyslipidaemia in the Maltese dialysis population and correlate this with variables known to influence such prevalence.

Method: 60 haemodialysis and 53 peritoneal dialysis patients undergoing dialysis during the first week of December 2002 had their fasting lipid profile checked during the same week. This was analyzed according to dialysis modality and diabetic status and correlated with time since commencement of dialysis, serum albumin and serum triglyceride levels.

Results: Patient age (57 and 60yrs) and time on dialysis (30.7 and 28.6mths) were similar for the HD and PD groups respectively. The prevalence of hypercholesterolaemia (total cholesterol > 5.0 and/or LDL > 3.0mmol/l) and hypertriglyceridaemia (> 2.3mmol/l) was 68 % and 37% respectively. There was no statistically significant difference between the total cholesterol, LDL, HDL, triglyceride or albumin levels according to dialysis modality. Similarly, there was no difference between the same variables in diabetics and non-diabetics. The correlation coefficient between serum albumin and duration of dialysis was not significant but there was a positive correlation between serum albumin and total cholesterol.

Conclusion: The prevalence of dyslipidaemia is very high and uninfluenced by dialysis modality or diabetic status. The positive correlation between albumin and cholesterol reinforces the former's position as a surrogate marker of the dialysis patient's nutritional status. Since the nutritional status is the best marker of survival on dialysis it also explains why an elevated cholesterol level has been universally shown to be an indicator of improved survival on dialysis.

P-036

Calcium / phosphate control in the Maltese chronic haemodialysis population

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Aim: To determine the prevalence of hyperphosphataemia, hypercalcaemia and raised calcium x phosphate product in the Maltese haemodialysis (HD) population and compare this with recommended targets.

Methods: All 68 chronic HD patients under the care of one consultant nephrologist had a biochemical analysis during the first week of January 2006.

Results: 66% of patients had a corrected predialysis calcium level within the recommended target of 2.2-2.6mmol/l; 22% and 12% respectively had a level below and above this range. Only 44% had a normal phosphate level of 0.8-1.8mmol/l (recommended in the European Dialysis and Transplant Association Guidelines) but 63% fulfilled the less stringent Caring for Australians with Renal Impairment (CARI) Guidelines (< 2.2mmol/l). While 78% had a calcium x phosphate product below the maximum accepted level of 5.8(mmol/l)² only 47% had a product that was lower than the ideal upper level of 4.2(mmol/l)²

Conclusion: The prevalence of hyperphosphataemia and a raised calcium x phosphate product in the Maltese HD population is high. This tends to be a problem in dialysis units worldwide. In addressing this problem one has to consider the compelling evidence implicating calcium based phosphate binders in the aetiology of vascular calcification. The latter has in turn been associated with increased cardiovascular morbidity and mortality. Hence the emphasis on the use on non-hypercalcaemic Vit D analogues and non-calcium based phosphate binders.

P-037

Is erectile dysfunction a sentinel symptom for cardiovascular autonomic neuropathy in patients with type 2 Diabetes ?

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Aim: To study whether there is a significant association between erectile dysfunction (ED) and cardiovascular autonomic neuropathy (CAN) in male patients suffering from Type 2 diabetes without evidence of overt cardiovascular disease and hypertension. The association of ED with left ventricular dysfunction was also assessed.

Methods: Patients suffering from Type 2 diabetes were recruited from the Diabetic Clinic. These patients had no history of neurological, renal or thyroid disease and did not suffer from hypertension. An elective stress test was performed and those with a negative test were assessed for autonomic erectile dysfunction, cardiovascular autonomic neuropathy (CAN) and left ventricular dysfunction. CAN was assessed using Expiratory:Inspiratory ratios, heart rate changes with the Valsava maneuver and with standing, and the systolic blood pressure response to standing. An echocardiogram was performed on each subject.

Results: A total of 22 patients entered the final stage of the study. Sixteen patients were excluded from the study at the various stages. 27.3% were found to be suffering from CAN while 43.5% were suffering from erectile dysfunction. Using the Fisher's Exact test it was found that in this sample there was no significant association between CAN and autonomic erectile dysfunction ($p=1$). 25% of patients with no erectile dysfunction had CAN, whilst 30% of patients with ED had CAN.

Conclusion: Unlike previous studies these results show that autonomic ED is not always associated with CAN and one must not assume that all patients with autonomic ED are suffering from CAN.

P-038

Visualization of hypoxic glial injury in white matter from transgenic mice - a morphometric and immunocytochemical study

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White matter injury is an important feature of several acute neurological diseases. To date, none of the immunohistochemical approaches for assessing oligodendrocyte (OL) damage have been entirely satisfactory. We investigated the usefulness of transgenic mice with oligodendrocyte-specific expression of GFP controlled by a proteolipid promoter (Plp-EGFP) to study the time course of injury during and after 30 min of oxygen-glucose deprivation (OGD). Acute coronal brain slices (400 μ m) including corpus callosum were transferred to an interface chamber and superfused with aCSF saturated with 95/5% O₂/CO₂ at 33°C. OGD was induced by switching to glucose-free aCSF bubbled with 95/5% N₂/CO₂. Within 1-2 hours there was widespread OL injury, demonstrated by loss of labeling with OL-specific antibody CC-1 (APC) and gain of pyknotic nuclei. Cytochrome c was released from mitochondria during OGD and diffused thereafter. Confocal visualization of GFP-expressing OLs revealed marked swelling of the nucleus and vacuole formation around the cytoplasm. By 2 hours of reperfusion some of the OLs lost their processes and extensive vacuoles were observed along their entire length. EM confirmed OL injury included swollen mitochondria, clumping of chromatin and cytoplasmic vacuoles. Our results demonstrate close correspondence between Plp-EGFP and EM assessment of OL morphology. The observed damage to OLs matches patterns of white matter injury in other models published in the scientific literature.

P-039

A young confused tourist on a hot sunny island

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Background: With recent emphasis on increased water intake during hot weather for the prevention of dehydration, there is a documented increase in cases of hyponatraemia related to excessive water intake. The most common symptoms related to cerebral oedema are changes in mental status, emesis, nausea and seizures.

Case Report: A 30-year old British tourist on holiday in Malta last June presented with a two day history of lethargy and confusion. He also complained of slight tremor and sweating. Due to the sweltering heat and wary of the risks of dehydration, the patient had drunk fifteen litres of water over the 48 hours prior to his admission to hospital. Physical examination was unremarkable as was CT scan of the brain. Electrolytes, however revealed a hyponatraemia of 114mmols/L. The patient was advised fluid restriction, and within a day the Sodium levels had improved to 129mmols/L. His electrolytes were frequently monitored to ensure that over rapid correction of Sodium did not occur, thus preventing the potential danger of osmotic myelinolysis.

Conclusion: Maintaining adequate hydration in hot weather is essential and of utmost importance but excessive fluid intake may lead to life-threatening hyponatraemia.

P-040

Severe hyponatraemia due to co-amilozide

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Background: Hyponatraemia is a recognized complication of fixed dose combinations of thiazides with Potassium- sparing diuretics due to the direct effect of these drugs on the distal nephrons. Mortality related to hyponatraemia may occur due to cerebral oedema but is more commonly due to a rapid correction of Sodium resulting in osmotic myelinolysis. This involves frequently symmetric, noninflammatory demyelination within the pons though in at least 10% of patients, demyelination also occurs in extrapontine regions.

Case report: A 76-year old lady presented with a 3 day history of lethargy, confusion and urinary incontinence. Only three days before, the patient had been discharged from an orthopaedic ward where she had required admission for lower limb traction. She had also recently been started on co-amilozide. Electrolytes revealed Sodium: 97mmols/L and Potassium: 2.8mmols/L. Co-amilozide was withdrawn, oral fluids restricted and an intravenous infusion of 0.9% saline with Potassium supplementation was set up at a 12 hourly rate whilst monitoring central venous pressure. Sodium was corrected at a rate that did not exceed 15 mmols per 24 hours. By ten days following admission, Sodium increased to 133mmols/L and the patient made a remarkable improvement. An MRI scan of the brain was carried out which ensured that there was no evidence of demyelination.

Conclusion: This was a case of hypovolaemic hyponatraemia. The use of such diuretics should be used cautiously in elderly patients and the possibility of hyponatraemia should be borne in mind in a patient presenting with vague symptoms and central nervous system disturbances..

P-041

Novel methods for symptom control in palliative care in Malta

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Aim: The introduction over the last year of several novel methods of symptom control by the author involving both invasive and non-invasive methods in terminally ill patients at the Palliative Care Clinic at Boffa Hospital is explained.

Methods: The data in this report was collected retrospectively from Procedure Lists and analysis of follow-up in patients' case notes. Patient confidentiality was maintained at all times. The invasive methods reviewed include the following:

- a) long term epidural and intrathecal catheterisation
- b) coeliac block for upper GIT malignancies
- c) multilevel sympathetic ablation for lower GIT
- d) hypogastric block for pelvic malignancies
- e) chemical ablation of solitary metastasis

Non-invasive methods include pain management using new indications for old drugs (e.g. ketamine for intractable pain relief) that have been introduced.

Results: The use, mechanism of action and results of these methods in palliative control of pain in patients suffering from cancer is discussed.

Conclusion: The role of the multidisciplinary team with different specialities, including oncologists, palliative care physicians, anaesthetists, pharmacists, physiotherapists, nurses and members of other caring professions, in the management in both pre- and post-procedure phases is highlighted. The role of radiofrequency and chemical neuroablation as well as neurolytic and non-neurolytic nerve blocks is discussed.

P-042

Patient satisfaction with rheumatology services

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Client satisfaction measures the extent to which a client's expectations for a good service are met. A proper measure of satisfaction includes a separate assessment of both client expectations and the quality of service provided.

Quality of service is a multi-dimensional concept. A questionnaire was set up to judge quality of service provided at the Rheumatology clinic and included the following dimensions: tangible variables, reliability, responsiveness, competence, courtesy, credibility, security, access, communication and understanding of client.

All patients who attended the clinic during November and December 2004 were provided with an English or Maltese version of the questionnaire that was fully explained by the clinic nurse. They were then asked to complete the questionnaire anonymously while waiting for their visit.

52 patients answered the questionnaire. 85% (44) of patients were female and the majority 86.5% (45) were above the age of 40 years.

An overwhelming majority of the patients were satisfied (45.6%) or very satisfied (52%) with the overall service provided.

This study demonstrated that although the majority of patients were satisfied with the overall service, an improvement in the quality / provision of support services was necessary.

P-043

Nitritoid reactions: occurrence in rheumatoid arthritis patients

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Background: Nitritoid reactions are vasomotor reactions occurring following the administration of sodium aurothiomalate (gold).

Objective: To report the occurrence of nitritoid reactions in rheumatoid arthritis patients attending the Gold Clinic at St Luke's Hospital.

Method: Patients who developed nitritoid reactions were identified by the Rheumatology Nurse. Case notes, review of their medication was taken in order to identify risk factors.

Results: Out of 38 patients on gold injections 5 (13.2%) developed nitritoid reactions. Four were females and one was male. Age range at onset of

reaction was 54-73 years (mean 65.2, SD: 7.46). Duration of gold therapy prior to nitritoid reaction ranged from 1 week to 7 years 8 months. None of the patients had previously experienced vasomotor side effects. Two patients developed the reaction following their first 50mg dose. One patient developed the nitritoid reaction with 50mg first dose after having stopped treatment for 12 months due to disease remission. Two patients developed the reaction following 50mg and 25mg doses respectively. All 5 patients were hypertensive. Four patients were on angiotensin converting enzyme inhibitors at the time of the reaction. One patient had just started therapy with an angiotensin converting enzyme inhibitor. Three patients were on an angiotensin converting enzyme inhibitor in combination with other anti-hypertensive drugs and had severe nitritoid reactions.

Conclusion: Nitritoid reactions are more likely to occur with concomitant administration of angiotensin converting enzyme inhibitors and gold. Parameters such as blood pressure and ECGs are required during recovery of the patient.

P-044

Use of the TNF blocker etanercept in a case of refractory Takayasu's arteritis

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Takayasu's arteritis is a chronic inflammatory disease of unknown aetiology that affects predominantly the aorta and its major branches. The clinical features vary depending on which arteries are involved.

We present the case of a female patient who was diagnosed with this condition at the age of 27 years. The brunt of her disease fell on the arch of the aorta and coronary arteries resulting in aortic valve incompetence and recurrent symptoms of angina pectoris that eventually necessitated aortic valve replacement surgery and coronary artery bypass grafting. There was a satisfactory response but 12 years later anginal symptoms recurred. At this stage immunosuppressant treatment was administered with intravenous pulsed methylprednisolone and cyclophosphamide. This resulted in symptomatic relief but 10 years later there was a further recurrence of angina that persisted despite an angioplasty to one of the stenosed graft vessels and maximisation of antianginal treatment.

Considering the effectiveness of biological agents such as etanercept as potent suppressors of autoimmune inflammatory disease and based on a few scant reports in the literature about their use in refractory Takayasu's arteritis, it was decided to add etanercept to this patient's treatment. The effect was dramatic with complete resolution of symptoms and a reduction in the ESR.

This is the first time a biological agent has been used to treat Takayasu's arteritis in Malta and adds to the growing literature on the efficacy of these agents in this condition.

P-045

Severe osteoporosis due to undiagnosed Coeliac disease: 3 case reports in Maltese women

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Osteoporosis is defined as a bone mineral density of less than 2.5 standard deviations below the mean for young adult white women. Dual x-ray absorptiometry (DEXA) is widely used to measure bone density. However, it does not help in identifying the cause of the decreased bone mineral density. The majority of men and pre-menopausal women as well as one-fifth of post-menopausal women will have an underlying cause for their osteoporosis. In such cases it is important that treatment is directed at the underlying cause. Coeliac disease is a gluten-sensitive enteropathy and is an established cause of osteoporosis. It is increasingly being diagnosed in asymptomatic patients. We present three cases of postmenopausal women who were referred to our unit with severe osteoporosis. One patient had been treated with oral corticosteroids and had an early menopause. The second

patient had an early menopause and a mild anaemia. The third patient had already been treated with HRT, 1 α -calcitriol and oral bisphosphonates but remained severely osteoporotic. All patients had positive anti-endomysial antibodies and duodenal biopsy confirmed the presence of coeliac disease in all three patients. They were instructed to follow a gluten-free diet and were treated with intravenous pamidronate, calcium and vitamin D. These cases demonstrate the importance and necessity of a careful evaluation of all patients referred for the management of osteoporosis as otherwise underlying causes may be missed.

P-046

Experience with leflunomide in a Maltese cohort of patients: a preliminary report

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Leflunomide is an oral pyrimidine synthesis inhibitor that belongs to the disease-modifying antirheumatic class of drugs. It has been shown to have significant efficacy in the treatment of various rheumatological conditions. Leflunomide was introduced to the local scene in 2002, initially for the treatment of refractory cases of rheumatoid arthritis. It was later also used for the treatment of psoriatic arthritis. The clinical records of the patients treated with leflunomide at the rheumatology clinic between 2002 and 2006 were reviewed. Data collected included the indications for treatment, the dosages used, and patient outcomes and tolerability. Adherence to the local guidelines for drug monitoring that were formulated in 2003 was also reviewed. The results are presented and discussed, and the literature is reviewed.

P-047

Lupus nephritis treated with rituximab: a case report

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Rituximab is a chimeric monoclonal antibody that targets CD20 surface markers present on B cells resulting in B cell depletion. In systemic lupus erythematosus (SLE) the loss of B-cell tolerance is a central feature. Rituximab has been used for several years to treat certain types of B-cell lymphomas. In more recent years, it has been used in patients with SLE and other autoimmune diseases and the results have been encouraging. We present a 23 year old girl with WHO Class IV lupus nephritis showing marked activity affecting all glomeruli but with minimal chronic damage. The nephritis was refractory to cyclophosphamide and the patient could not tolerate mycophenolate mofetil. She was treated successfully with Rituximab. This is the first case of Lupus Nephritis treated with Rituximab in Malta. The literature is reviewed.

P-048

Bronchiolitis obliterans in a Maltese woman with Sjögren's syndrome: a case report

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Sjögren's syndrome (SS) is a relatively common, slowly progressive, systemic autoimmune disorder that characteristically affects the exocrine glands and causes dryness of the eyes and mouth. It is a multi-system disorder that may affect the lungs, liver, kidneys, vasculature and blood. The histological hallmark of all organs affected is a potentially progressive lymphocytic infiltration. Primary SS occurs alone while secondary SS occurs in association with other systemic autoimmune rheumatic diseases. Pulmonary involvement is common in SS but is rarely clinically important. Any part of the respiratory tract may be affected by lymphocytic infiltration, although the most commonly encountered pathology is interstitial lung disease and airways disease. We report the case of a 44 year old lady with a ten year history of primary Sjögren's who presented with recurrent

parotid swelling, sicca symptoms, symmetrical joint pains, early morning stiffness, Raynaud's phenomenon, pleuritic chest pain, dyspnoea, weight loss and fever. Her clinical condition deteriorated despite treatment with corticosteroids. Bronchiolitis obliterans was diagnosed on lung biopsy. She responded well to treatment with 5 pulses of cyclophosphamide and methylprednisolone. This was subsequently changed to azathioprine and she has remained in remission. The literature of pulmonary involvement in SS is reviewed.

P-049

Erdheim-Chester disease in a Maltese patient: a case report

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Erdheim-Chester disease is a very rare systemic non-Langerhans histiocytosis of unknown aetiology. Less than 200 cases have been reported in the literature. The affected organs are infiltrated with lipid-laden macrophages, multi-nucleated giant cells and an inflammatory infiltrate of histiocytes and lymphocytes. Bone involvement is a hallmark feature, and typically this is symmetrical with metaphyseal and diaphyseal involvement. This pattern may be seen on bone scintigraphy and is pathognomonic of the disease. Other organs may be affected and these include the skin, the central nervous system, the heart, the lungs, the retroperitoneum and rarely the orbits. Symptomatology and prognosis depends on the extent of organ involvement. The disease has a high mortality due to resultant end-organ failure. We present the case of a 51 year old gentleman who was investigated for a one year history of a lesion in the lower gum. This had gradually increased in size and further lesions had appeared. He also complained of abdominal pain. Biopsy of the lesion showed a submucoid xanthoma. CT Scan of the Chest and Abdomen showed a benign looking right lower costal lesion, and a soft tissue mesenteric tumour with perinephric exudation and ascites. Bone scintigraphy showed symmetrical involvement in the long bones as is typical in Erdheim-Chester disease as well as increased uptake in the mandible, maxilla and the seventh and eighth right ribs. The patient received radiotherapy to the gum lesions and is being treated with interferon. This is the first case diagnosed in Malta.

P-050

The role of exercise in the weight management of obesity

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The importance of obesity prevention and treatment grows as the prevalence of obesity increases in Malta. Obesity is a chronic metabolic disease that is associated with increased morbidity and mortality. There is strong evidence that weight loss in obese individuals improves risk factors for diabetes and CHD, reduce blood pressure in both overweight hypertensive and non hypertensive individuals, reduce serum TG levels, increase high-density lipoprotein cholesterol levels, and may produce some reduction in low-density lipoprotein cholesterol concentrations. However, what is of interest is that even if weight loss is minimal, obese individuals showing a good level of cardiorespiratory fitness are at less risk for cardiovascular mortality than lean but poorly fit subjects. The clinician should therefore explain to the patient the role of exercise in the improvement of the metabolic profile rather than on weight loss alone. Realistic goals should be set between the clinician and the patient, with a weight loss of approximately 0.5kg a week. It should be kept in mind that since it generally takes years to become overweight or obese, it will require time and perseverance to reach the established target weight. Exercise should be introduced slowly and at low intensity with a combination of both aerobic and resistance elements. The ultimate aim is to have exercise as an integral part of the patient's lifestyle.

P-051

Nurse led clinics

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Nurse led clinics have developed in response to the dynamic changes in healthcare delivery. They have mainly been introduced to support intermediate care following the acute phase of disease. Nurse led care varies from highly driven focused tasks such as cardioversion and smoking cessation to more diverse challenges such as first contact care and rehabilitation and entails nurses working independently or interdependently with the medical and other health professionals. Studies have shown that patients demonstrated significantly higher scores in overall satisfaction, and provision of information, access, and even symptom control. These clinics have resulted in reduced waiting times, as well as improved quality of care, as patients have reported being more comfortable and having more opportunity to talk to nurses about quality of life issues.

Nurses leading these clinics need to be clinically competent, with special emphasis on assessing skills, in order to be able to refer patients according to need, and communication skills, as the majority of time is spent counseling patients. They should also be highly trained in research, and education in order to keep up to date with information, as well as educating patients and their careers.

Locally this service is being gradually introduced in areas such as stoma care, rheumatology, breast care, and wound care. Although formal evaluation of these clinics is yet to be undertaken, the informal reports demonstrate patient satisfaction, as well as increased job satisfaction. However, there is still a long way to go, to ensure that more patients will benefit from these services, as well as to increase awareness of the role of these clinics.

P-052

Outcome of endoprosthetic replacement for proximal humeral metastasis

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Whilst the treatment of primary tumours of the proximal humerus with endoprosthetic replacement is generally accepted, that of metastatic lesions remains controversial. Poor prognosis is usually accepted once the diagnosis of metastatic disease is confirmed and such patients are treated with radiotherapy and skeletal stabilisation when possible. We retrospectively reviewed the outcome of patients with proximal humeral metastases who underwent endoprosthetic replacement.

Average follow up was 26 months. The mean time from primary diagnosis to surgery was 118 months. With regards to survival 66% of our patients were alive at 6 months and 41% were alive at 2 years.

All patients had excellent pain relief. Shoulder function was satisfactory to good with most patients lacking elevation beyond 90 degrees. Hand and elbow function was preserved in all patients

It is well known that the probability of implant failure increases with time in these patients. In our experience endoprosthetic replacement should be considered for proximal humeral metastases. This form of treatment is preferred to skeletal stabilisation in well selected cases.

P-053

A seven-year epidemiological survey of slipped upper femoral epiphyses in the Maltese islands

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Slipped upper femoral epiphysis (SUFE) is an acute/acute on chronic condition involving separation of the epiphysis and metaphysis through the epiphyseal plate of the femur occurring at or around puberty. Various characteristics of SUFE have already been described in the literature,

emphasising the increased incidence in males (in whom the condition occurs at a higher mean age), its laterality and seasonality.

The hypothesis at the onset of this study was to test whether there is a greater than expected incidence of SUFE in Maltese archipelago and in Maltese female adolescents, and whether there is a higher incidence in the summer months than would be expected from the literature.

Fifty-four consecutive cases of SUFE presenting over a seven-year period to the island's main acute general hospital were reviewed retrospectively in order to obtain crude incidence, sex incidence, mean age at onset, laterality and seasonal distribution.

A crude incidence of 2.08/100,000 population was obtained with an observed male:female ratio of 2:1 which is comparable with the literature. Mean age at onset was 12.6 years in males and 11.9 years in females. Seasonal distribution revealed an unexpected higher incidence in the predominantly winter months.

P-054

Traumatic transverse fracture of the sacrum: a case report

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Fractures of the sacrum are rare and usually occur after significant spinal axial loading. Transverse fractures of the sacrum are even rarer and neurological deficit may accompany these fractures. We report a case of polytrauma resulting in bilateral fractured tibia and a transverse sacral fracture with neurological damage. The tibial fractures were treated surgically whilst a conservative approach was adopted for the sacral fracture.

In the literature results of operative decompression appear debatable and opting for conservative treatment has been advocated in a number of studies.

P-055

Poland Syndrome: a case presentation

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Poland syndrome is an unusual congenital unilateral anomaly of the chest wall with agenesis or dysplasia of the anterior ribs and costal cartilages, absence of pectoralis major and pectoralis minor muscles, breast deformities as well as occasional hand defects.

The case of a 9-year-old girl suffering from this condition is presented and treatment options are discussed.

Current literature on Poland Syndrome is reviewed.

P-056

The development of guidelines for primary urethral catheterisation

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Primary urethral catheterisation is a very common procedure undertaken daily. It may be associated with a significant degree of avoidable patient inconvenience and morbidity if the technique and/or catheter used are inappropriate. Hence the need for up to date, evidence based, and concise set of guidelines aimed particularly at nurses and medical officers in the Accident and Emergency Department, on the wards, in the operating theatre, and in the primary care setting where this procedure is routinely carried out.

The aim of this protocol is to provide a clear set of recommendations as to when nurses should be carrying out primary catheterisation, and when they should seek help from medical officers and surgical residents, as well as when senior urological help should be sought. Other recommendations include the choice of catheter that should be used, with respect to catheter type and material, size and length; depending on the various indications

for primary urethral catheterisation. Also included is a detailed technique of safe urethral catheterisation as well as tips to help overcome certain difficulties encountered.

The recommendations in these guidelines were formulated after an extensive literature review and discussion with the concerned parties.

P-057

A retrospective audit of the undergraduate surgical logbook: Part 1 of 3

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Background: The Faculty of Surgery has recently initiated a scheme whereby students in their Final years of the MD course are required to complete 33 surgical case studies by the end of their 5th year. The cases are spread out over the three-year final course period and one case each year must be an in Department study. The final casebook serves both as an incentive for students to carry out undergraduate case studies as well as a Faculty record of the said undergraduate's work.

Aim: To carry out a retrospective study of a number of such casebooks, taken from the class graduated in 2006 (the first set of students benefiting from this scheme).

Method: This is the first part of a three year study. Our aim is to carry out a comprehensive quantitative and qualitative study outlining the various cases under study, categorising them into specialties chosen, level of detail and type of operation, amongst others.

Results and Conclusions: This three-year study is chiefly concerned with auditing the casebooks under study, thus being able to propose any relevant changes and improvements to the current scheme. The results may also be implemented in suggesting any amendments in surgical areas, which the studies prove to be lagging behind others. Both the conclusions and suggestions will be presented in the form of a poster.

P-058

The effectiveness of analgesic regimes in renal colic

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Background: Renal colic is a well known cause for acute severe pain. Its incidence peaks during the summer months in Malta due to relative dehydration that facilitates stone formation.

Objective: The objective of this study is to assess the effectiveness of available analgesia in the pain relief of renal colic in patients. The effectiveness and encountered side effects of the different types of analgesia used are compared.

Method: Participants included in this study will involve patients admitted to St Luke's Hospital with pain attributed to acute renal colic during the holiday summer months. Patients where renal colic is not diagnosed by imaging as a cause of the pain are excluded. The Visual Analog Scale will be used to assess the patient's perception of pain and its relief.

Results: The results are compared to similar studies to review our experience, identify the more effective strategies and suggest optimum treatment of renal colic effecting more effective pain relief in renal colic.

P-059

Surgical ablation with bipolar radiofrequency energy as treatment for the elimination of atrial fibrillation in patients undergoing concomitant cardiac surgery

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Aim: The aim of this study is to present a single-centre experience of using a

bipolar radiofrequency device to eliminate atrial fibrillation (AF) in patients undergoing surgery for co-existing cardiac conditions.

Methods: Between April 2004 and July 2006, 11 patients underwent ablation in an attempt to eliminate AF during surgery to treat another disorder. 7 patients underwent mitral valve repair for mitral regurgitation - 4 of these required additional coronary bypass grafts and another, a tricuspid repair. 1 patient underwent an aortic valve replacement for aortic stenosis, 2 patients, a mitral valve replacement for rheumatic and congenital mitral valve disease, and 1 other, bypass grafts to treat multivessel coronary disease. AF was permanent in 9, persistent in 1 and paroxysmal in another. In 2 patients, ablation lines were placed in the left atrium and in the other 9, in both left and right.

Results: The bipolar device was easy to use and ablation lines to both atria were completed in 20 minutes. One patient died in hospital from sepsis and multiorgan failure. We have post 180 day rhythm data in 5 patients - 4 are in sinus rhythm (1 required cardioversion from atrial flutter) and 1 patient is back in permanent AF. A further patient is in sinus rhythm on day 67 having required cardioversion from AF on day 35.

Conclusion: Radiofrequency ablation with a bipolar device is easy and effective. Further long-term studies are required to see whether sinus rhythm is maintained and whether anticoagulation treatment can be withdrawn safely.

P-060

Reconstruction with temporalis muscle flap after total maxillectomy with orbital exenteration for resection of an extensive maxillary antral squamous cell carcinoma

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This is a case report of a 62-year old male who presented with a one month history of left sided facial pain and occasional epistaxis. Subsequently, he was diagnosed with a squamous cell carcinoma (SCC) of the left maxillary antrum, with involvement of the hard palate, orbital floor periosteum, medial and inferior rectus muscles, left ethmoid complex and left infratemporal fossa. This tumour was staged as T4, N0, Mo.

A total maxillectomy with orbital exenteration were performed for surgical resection of the tumour, and using the left temporalis muscle, a flap was fashioned for the reconstruction of the facial defect.

This flap represented a good solution for reconstruction as it provided copious, well-vascularised tissue for the obliteration of the total maxillectomy and orbital exenteration cavities. Temporalis muscle flap is considered a very reliable technique with low complication rates and few donor site problems, making it a safe and technically easy flap, which is preferred for the reconstruction of craniofacial defects after resective tumour surgery.

P-061

Comparison of inguino-vaginal fascial sling with synthetic transvaginal slingplasty for genuine stress incontinence

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Objectives: The use of an autogenic material for the suspension of a bladder neck using the traditional sling procedure is compared with the new technique using synthetic multifilament polypropylene mesh tape for tension free vaginal sling procedure.

Method: In this study both the autogenic sling and the synthetic multifilament polypropylene mesh tape were inserted retropubically using the same blunt tipped tunneller device. Through the suprapubic approach, a fascial strip is dissected from the aponeurosis of the external oblique muscle using a plastic rounded tip tunneller the fascial strip is threaded retropubically. Both fascial strips are then plicated beneath the mid-urethra.

The tunneller is introduced paraurethral through a midline incision at the level of the mid-urethra. In the synthetic mesh slingplasty group the tape is passed through the submucosal tunnel and brought up through a small abdominal incision. In both groups, the midline incision is closed using absorbable sutures. No vaginal packing was performed in either group.

Results: The inguinovaginal fascial sling for genuine stress incontinence involves a laparotomy and delayed discharge from hospital compared to intravaginal synthetic mesh slingplasty which can be done as a day surgery. There were no intraoperative or postoperative complications. Ultrasonography for residual post void measurements was performed prior to discharge and four weeks post operatively. There was no post operative urinary retention, no mesh erosions and no urinary urgency reported in both groups. The tension free vaginal sling provides mid-urethral support during increasing abdominal pressure and less risk of voiding dysfunction and urinary retention.

P-062

Gallstone ileus: pictorial review of CT scan findings in a series of local cases

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Gallstone ileus is an uncommon cause of small bowel obstruction representing 3% in all age groups. However, it is the cause for 25% of small bowel obstructions in patients over 65. It is an important clinical problem with mortality rates as high as 27% being reported. The classical plain film findings are described as Rigler's triad and include features of small bowel obstruction, gas in the biliary tree and the presence of an ectopic gall stone. This triad of findings is only seen in 10% of cases on plain film with 2 signs seen in 40-70% of cases. CT scan has taken a major role in investigating small bowel obstruction with gallstone ileus often being diagnosed when no suspicious signs were identified on the plain film. The above signs described are identified in a larger number of cases on CT scan (77-93%). Other features on CT include; abnormality of the gallbladder and duodenum, identification of the cholecysto-digestive fistula, identification of the transition point at the site of the gallstone, accurate size of the gallstone and features of bowel perforation and ischaemia. Following a series of cases of gallstone ileus in our institution, the aim of this poster is to demonstrate a pictorial review of the diagnostic signs on CT scan.

P-063

Abuse (physical and verbal) of doctors who work in the Accident and Emergency (A&E) department of St Luke's Hospital

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Aim: To quantify the level of abuse suffered by doctors working in A&E.

Method: All doctors working in the A&E department during August and September were asked to answer a questionnaire about abuse by patients/general public. This questionnaire was based upon a similar one designed by the Royal College of Nurses to be able to have comparable results. Doctors working in paediatric casualty have separate results.

Results: The response rate was 87.5% (35/40) 19 males and 16 females.

Results show that 94.286% of doctors working at A&E Department suffered some sort of abuse, over the past year.

5 of the current doctors working in A&E have reported physical abuse. 4 of these over the past 3 years.

Only 4 doctors did something about the physical abuse and only 1 was satisfied with the outcome.

Results (paediatric casualty): The response rate here was 76%. 58% reported harassment, 68% reported verbal abuse and one doctor claimed physical assault in the last 12 months.

Conclusions: The level of abuse of doctors is very high. Verbal abuse is at a particularly high level. A large amount of abuse goes unreported. Of the abuse that is reported, the level of satisfaction with the outcome is low.

P-064

Bupivacaine infiltration and multimodal analgesia during gynaecological laparoscopy

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Objectives: The use of local anaesthesia, namely bupivacaine intraoperative wound infiltration is compared with the use of non-steroidal anti-inflammatory analgesics in patients undergoing gynaecological laparoscopy either for diagnostic or therapeutic purposes.

Method: In one hundred and twenty women undergoing laparoscopy, either as a diagnostic investigation of infertility or during therapeutic electrocautery of endometriosis, were randomly allocated to treatment by bupivacaine 0.5% wound infiltration or by diclofenac 100mg suppository. All patients were administered 1.5g paracetamol rectal suppository prior to starting the operative procedure. Patients undergoing laparoscopic adhesiolysis and patient undergoing aspiration of ovarian cyst were also included. The outcome was established by assessing the degree of patient satisfaction, the need for other forms of analgesia such as pethidine intramuscular injections, reduction in time spent in recovery room and rapid recovery to a state of post anaesthetic street fitness that is early discharge post-operatively.

Results: In the bupivacaine group, there was a reduction in the need for post-operative intramuscular pethidine, a higher degree of patient satisfaction, a reduction in the time spent in the recovery room. The recovery time for the patient to be discharged from the ward was not dependent on medical factors in most cases, but there was an earlier recovery to a state of post-anaesthetic street fitness in the bupivacaine group.

P-065

An audit of threatened miscarriage as a predictor of obstetric outcome in Malta

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Objective: To investigate prospectively the risk of adverse pregnancy outcome in women presenting with first-trimester threatened miscarriage.

Methods: A retrospective cohort study was performed on women presenting with bleeding during their first trimester at the Gynae Admission Room (St Luke's Hospital) during 2004. Main outcome measures included gestational age and weight at delivery and incidence of adverse pregnancy outcome. Data were analyzed by univariate and multivariate statistical methods.

Expected results: Women with threatened miscarriage are usually at a higher risk of premature delivery, when compared to normal pregnancies. In addition, they were also at a higher risk of preterm prelabour rupture of membranes. Other outcomes that have been linked to threatened miscarriage in the literature include antepartum haemorrhage, elective caesarian sections, manual removal of placenta, and malpresentation.

Conclusions: This study aims to establish whether, in the Maltese population, patients presenting with a threatened miscarriage during early pregnancy are at a high risk for adverse pregnancy outcome. If so, such patients would qualify for closer surveillance up till delivery.

P-066

The role of TNF-alpha in pregnancy loss: a review

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TNF-alpha is synthesized throughout the female reproductive tract, in

the placenta and embryo. The expression of this gene is influenced by development, female sex steroid hormones, and lipopolysaccharide. The differential expression of the two species of TNF receptors is regulated by female sex steroid hormones, and this partly determines the functions of TNF-alpha. TNF-alpha is a potent, multifunctional cytokine in autocrine and paracrine processes central to reproduction, including gamete and follicle and luteal development, steroidogenesis, uterine cyclicality, placental differentiation, development of the embryo, and parturition.

Evidence suggests the existence of a range of CD4+ T-helper mediated responses. The two major subsets of these cells: Th1 and Th2. These have different immune responses via different patterns of cytokine production. Studies on murine and human pregnancy show a strong association between maternal Th1-type immunity and pregnancy loss on one hand, and, on the other hand, Th2-type immunity (together with TGF-beta secreted by Th3 cells) and successful pregnancy. It has been shown that there is a pro-type 2 shift in ratios of cytokine expression at the maternal-fetal interface in women with normal pregnancy as compared to women with recurrent spontaneous abortion.

Current literature shows that TNF-alpha, IFN-gamma and natural killer cells cannot induce miscarriage separately, but a Th1-NK-macrophage triad is known to bring about miscarriage, which can in turn be suppressed by a Th2 cytokine response

P-067

Intervertebral disc height correlation with bone density and demographic data of postmenopausal women with osteoporotic vertebral fractures

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Objectives: To assess correlations of Intervertebral disc height with bone density and demographic data of postmenopausal women.

Methods: Two hundred and fifty seven women were collected randomly from a large directory in a data base of a bone density unit.

Results: 257 Women were divided in five groups according to the menopausal/menstrual status. Forty seven (47) menopausal women were on HRT, 77 women were untreated menopausal women, 21 women were on bisphosphonates, 30 women were on calcium supplements, 44 women were premenopausal and 38 women had confirmed vertebral fractures. All women with fractures had low T-scores in the osteoporotic range. Age and weight difference were noted across groups and statistical. Correction was made for these differences.

Age showed the most consistent negative correlation with disc height throughout all the groups of women. Correlations were also borne out with the height and weight variables. Bone density showed a significant correlation with disc height ($R = 0.499$ $P < 0.0001$). The premenopausal group showed the most significant correlation between the disc height and T-score ($R = 0.47$ $P < 0.01$) followed by the untreated menopausal group ($R = 0.25$ $P < 0.05$).

Conclusion: Disc height showed strong correlation with age, weight and height. The premenopausal group maintained a significant correlation with bone density. Disc degeneration appears to be significantly influenced by the age and weight status and this may partially explain the observed height loss in postmenopausal women.

The correlation in the premenopausal women suggests a close coupling between bone density and disc height. With the onset of the menopause this coupling mechanism may be disrupted increasing the risk for osteoporosis and subsequent fracture.

P-068

Iliac vessel wall thickness: an atherosclerotic marker in 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. 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-069

Lipid profile 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.

Methods: 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.

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

The epidemiology of polycystic ovarian syndrome

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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.

P-071

SANDS (MALTA), stillbirth and neonatal death society

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SANDS (Malta) was first established in 1994 when a group of health professionals and bereaved parents felt that a vacuum existed where support of the bereaved parents of stillbirths and neonatal deaths was concerned. It appeared convenient to organise the group's activities according to the status of its members. Support from SANDS developed into an initial hospital and later a community based service.

The primary aim in the initial stages is to provide comfort for the mother and partner. Respecting the parents' wishes and providing an understanding and supportive environment are the key issues of support. Practical support is also offered so as to diminish the burden on both mother and her partner.

A questionnaire distributed at the end of each SANDS session indicated that the majority (69%) felt "much better" while the rest indicated that they felt "better" than before they attended SANDS. Following their attendance at SANDS the large majority (94%) were considering another pregnancy. In fact some 21 % of mothers did have a pregnancy within the first two years of attending SANDS.

SANDS has undoubtedly helped several parents to deal with the traumatic experience however difficult the circumstances. The effective support offered by SANDS very much depends on the efficient co-ordination of both the Hospital and Community components.

P-072

Carotid artery wall thickness in hormone treated and untreated 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. There was also a significant difference in the media layer when comparing the control group (0.265 ± 0.092 mm) to both the oral (0.289 ± 0.087 mm) 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 ($0.0.249\pm 0.88$ mm) when compared to the controls (0.287 ± 0.095 mm). No significant difference in the intima layer was noted between the control and the implant group (0.279 ± 0.1 mm). 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-073

Bone density and skin thickness changes in postmenopausal women on long-term corticosteroid therapy

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A cross-sectional study was performed on 64 postmenopausal women who had been on long-term corticosteroids. Each woman had the skin thickness measured using high resolution ultrasound (22MHz) and the bone density measured using a DEXA Norland. These measurements were compared to a control group (n=557), a group of women who had sustained osteoporotic fractures (n=180), and a group of women on hormone replacement therapy (n=399). The longitudinal study on 38 postmenopausal women on corticosteroids was also performed over a period of two years. The cross-sectional study showed that the corticosteroid therapy was associated with the thinnest skin thickness measurements mean (0.83mm). Similarly, low bone density measurements lumbar spine mean (0.81g/cm²) and left hip mean (0.71g/cm²) were obtained for this group. The longitudinal study of women on long-term corticosteroids treated with HRT over two years revealed a constant increase in skin thickness (mean 6% per year) and bone density (left hip mean 5% per year, lumbar spine mean 5% per year). Skin thickness and bone density level in women on long-term corticosteroids were comparable to that of women who had sustained osteoporotic fractures. In postmenopausal women on long-term corticosteroids, skin thickness and bone density were both decreased, but the addition of hormone replacement therapy as add back improved the situation.

P-074

Challenges to obstetric medicine with the recent influx of irregular immigrants to the Maltese islands

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Over the past three years the Maltese Islands have experienced an influx of irregular immigrants, the majority coming from the African continent. A number of these irregular immigrants are pregnant women arriving in Malta at various stages of gestation.

From the outset, the management of these cases is hampered by severe difficulties in communication. Many of these irregular immigrants originate from different countries with diverse languages and cultural backgrounds. Difficulty with accurate dating of the pregnancy and obtaining a reliable past obstetric history are frequently encountered. The problem with communication leads to inaccuracy in history-taking and blunderbuss investigation in an attempt at arriving at a diagnosis.

The pregnancies have been complicated by various pathologies pertaining to pregnancy. Early and mid-trimester miscarriage complicated by severe chorionamnionitis have been encountered. These patients are at greater risk of preterm labour due to both the complications related to pregnancy and medical disorders sustained by these patients.

A variety of infections have been diagnosed in pregnancy. Viral infection such as Human Immunodeficiency Virus, Parvovirus B19 associated with fetal ascites and hepatitis b have been detected in these patients. Rickettsial infection and bacterial infection with Neisseria meningitidis have also been diagnosed. These infections threaten both mother and child and also present difficulty with the possible teratogenicity and side-effects of the treatment applied.

This recent phenomenon of irregular immigration including pregnant women presents a significant challenge to the practice of Obstetric Medicine. Besides the increased workload the department of Obstetrics has to deal with, the socio-medical problems are diverse and complicated requiring substantially increased efforts at overcoming them.

P-075

Mirena/dilatation and curettage: a one stop shop at treating menorrhagia and avoiding hysterectomy

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Until recently menorrhagia was the commonest symptom for which hysterectomy was performed. The application of the Levonorgestrel intrauterine implant (Mirena) has been shown to significantly diminish menorrhagia, reducing the hysterectomy rate by at least 35%.

This method of treating menorrhagia is slowly gaining acceptance in the Maltese Islands. A total of 72 cases were recruited over the past five years and the outcome was assessed. The vast majority showed an favourable reaction to the application of the Mirena. Only two women were dissatisfied with persisting menorrhagia which required a hysterectomy. The commonest minor complaint was spotting in the first 3-6 months following the introduction of the Mirena but in the great majority of cases this symptom petered out after six months.

The application of the Mirena has been further facilitated by combining the standard investigative procedure – dilatation and curettage – with the application of the Levonorgestrel implant under the same anaesthesia. The contemporaneous curettage may remove the endometrial lining which may act as a barrier to the permeation of levonorgestrel, thereby augmenting the latter's function.

The above combination of procedures has increased efficiency at both diagnosis and expediting treatment further reducing the possibility at resorting to hysterectomy to treat menorrhagia.

P-076

Characteristics of pregnancies undergoing preterm delivery from 2004 till 2006

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The incidence of preterm delivery occurs at around 5%. Preterm delivery is the most common cause of fetal morbidity and perinatal mortality. Women who have had a spontaneous preterm delivery, will be at an increased risk of having a preterm delivery in subsequent pregnancies and among the complications related to prematurity, there are respiratory distress syndrome, necrotising enterocolitis and intraventricular haemorrhage.

Over the past three years 119 women were noted to have sustained preterm delivery (24 - 34 weeks gestation). A number of clinical features were assessed in an effort to delineate possible causal factors for preterm delivery in this group of women. The most common cause for preterm delivery was premature rupture of membranes. Premature rupture of membranes was the initiating cause in 68 women (55.8%). This was followed by bleeding in both early and late pregnancy – 27 women (23%). Pregnancy induced hypertension and multiple pregnancies accounted for 13.4% and 14% of preterm deliveries respectively. Abnormal glucose metabolism was associated with 8.4% of preterm delivery. A number of pregnancies had two or more of the above complications. Two thirds of these pregnancies (64.7%) were delivered by Caesarean Section. Intrauterine death and early neonatal death soon after delivery occurred in 15.1% of the premature neonates delivered. The majority of the surviving neonates required transfer to the Special Care Baby Unit.

Preterm delivery accounts for substantial fetal mortality and surviving premature neonates require intensive SCBU care. Efforts should be directed at the possible causal factors of preterm delivery so as to diminish the birth of premature neonates.

P-077

Should clomiphene citrate or low-dose gonadotrophin therapy be the first line treatment for anovulatory infertility associated with polycystic ovary syndrome?

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Background: Clomiphene citrate has been the first-line treatment for anovulatory infertility associated with polycystic ovary syndrome for 40 years. Ovulation is induced in 75% of patients but only 33% conceive, with the singleton live-birth being 22%. Low-dose FSH therapy has a pregnancy rate of 45%, and a singleton live-birth rate of 34%. However, FSH has only been given to clomiphene failure! From these figures it can be predicted, that if FSH is given as first-line treatment, the singleton live-birth rate will be 57%.

Aim: To compare results of first line treatment with clomiphene to those with low-dose FSH in women with anovulatory PCOS wishing to conceive. The results plus a cost-effective analysis will determine if the administration of FSH rather than clomiphene citrate as first-line treatment for anovulatory women with PCOS is a feasible option.

Study Design: A multicentre, randomized, prospective trial and cost effective analysis. Infertile women with established PCOS and who have had no infertility treatment in the preceding 12 months, will be randomized to receive either Clomiphene citrate or FSH for a maximum of 3 cycles. Primary endpoints include pregnancy, miscarriage, multiple births and singleton live birth rates.

Results: So far 8 patients have been recruited to the study. Six patients were randomly assigned to the FSH group. Of these one had a singleton live birth and one had a miscarriage at 8 weeks. Two patients were randomly assigned to the clomiphene citrate group and none of them conceived.

P-078

Temporal trends in multiple pregnancy rates in the Maltese Islands

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Multiple pregnancy rates in the Maltese Islands have increased significantly in the last forty years from 1.04% during the period 1960-1969 to 1.30% during 1990-99. This increase has in part been influenced by changes which have occurred in maternal age distribution which alone would have increased the twin pregnancy rate to only 1.07%. The difference must be attributable to other factors, the most likely being the increasing use of pharmacological and technological reproductive aids. The occurrence of a multiple pregnancy remains fraught with adverse outcomes and in spite of the advances in obstetric antenatal surveillance and easier recourse to early delivery, the stillbirth rates in multiple maternities has remained markedly elevated contrasting with the fall in the singleton stillbirth rate. The early neonatal mortality also remains markedly greater than that registered for singleton births, but has shown a proportional decrease.

P-079

Short-term obstetric outcomes in obese Maltese women

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Obesity has been associated with specific increased perinatal risks to mother and child. The obstetric outcomes of 1691 of women with a body weight ≥ 85 kg and a pre-pregnancy BMI >30 and their 1721 infants were statistically compared to similar parameters in the background population of 18717 maternities and 18974 births. Obese mothers were more likely to be older than 30 years [$p < 0.0001$], multiparous [$p < 0.0001$] with a history of previous miscarriages [$p = 0.003$]. The antenatal period was more likely to be complicated by hypertensive disease [$p < 0.0001$], and gestational diabetes [$p < 0.0001$]. They were less likely to suffer from accidental haemorrhage [$p = 0.0074$]. These antenatal problems were not simply a determinant of maternal age. They did not appear to have a significantly higher risk of pre-existing diabetes [$p = 0.3267$]. Obese women were also more likely to require obstetric interventions with induction of labour [$p < 0.0001$] and Caesarean section [$p < 0.0001$]. There was a statistically lower rate of operative deliveries [$p = 0.0007$]. The preterm delivery rates were not different [$p = 0.947$] between the two groups of women. The infants born to obese women were at a statistically higher risk for macrosomia [more than 4.0 kg; $p < 0.0001$] and lower risk for low birth weight [under 2.5 kg; $p = 0.0248$]. They also apparently had a statistically higher risk for congenital malformations. There appeared to be a slightly higher risk for respiratory distress though the differences did not reach statistical significance [$p = 0.0596$]. There did not appear to be any significantly increased risk for perinatal loss [$p = 0.8212$], shoulder dystocia [$p = 0.5059$], and low APGAR scores at five minutes [$p = 0.9989$]. It would appear that the obese pregnant woman and her infant are predisposed to adverse short-term obstetric outcomes similar to those found in gestational diabetics. This apparent relationship may reflect determinants of the "Metabolic Syndrome".

P-080

Multiple pregnancy outcomes in the Maltese Islands: 2000-2004

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Multiple births have increased significantly in the last decades. This study attempts to audit the characteristics and outcomes of these maternities. The National maternity data for 2000-04 was analysed [19935 maternities; 20215 births]. The twin maternity rate stood at 1.26%; triplet maternities 0.06%; quadruplet maternities 0.01%. Artificial reproductive technology was used in 9.1% [twins], 27.8% [triplets]; 50.0% [quadruplets], in contrast to 0.7% in singleton maternities. Multiple maternities apparently had increased risks over singleton maternities of hypertensive disease and

antepartum haemorrhage. Pregnancies were more likely to be terminated by Caesarean section. Infant outcome was more likely to be complicated by prematurity and dysmaturity and the associated complications of respiratory distress, low Apgar score, and perinatal deaths.

P-081

Pregnancy outcome in diabetic mothers: 1999-2004

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In spite of several advances made in the last two decades in obstetric management, diabetes complicating pregnancy remains a high risk obstetric situation irrespective of whether the medical condition is pre-existing [pre-DM] or develops during pregnancy [GDM]. The study reviews the outcome parameters of pre-DM [maternities = 98; infants born = 106] and GDM [mat. = 480; infants = 498] and compares these to those presumed to have normal metabolic profiles [mat. = 23668; infants = 23993] who delivered in the Maltese Islands during the six-year period 1999-2004. The study confirms that pre-DM carries definite obstetric morbidity risks for the mother and child - the mother showing significantly higher incidences of hypertensive disease and need for Caesarean delivery; while the infant shows a significantly higher morbidity arising from prematurity and attendant complications of low Apgar scores and respiratory distress. There was also a significant risk of macrosomia in these infants, congenital malformations were only slightly increased though the difference did not show statistical significance. GDM similarly showed significant obstetric maternal morbidity risks with a significantly higher incidence of hypertensive disease, induction of labour and Caesarean deliveries. The infant similarly had significantly higher risks from prematurity, respiratory distress and macrosomia. The study confirms that in spite of the increased obstetric and metabolic intervention, the diabetic mother and her child remain at significant obstetric morbidity risks. St Vincent's Declaration goal for diabetic pregnancies has yet to be achieved and may have been overambitious.

P-082

Starvation and the development of the Metabolic Syndrome

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Studies have shown that low birth weight infants have a significant risk of eventually developing the Metabolic Syndrome including maturity-onset diabetes. A severely restricted diet has similarly been associated with poor fetal development leading to low birth weight; while several animal studies have confirmed the link between a restricted diet and the subsequent development of maturity-onset diabetes. The present study sets out to test the hypothesis that the food-restricted situation during the Second World War in Malta led to a population at higher risk of developing the Metabolic Syndrome in adulthood. These war-born women would in turn develop carbohydrate metabolism disorders during their pregnancy predisposing them to deliver infants with a higher birth rate. The study will thus analyse and compare the birth weights of infants born at St Luke's Hospital during 1967-1968 of mothers born during the War period and those born before and after the siege.

P-083

The prevalence of methylenetetrahydrofolate reductase (MTHFR) mutations in patients attending a recurrent miscarriage clinic

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Aim: The aim was to investigate the prevalence of MTHFR mutations in a cohort of 56 patients.

Method: This retrospective observation study includes couples with 2

or more recurrent miscarriages who attended the recurrent miscarriage clinic over the past 2 years. A standard investigation protocol was applied to all patients. The protocol included blood tests for serum folate, fasting homocysteine levels and MTHFR mutations. Both the patients and their partners were investigated. Every patient with MTHFR homozygote mutation was advised to take double dose folic acid daily, stop smoking and avoid other contributing factors to thrombosis.

Results: The results concerning MTHFR mutations were as follows:

- Patients with homozygous MTHFR mutation - 5 (9%)
- Patients with heterozygous MTHFR mutation - 23 (41%)
- Patients' partners with homozygous MTHFR mutation - 3 (5.3%)
- Patients' partners with heterozygous MTHFR mutation - 11 (20.7%)

3 patients (5.3%) were found to have high homocysteine levels. 1 patient's partner was found to have high homocysteine levels. Serum folate levels were found to be normal in every case.

Conclusion: From these results it can be seen that MTHFR mutations have a high prevalence in our population of patients with a history of recurrent miscarriages and that therefore its inclusion in the investigation protocol of recurrent miscarriage is both justified and indicated. The role of heterozygote states of the MTHFR mutation (41% of female partners) in the aetiology of recurrent miscarriage is yet to be defined.

P-084

An analysis of the investigations of patients attending a recurrent miscarriage clinic

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Aim: This is a retrospective observation analysis of the investigations of the patients who attended the clinic over the past 2 years. 56 patients were seen during this period of time.

Methods: A standard detailed obstetric, gynaecological and medical history was taken in every case. A standard investigation protocol was then applied to all patients. Following the investigations each couple was advised a treatment protocol. These protocols were strictly adhered to as far as possible in order to enable comparisons

Results: The largest group of patients was the idiopathic group with 20 couples representing 35% of the total. The second largest group was the PCOS with 11 patients (20%) and congenital thrombophilia with 8 cases (14.2%). Luteal phase defects (12.5%), congenital anatomical abnormalities (10%) and acquired thrombophilia (7%) followed. There were no cases of genetic defects in this group. The outcome of the group is still incomplete as a significant number (28 patients) are still trying to conceive following investigation.

Conclusion: The group with ovulatory dysfunction (32%), which comprises the group with Polycystic Ovary Syndrome (20%) and Luteal Phase Defects (12.5%), was nearly as common as the idiopathic group. The PCOS group was, as in previous audits of this clinic, the most important pathological group. This fact sustains the notion that PCOS is in high prevalence in Malta and is probably related to the documented high incidence of diabetes mellitus in our island.

P-085

Detection of *Chlamydia trachomatis* and *Neisseria gonorrhoea* in urine by real time PCR

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Aim: Chlamydia and gonorrhoea infections are two common sexually transmitted diseases that can be asymptomatic and difficult to diagnose especially in women but can eventually lead to serious problems if left untreated. Current testing for these diseases is not so efficient and can often result in false negative results. In this study, a molecular test was developed for detection of *Chlamydia trachomatis* and *Neisseria gonorrhoea* in urine.

Method: Positive controls as well as urine samples spiked with the organisms were used in the analysis. DNA was extracted from 50mls of urine after concentrating the sample. PCR was performed using two sets of specific primers and fluorescently labeled probes using an ABI7300 real time PCR cycler.

Results: PCR amplification was detected for all positive controls as well as from urine samples spiked with the corresponding organism. No amplification was observed in non template controls.

Conclusion: In this study a very sensitive method for the detection of Chlamydia and gonorrhoea in urine samples was developed. This method is useful for early detection of these two common sexually transmitted diseases.

P-086

Detection of human papilloma virus in clinical samples by polymerase chain reaction (PCR)

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Aim: The Human Papilloma viruses (HPV) are a group of viruses that includes more than a hundred types, thirty of whom were reported to be transmitted sexually and infect the genital area in both males and females. Detection of HPV is very difficult since it might be present very high up in the vagina, cervix or anus. Until now observation of koilocytosis in routine Pap smear is indicative of HPV infection although this is not always the case. In this study a molecular test for the detection of HPV infection was developed.

Method: DNA was extracted from cervical brushings or biopsies by conventional methods. HPV DNA controls of different types including 16, 18 and non-oncogenic types were also used in the study. A set of primers consisting of nine pairs was used for PCR amplification. In parallel, another PCR was performed as a control to test for the efficiency of the extraction method. Following PCR, the expected fragment of approximately 400bp was detected by agarose gel electrophoresis.

Results: Positive amplification was observed for all HPV controls and known positive samples. DNA sequencing was then performed using BigDye® terminator technique and results compared to public databases to identify the type. There was 100% concordance with the expected types of HPV controls.

Conclusions: In this study a novel method for detection and typing of HPV in clinical samples was developed. This method is very sensitive and specific and can detect early infection with this virus and so help in better treatment management.

P-087

Infertility in science fiction

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Medicine and its practitioners are frequently used in mainstream literature and in subgenres of literature, either as protagonists or as useful backdrop. Infertility is often employed in science fiction (SF) and is applied not only to humanity, but also to animals and to aliens. This talk will briefly depict some of these representations of infertility in SF.

P-088

The eyes and vision in science fiction

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Medicine and its practitioners are frequently used in mainstream literature and in subgenres of literature, either as protagonists or as useful backdrop. Eyesight and the eyes themselves are regularly employed in science fiction (SF), not only as important motifs enjoying central roles in the plot, but also in other aspects of the story, such as in characterization. In this article, I will therefore review some interesting aspects of eyesight and of the visual

organs as exploited by SF authors, with particular reference to Ridley Scott's 1982 cult movie 'Blade Runner'.

P-089

Stenosis of the upper body arteries in association with coarctation and interrupted aortic arch

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Coarctation of the aorta and interrupted aortic arch are not usually associated with stenosis of innominate, common carotid or subclavian arteries. We report two patients with stenoses of combinations of these arteries, one in association with coarctation (stented later in life) and the other in association with interrupted arch (arterial stenoses surgically repaired at the time of surgery for the arch proper). Both have done well.

P-090

Mycoplasma pneumoniae – an unusual cause of acute myocarditis in childhood

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Mycoplasma pneumoniae is primarily a respiratory pathogen but may affect exhibit a diverse range of presentations from asymptomatic infection to life threatening conditions. Myocarditis of varying severity is an unusual complication. We report a 6 year old with mycoplasma myocarditis, a rare age for such a presentation, and who responded well to treatment with no sequelae. Serological testing for *Mycoplasma pneumoniae* should be part of the routine work-up for myocarditis.

P-091

A case of congenital cytomegalovirus infection

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Aims: To highlight (1) the incidence and clinical features of congenital CMV infection; (2) the diagnostic features and imaging; (3) the controversial issue regarding treatment; (4) outcome.

Methods: Case report of a newborn infant presenting at birth with petechial rash, hepato-splenomegaly, hyperbilirubinaemia and pneumonitis.

Conclusions: Congenital CMV infection remains an important of intra-uterine infection with potential devastating complications for the infant. The difficulties of treatment and outcome are discussed.

P-092

Protocol for administering medicines in mainstream schools

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Background: The requirement for regular medication and, sometimes, medical procedures, during school hours may hinder regular attendance. Similarly, unsupervised administration by pupil or teachers is potentially dangerous to the pupil, his peers and may result in litigation against teachers and education authorities.

Aim: A national protocol with clear guidelines for pupils, parents, attending doctors and all relevant personnel from the Division of Education was

designed for the safe administration of medicines to children in mainstream schools.

Methods: The protocol differentiated between 'ORDINARY' and 'EXTRAORDINARY' guidelines to cater for the majority on regular medication who require the ingestion of tablets, syrup, inhalers or drops generally once during school hours, and the remaining 5% who require special medication (e.g. dangerous or controlled drugs), invasive medication (e.g. per rectum, injections, via enteral tube), or special procedures (e.g. urinary catheterization, injection through indwelling central ports, etc). A standing committee was proposed to assess the application of parents for extraordinary procedures on an 'ad hoc' basis, with an emphasis on the feasibility of introducing such procedures in school. For the remaining majority, a clear protocol standardized the following: i. 'Request Form' (with medical section outlining details of prescription including name, dosage, method of administration, time, method of storage, etc); ii. 'Consent Form' for parents/guardians; iii. Designation and training of staff, co-ordinated by head of school; iv. Specific forms for recording daily administration, errors, complications, etc; v. Practice for disposal of medicines; vi. Request for review/renewal/cancellation of established approval.

Conclusion: Pending clarification on indemnity, legal issues and official approval, the protocol should significantly facilitate school attendance in children requiring regular medication.

P-093

Brain and myocardial infarction in a patient with complex transposition of the great arteries

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In transposition of the great arteries, systemic venous return is preferentially routed to the aorta, and any spontaneous or iatrogenic emboli may therefore cause organ infarction. We present a patient with transposition of the great arteries who developed myocardial and brain infarction despite adequate precautionary measures.

P-094

Myocardial injury following perinatal asphyxia

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Aims: To highlight the following:

1. Birth asphyxia remains a common problem
2. Commonest complication is neurological
3. Less commonly, other organ systems, including the heart, may be involved.

Methods/Results: Case report of a newborn baby with birth asphyxia who sustained documented myocardial injury, including tachyarrhythmia and elevated cardiac enzymes.

Conclusion: Following birth asphyxia a careful diagnostic workup is necessary to determine end-organ damage of the CNS, peripheral nervous system, kidneys and heart.

O-095

Coverage of neonatal cranial ultrasound scanning - current practice in the Special Care Baby Unit and recommendations

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Aims: To review the coverage of cranial ultrasounds in sick neonates admitted between October 1997 and October 1999 comparing this to recommended guidelines.

Methods: A Medline review (1976-2005) was performed to assess the value and timeliness of screening neonatal cranial ultrasounds.

Results: Recommendations are to perform first scan for preterms at high risk of intraventricular haemorrhage in first 72 hours and follow up at 14 days. In those with birth / perinatal asphyxia, first scan should be performed in the first 24 hours and follow up at 6-8 weeks. Early scans within the first 96 hours are important to detect lesions of antenatal origin. In our preterm group 99 (58%) underwent the first ultrasound scan within 72 hours of life. By the end of the first week, 126 (80%) preterm and 94 (84%) term underwent first cranial scan. A second scan was performed in the 2nd week in 40% (63) of preterms. First timely scans were performed in 64% of term infants with hypoxic ischaemic encephalopathy and 44% had a follow up scan booked on the SCBU at 4-6 weeks.

Conclusion: Adhering to the optimal timing of scanning is difficult. Just over half of preterm infants had early scans which could result in missing transient lesions like flares / early haemorrhages in those unscanned. Most preterms had a scan by the first week, the time when virtually all haemorrhages will be detected. Coverage of term infants with second ultrasound is low as most would have been discharged before 4-6 weeks. The latter require improved 6-8 week ultrasound coverage.

P-096

Autoantibodies in visceral leishmaniasis

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Visceral leishmaniasis is endemic in the Mediterranean region and is caused by *Leishmania infantum*. Disease burden is highest in children below the age of 3 years. Autoantibodies might be produced in association with *Leishmania* infection. Discriminating between infection and autoimmune disease might then be challenging.

This is a case report of a 2 year old boy of Afro-Caribbean origin who presented with a four week history of occasional fever and left knee pain. On physical examination he was noted to be pale, had hepatosplenomegaly and a normal left knee. Laboratory investigations showed a hypochromic microcytic anaemia, a raised ESR, a high CRP, and a markedly elevated serum IgG. Cultures of the blood and urine were negative. Serological tests for hepatotropic viruses and HIV were also negative. Rheumatoid factor IgM, anti-dsDNA antibodies and antinuclear antibodies, with a nucleolar pattern, were measured in high titres. *Leishmania* antibodies were detected by immunofluorescence and intracellular *Leishmania* amastigotes were identified on examination of a bone marrow aspirate. He was successfully treated with sodium stibogluconate for 3 weeks; however the autoantibodies persisted for up to 4 months later.

The production of autoantibodies in visceral leishmaniasis might be secondary to polyclonal B cell activation and molecular mimicry between leishmanial antigens and human proteins. A high index of suspicion is necessary to diagnose this potentially fatal disease.

P-097

Neonatal zoonosis

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Pasteurella multocida is a Gram negative coccobacillus which is a common commensal in the upper respiratory tract of cats and dogs. Infections by *Pasteurella multocida* are still not notifiable so incidence and prevalence data are not available. Human infection usually follows animal contact; however rare cases of infections without dog or cat exposure have been reported. This is a case report of a neonate born with congenital *Pasteurella multocida* infection.

A term female infant was delivered by emergency Caesarean section because of a prolonged first stage of labour. Her mother was febrile during labour, her membranes had ruptured 15 hours before delivery and she had foul smelling liquor. At birth the neonate needed to be resuscitated due to an absent respiratory effort. Subsequently she was noted to be tachypnoeic and hypotonic.

Culture of the neonate's cerebrospinal fluid was negative; however *Pasteurella multocida* was isolated from the blood. She was treated with a 10 day course of co-amoxiclav and cefotaxime, and did not suffer any sequelae. Her mother denied any contact with cats or dogs.

This neonate was born with *Pasteurella multocida* septicaemia associated with chorioamnionitis, most probably acquired vertically from asymptomatic maternal vaginal colonisation. A negative maternal history of contact with cats or dogs does not exclude the possibility of this zoonotic infection.

P-098

Autoimmune neutropenia of infancy

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Destruction of neutrophils by granulocyte specific autoantibodies characteristically occurs in primary autoimmune neutropenia (AIN). AIN is often observed in infants and has an incidence rate of 1:100,000. Despite severe neutropenia, AIN usually follows a benign course. This is a case report of AIN of infancy presenting, quite unusually, at 26 months.

A 26 month old girl was found to have isolated neutropenia after she was investigated for a *Pseudomonas aeruginosa* wound infection complicating a herniotomy. Following resolution of the infection she was noted to remain persistently neutropenic, with absolute neutrophil counts $<1.0 \times 10^9/l$. On repeated physical examination she was always well, was growing normally and did not develop any fever, enlargement of the liver or spleen, lymphadenopathy or rashes. Her blood picture was normal. Immunoglobulin levels were normal for her age and she did not have any serological evidence of a connective tissue disorder. Examination of the bone marrow revealed hypercellularity with no signs of malignancy. Granulocyte-specific human neutrophil antigen-1 (HNA-1a) antibodies were detected in her serum. Furthermore she was genotyped as HNA-1a(+) suggesting that the antibodies were autoimmune in nature. She has remained well except for the occasional upper respiratory tract and superficial skin infections.

In the majority of cases AIN resolves spontaneously over 7 to 24 months. Most children do not require any treatment except for antibiotics to treat infections; however prophylactic antibiotics may be considered in those with frequent infections. Remission of neutropenia, in children with severe infections or in those scheduled for surgery, can be achieved with granulocyte colony stimulating factor (G-CSF).

P-099

Gram-negative septicaemia and peritonitis – an unusual neonatal presentation of cystic fibrosis

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Cystic fibrosis is a common caucasian autosomal recessive disorder with variable presentation. Most children are diagnosed prior to school age and the disease may also manifest in the neonatal period. Our patient, a two week old baby boy, presented with gram-negative septicaemia and peritonitis - a presentation that has not been previously reported, to our knowledge.

P-100

Transient shoulder paralysis after vaccination in childhood - two cases with different vaccines

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Limb paralysis is a highly unusual complication of various types of vaccination. We report a case of arm paralysis after the first dose of DTP polio vaccine at 2 months of age and another case of arm paralysis after a first dose of influenza vaccine. MRI on both cases showed diffuse muscular oedema inflammation in the former and synovitis in the latter. Both resolved with conservative treatment within 48-72 hours.

P-101

Aicardi-Goutières syndrome: a genetic syndrome mimicking congenital infection – a description of two new cases

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Aicardi-Goutières syndrome (AGS) is a progressive encephalopathy, with a recessive autosomal pattern of inheritance that has its onset in the first year of life and is characterized by acquired microcephaly, basal ganglia calcifications, white matter abnormalities, chronic lymphocytosis and raised interferon-alpha in cerebrospinal fluid. Many of these features overlap with those of an intrauterine infection and can therefore lead to the wrong diagnosis.

Here we describe two siblings, a brother and a sister, with clinical features initially suggestive of a congenital infection but with negative serological TORCH analysis. Further testing confirmed AGS.

AGS is an autosomal recessive syndrome that can mimic congenital infection. It is important to recognize the nature of the progressive nature of the syndrome and the risk of recurrence in families with affected children.

P-102

Special educational needs teams (SENT) project in schools – a model of service delivery

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Aims: Special Educational Needs Teams (SENT) project was initiated in October 1998 through joint collaboration of child support services within the Education and the Health Divisions. The aim was to implement the project as a pragmatic response to the need for a co-ordinated approach in the support of children in schools in order to overcome some of the problems of poor interagency liaison and lack of community resources.

Methods: Work was initially piloted in two State primary schools and in subsequent years, the number of participating schools varied from 4-10 schools/year. Team structure, method of work and evaluation procedures were developed in order to provide a basis for individual case studies, assessing whole school-needs and developing a plan

Results: Over the past 6 years, SENT provided support to 38 Mainstream schools. An average of 7 meetings /school / year was held and an average of 14 cases was reviewed / team. The team liaised with a total of 11 different agencies. Predominant reasons for referral included emotional / behavioural difficulties, speech and language problems, learning difficulties and psychosocial problems. Whole-school needs evaluation varied but a recurring theme included the need for a resource room, social support and parental and teacher information.

Conclusion: Feedback received from schools regarding the project has been generally positive. There was a consensus feeling that SENT has enhanced inter-agency collaboration and offered support not only to children and their parents but also to the whole school environment.

P-103

Griscelli syndrome - the commonest cause of Haemophagocytic Lymphohistiocytosis in Maltese children

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Aims: The presentation will describe the clinical features, laboratory findings, diagnostic criteria and treatment modalities of children with the Griscelli syndrome and Haemophagocytic Lymphohistiocytosis who

presented to the Department of Paediatrics in Malta from 2005 to 2006.

Methods: Three short case presentations will be followed by a description of the Griscelli syndrome and Haemophagocytic Lymphohistiocytosis.

P-104

DC cardioversion in a case neonatal atrial flutter

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Flutter is very rare in the paediatric age group, particularly in the neonatal period. We present a newborn with atrial flutter in the absence of structural heart disease. Tachycardiomyopathy was already present i.e. cardiac dilatation and failure due to excessive heart rate - 400/min atrial rate with 2:1 block producing a ventricular rate of 230/min. Medical treatment failed and DC shock reverted the rhythm to sinus with rapid normalisation of cardiac function.

P-105

Transmission of ring chromosome 21 from a phenotypically normal mother to her trisomic daughter

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Introduction: Ring chromosome 21 is a rare abnormality giving rise to a wide variety of phenotypes. The origin of ring 21 chromosome also varies and may include deleted or duplicated material. Most cases arise de novo, but some are transmitted through generations. We analysed the mechanism of origin of mosaic trisomy 21 that included an additional ring 21 chromosome of maternal origin.

Methods: G-banded Karyotype and Telomeric FISH analysis.

Results: The baby showed some phenotypic features of Down syndrome. Her karyotype showed a mosaic 46,XX / 47,XX+r21 The ring chromosome was present in the trisomic cell line only, while the 46 XX cell lines all contained a pair of normal chromosome 21. Her mother, a 35 year old lady with a normal phenotype and a record of consistently poor school performance had a non-mosaic karyotype 46,XX -21, + r21. FISH analysis showed the presence of a single centromere, and loss of 21q telomeres in the maternal ring chromosome 21 and in all trisomic cells of the child.

Conclusions: The conceptus originated as a maternal non-disjunction giving rise to a trisomy 21 zygote. Mosaicism arose post-zgotically by trisomic rescue in some blastomeres. Ring chromosome formation involved fusion of the distal ends of the long and short arms of chromosome 21 with consequent loss of 21q telomeres. The telomeric loss apparently had very small effects on the phenotype resulting only in intellectual impairment in the mother. Evidence indicates that ring chromosome 21 also predisposes to non-disjunction.

P-106

Therapeutic drug monitoring of lamotrigine in a paediatric population

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Aims: Therapeutic drug monitoring is important for drugs that exhibit inter-individual variability in pharmacokinetics, and where drug-drug interactions, concurrent disease or age alters the kinetics of that drug. This is of particular importance in a chronic neurological condition such as epilepsy. In this study, the value of therapeutic drug monitoring for lamotrigine, a novel antiepileptic drug, was investigated in a group of paediatric patients.

Methods: Plasma lamotrigine levels at steady state (mean \pm S.D.) in epileptic patients were thus measured using this novel analysis.

Results: A statistically significant difference ($P < 0.05$) was obtained between valproate co-medication group and carbamazepine co-medication group, between valproate co-medication group and clonazepam co-medication group, and between valproate co-medication group and valproate, clonazepam co-medication group.

Conclusion: Overall, the results thus obtained from the studies in this research, indicate the important need to streamline pharmacokinetic data for the use of antiepileptic drugs in children. Most physicians use ad hoc reasoning in the design of therapeutics and dosage regimens for these drugs in children. Our studies have shown that there are too many variables that could influence the plasma drug concentrations obtained. There is still a lack of satisfactory models and software packages that will allow accurate predictions of drug levels with these drugs in these populations.

P-107

Age-related effects on *in vivo* tau protein processing in different regions of the rat brain following chronic nicotine administration: relevance in Alzheimer's disease pathology

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Abundant senile plaques and neurofibrillary lesions are the major neuropathological lesions present in Alzheimer's disease (AD). The principal structural components of neurofibrillary tangles are paired helical filaments (PHFs), which are composed of microtubule-associated protein tau in hyperphosphorylated state. Hyperphosphorylation of tau has been shown to dissociate tau from microtubules, leading to the disruption of the neuronal cytoskeleton and interference with cellular transport mechanisms. The loss of cholinergic neurons is also a critical event in the pathogenesis of AD. Acetylcholine is a key neuromodulator in the synaptic mechanisms involved in learning and memory and acts through two major receptor subtypes: nicotinic and muscarinic acetylcholine receptors (nAChRs, mAChRs). Several studies have shown that nAChRs are selectively reduced in AD brains suggesting a potential relationship between nicotinic receptors and AD pathology. Notably, chronic nicotine treatment has also shown to reduce the plaque burden suggesting that nicotine-based therapies could have therapeutic benefits in AD. To understand the possible mechanisms regulating tau levels *in vivo* by nAChR activation, nicotine was infused chronically in both young and old rats and the levels of the protein analysed in various regions of the brain. Chronic administration of nicotine was found to significantly increase the expression levels of total and dephosphorylated form of tau in the hippocampus of young rats while reducing the phosphorylated form of the protein in older rats. This data suggests that nicotine, by reducing tau phosphorylation, may be considered as a potential therapeutic agent in AD.

P-108

Point-of-care glycosylated haemoglobin testing

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Introduction: The advent of glycosylated haemoglobin testing (HbA_{1c}) as a point-of-care procedure provides an opportunity for practitioners to monitor the management of diabetes by the patient over a period of time rather than the instantaneous indication given by the blood glucose levels. Aim: To evaluate the impact of using HbA_{1c} testing in a community pharmacy and the provision of individualised patient counseling.

Method: A prospective study where patients visited a community pharmacy three times was carried out. During the first (baseline) and third visit (held three months after the first visit), questionnaires addressed to the patients and the HbA_{1c} test were performed to assess patient knowledge. During the second session information was presented to the patients by the pharmacist. Patients paid 33 Euro for the service.

Results: Thirty-four patients participated in the study: average age- 49 years, age range- 28-78 years, 18 females, 16 males, 33 were type 2 diabetics. There was a significant improvement in knowledge and lifestyle, self-care activities and in understanding of HbA_{1c} testing during the third interview compared to baseline (first interview) ($p < 0.05$). The difference in HbA_{1c} test results at 3 months from baseline however was not significant ($p = 0.79$).

Conclusion: An improvement in patients' knowledge was obtained. The study should be extended to cover a longer time-span to assess the impact of the pharmacist intervention on blood glucose levels through the use of the HbA_{1c} point-of-care test.

O-109

Interpretation of glycosylated haemoglobin testing

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Aims: To determine the significance of HbA_{1c} testing in the diagnosis of diabetes and to assess correlation between HbA_{1c} results and concomitant conditions.

Method: A prospective study was carried out with 272 patients (mean age- 52 years, range 25-83 years) referred for diagnosis of diabetes. Patient medical history and laboratory results were compiled. A comparison of diagnostic capabilities of HbA_{1c} with FPG and OGTT was studied and the influence of occurrence of hyperlipidaemia, hypertension, obesity and family history of diabetes on HbA_{1c} results were analysed. Statistical analysis was carried out using the Biomedical Data Package.

Results: Diagnosis according to FPG and OGTT was: 68 (25%) normoglycaemic, 49 (18%) borderline and 155 (57%) diabetic. The Pearson chi-square test indicated correlation between results obtained with FPG and HbA_{1c}, and results obtained with OGTT and HbA_{1c} ($p < 0.05$ for both). The area under the receiver operating characteristic curves comparing HbA_{1c} and FPG, and HbA_{1c} and OGTT was 0.77 and 0.78 respectively. HbA_{1c} values were unaffected by the occurrence of concomitant factors (p values of Mann Whitney test > 0.05).

Conclusion: HbA_{1c} testing cannot be used as a single diagnostic test since 22% of the abnormal glucose tolerant population is missed. Considering the fact that HbA_{1c} testing kits are now available for use in community pharmacies, the pharmacist may confirm result of FPG test with HbA_{1c} test result for patients who present with an abnormal FPG result. HbA_{1c} values are unaffected by the concomitant conditions studied and therefore any changes in HbA_{1c} levels reflect changes in glycaemic control irrelevant to the status of the other conditions.

P-110

Evaluation of management of pregnancy-induced hypertension

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Aim: To record incidence and to evaluate management of pregnancy-induced hypertension (PIH).

Method: A retrospective study covering a one-year period where patients with PIH attending the Obstetrics Clinic at St Luke's Hospital were identified and the number of cases of PIH, management of PIH, and delivery outcomes for PIH patients were documented. The Pearson Chi-squared test and the paired t-test were undertaken using the BMDP software.

Results: During the period studied, there were 2008 patients presenting at the clinic between 16th and 20th week of gestation. Of these, 83 (4%) were diagnosed with PIH: 50 (60%) - primigravida and 33 (40%) - multigravida. Management: 57 patients (69%) were recommended bed rest and dietary changes and 26 patients (31%) were prescribed drug therapy. The drug therapy recommended was (n=26): labetalol- 22 (85%), aspirin- 2 (7%), methyldopa and hydralazine- 1 (4%). The mean duration of labetalol

therapy was 33.5 days (1-100) and the mean gestational age at start of labetalol treatment- 31 weeks (range: 24weeks-post-partum). Patients receiving labetalol (PIH labetalol) had a significantly higher mean arterial pressure during pregnancy compared to non-drug therapy PIH patients and to normotensive pregnant patients (control patients) ($p < 0.05$). PIH patients had a significantly longer hospitalisation period than control patients ($p < 0.05$). The PIH labetalol group patients had a lower mean gestational age at delivery (36.8 weeks) when compared to non-drug therapy PIH patients (38.6 weeks) and to control patients (38.9 weeks) ($p < 0.05$). Conclusion: The incidence of PIH was 4%. Labetolol was the drug of choice in severe conditions whilst diet and bed rest were recommended in mild hypertension.

P-111

Chronopharmacology of atenolol in controlling hypertension

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Introduction: The extent of lowering of blood pressure with antihypertensive agents may vary depending on the time of administration of antihypertensive drugs.

Method: A total of 29 patients (mean age 52 years, range 36-63 years, 15 males, 14 females) diagnosed with primary hypertension were included in the study. Of these, 25 were receiving atenolol 100mg once daily (treatment group) and 4 patients were not receiving any antihypertensive agents (control group). Treatment patients were first instructed to take atenolol in the morning for five days and then were asked to cross over to evening administration for another five days. Blood pressure was monitored using an ambulatory blood pressure monitor for 24 hours.

Results: The blood pressure circadian pattern was preserved with atenolol when the drug was administered in the morning and even when the drug was administered in the evening. Evening administration of atenolol produced a statistically significant lower diastolic blood pressure ($p < 0.05$) when compared to diastolic blood pressure following administration of atenolol in the morning. Comparison of blood pressure of treatment group patients and control group patients showed that blood pressure was relatively lower for treated patients compared to control patients particularly the diastolic blood pressure ($p < 0.05$) of both morning and evening administration.

Conclusion: The findings suggest that administration of atenolol at different times of the day may exert a different effect on blood pressure levels and profiles. Administration of atenolol in the evening may result in a better control of hypertension.

P-112

Knowledge of paediatric diabetic patients on their disease state

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Introduction: In insulin-dependent diabetes mellitus paediatric patients, responsibility of care changes from a predominantly parent-managed situation to a child-managed system as the child grows older.

Aim: To assess the knowledge of young patients suffering from diabetes and of their parents on the condition and its management.

Method: A prospective study was carried out where 50 patients attending the Diabetes Clinic were interviewed using a questionnaire based on the Diabetes Knowledge Assessment Scales to evaluate the knowledge of patients and of parents on diabetes (each correct answer was assigned a score of 1, maximum score 18).

Results: Patient characteristics: mean age 12.5 years (range 7-18 years), gender 25 males, 25 females, mean duration of diabetes 3.5 years (range 6 months-10 years). Scored knowledge of patients: < 10 scores- 16 (32%), 10-13 scores- 18 (36%), >13 scores- 16 (32%). Scored knowledge of parents: <10 scores-0, 10-13 scores 10 (20%), >13 scores- 40 (80%).

Conclusion: Disease knowledge of paediatric patients suffering from diabetes needs to be revisited and emphasised as the child grows older. Health professionals should use knowledge assessment scales to assess level of patient's knowledge and provide information according to the patient's needs so as to support the shift towards a child-managed system.

P-113

A comparative cost-effectiveness study in wound management

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Introduction: Cost-effectiveness of methods adopted for treating and preventing the occurrence of pressure sores is considered within institutions. Aim: To determine costs incurred in preventing and treating pressure ulcers at two geriatric institutions namely St Vincent de Paule (SVPR) and Zammit Clapp Hospital (ZCH). Method: Cost-minimisation analysis for 50 sores (25 sores in each setting) over an 8-week period was carried out. A wound dressing chart was developed to evaluate management of pressure sores and to assess wound volume, treatment costs, prevention costs, and pressure sore incidence.

Results: Pressure sore incidence: 6.2% for ZCH and 7.2% for SVPR, prevention costs: 1.8 Euro/patient/day for ZCH and 0.37 Euro/patient/day for SVPR. Treatment costs for fifty sores: 6538 Euro for ZCH and 5695 Euro for SVPR. Of these amounts, 64% at ZCH and 79% at SVPR were due to dressings while the remaining costs were due to nursing time. In both institutions the most common pressure ulcer site was the sacrum. Total pressure sore volume reduction: 69 cc for ZCH and 19 cc for SVPR. Costs of treatment/cc: 1.90 Euro at ZCH and 6 Euro at SVPR.

Conclusion: Dressing costs at SVPR are higher than those at ZCH whereas nursing time is lower at SVPR when compared to ZCH. This results in lower treatment costs at SVPR. et, pressure sore treatment at ZCH was more cost-effective than at SVPR because total pressure sore volume reduction was three times higher at ZCH. The costs of treatment/cc is lower for ZCH.

P-114

Quality of life measurement and use of losartan in patients with ACE inhibitors intolerance

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Aim: to investigate the effect on quality of life of changing from an ACE inhibitor to losartan, an angiotensin II receptor antagonist, in patients suffering from heart failure who are not tolerating ACE inhibitors.

Method: A prospective study was carried out over 20 weeks with 17 patients (mean age- 65 years, range 50-81 years). Two health-related quality of life instruments were used: Short Form-36 (SF-36, a generic instrument) and the Minnesota Living with Heart Failure (LHFQ, a disease specific instrument). A data sheet to assess the occurrence of side effects was developed. The SF-36, LHFQ and the data sheet were addressed to the patients while still on an ACE inhibitor (baseline) and after 12 weeks of starting treatment with losartan.

Results: There was no significant difference between SF-36 scores obtained at baseline and scores obtained during losartan treatment. For the LHFQ scores a statistically significant improvement in quality of life was detected ($p < 0.001$) during losartan treatment (angiotensin II receptor antagonist) compared to baseline (treatment with ACE inhibitor). Patients (14, 82%) reported that they noticed an improvement in their well-being with the start of losartan treatment. Occurrence of side effects with losartan: 10 (59%) reported no side effects, 6 (35%) dizziness, and 2 (12%) hypotension on treatment initiation.

Conclusion: Treatment with losartan resulted in an improvement in scores for the LHFQ instrument and a better side effect profile for patients who were intolerant to ACE inhibitors.

P-115

Pharmacoeconomics and quality of life in continuous ambulatory peritoneal dialysis

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Introduction: Continuous ambulatory peritoneal dialysis (CAPD) supports patients with renal disease to keep following their daily activities as much as possible.

Aims: To calculate yearly costs per CAPD patient and per haemodialysis patient, and to identify the impact of treatment on the patients' quality of life.

Method: The yearly hospital costs per CAPD patient and per haemodialysis patient were calculated. The McGill Quality of Life instrument was administered to 50 CAPD patients and to 50 haemodialysis patients (average age 58 years). The total yearly cost per CAPD patient (catheter insertion, teaching sessions, accessories, monitoring costs, antibiotic and epoetin treatment), total yearly cost per haemodialysis patient (fistular insertion, accessories, monitoring costs, equipment, treatment sessions, epoetin treatment), were calculated.

Results: The annual dialysis costs: 16 730 Euro per CAPD patient, 36 761 Euro per haemodialysis patient. From the McGill Quality of Life instrument, the average score obtained out of 190 was: 150 by CAPD patients, 151 by haemodialysis patients. Restlessness was the most common symptom experienced by both CAPD (30%) and haemodialysis (50%) patients followed by pain due to peritonitis for CAPD patients (24%) and insomnia for haemodialysis patients (22%).

Conclusion: The annual expense to maintain a patient on haemodialysis is about two times more than to maintain a patient on CAPD. Although restlessness was more common in haemodialysis patients, there was no significant difference in the quality of life of CAPD and of haemodialysis patients.

P-116

Pharmacist intervention in elderly patient discharge

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Aim: To evaluate long-term effects of pharmacist intervention in counseling elderly patients upon discharge.

Method: A prospective controlled study was undertaken. The pharmacist intervention consisted of the pharmacists preparing a four-day medicines supply, a patient discharge medication leaflet and counseling patients on how to take the medications. At Zammit Clapp Hospital, 53 patients were interviewed on admission (t0), after pharmacist intervention (t1), four days post-discharge (t4) and fifteen days post-discharge (t15) (Group A). At St Vincent de Paule Residence, 28 patients as the control group patients (Group B) did not receive pharmacist intervention and were interviewed at t0. Patient interview was intended to evaluate patient knowledge on medications and patient compliance.

Results: Patient knowledge improved from 26% (t0) to 86% (t1) for Group A patients. Knowledge decreased to 73% at t4 and to 58% at t15. There is a significant decrease ($p=0$) in knowledge when comparing results for all four interviews. The knowledge of Group A patients (26%) was not significantly different to Group B patients (30%) at t0. Compliance reported by patients was with 86% and 76% of the medications at t4 and t15 respectively compared to the 94% intended compliance during discharge ($p<0.05$).

Conclusion: The pharmacist intervention resulted in an improvement in knowledge. There was a significant decrease in knowledge between t1 and t15, suggesting that a pharmacist counseling session held every four weeks, when the patient presents at the pharmacy for a refill, is indicated for older persons.

P-117

Validation of hospital clinical pharmacists' intervention

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Introduction: Validation of standards of practice in patient care should consider the perception held by patients and non-pharmacist health professionals of the pharmacist intervention.

Aim: To develop methods to validate the hospital clinical pharmacists' intervention in patient care as perceived by patients and other health professionals.

Method: Two quantitative measurement instruments directed towards patients and other non-pharmacist health professionals were developed for use within a hospital setting. The tools evaluate the intervention of clinical pharmacists in patient care during admission, ward rounds, and patient discharge on a scale with a maximum of 100. The instruments were psychometrically evaluated and implemented at Zammit Clapp Hospital (ZCH). Face and content validity, reliability, and practicality of the instruments were assessed. Statistical analysis was carried out using SPSS.

Results: Face and content validity: the team of experts agreed upon the structure of the instruments, presentation, layout, and statements included. Reliability testing: the kappa-value was <0.80 indicating reproducibility of data generated.

Implementation: 60 patients (19 males, 41 females) completed the instrument intended for patients while 51 out of 54 health professionals practicing at ZCH returned the instrument intended for health professionals. The average scores achieved were: 94 for the patients (range 44-98) and 88 for the health professionals (range 74-100).

Conclusion: These tools provide a quantitative evaluation of the intervention of hospital clinical pharmacists in patient care as perceived by patients and other health professionals and can be adapted for an external validation exercise of hospital clinical pharmacy services.

P-118

Use of fish enzyme gel for the management of pressure sores

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Aim: To assess the clinical efficacy and cost-effectiveness of Penzim gel, a skin preparation that consists of an enzyme extracted from fish, in the treatment of pressure sores.

Method: A clinical study was carried out over 25 weeks and involved 50 wounds. The wounds were divided into two equal groups, A and B. Group A patients were treated with Penzim gel while conventional treatment was used for Group B patients. The clinical efficacy of the products in the two groups was assessed by measuring pressure sores colour and volume. The total cost of items used for each sore was identified and the average nursing time for dressing change was calculated.

Results: The mean width of the pressure sores in Group A was significantly smaller than that of Group B in the final weeks of the study according to the Mann-Whitney test (p value 0.022-0.045). The mean Department of the pressure sores in group A was found to be significantly higher than that of Group B (p value 0.0013-0.0386). The wound colour appeared to be significantly better for Group A for various weeks (p value 0.019-0.04). The cost of Penzim gel was estimated to be 78 Euro per cc and the cost of conventional treatment was 92 Euro per cc.

Conclusion: The enzyme extracted from fish contained in Penzim gel was found to be significantly more effective and cost-effective than conventional treatment used in the management of pressure sores.

P-119

Management of psoriasis and impact on quality of life

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Introduction: Psoriasis is a condition that impacts negatively on the quality of life of patients.

Aim: To assess the quality of life (QoL) of Maltese psoriatic patients and the relative costs of treatment.

Method: A prospective, cross-sectional study was carried out in psoriatic patients attending the out-patients dermatology clinic at Sir Paul Boffa Hospital. Three measurement instruments were used to generate QoL scores: the Short Form-36 (SF-36) as a general health index, the Dermatology Life Quality Index (DLQI) as a general skin disease index, and the Psoriasis Disability Index (PDI) as a disease specific index. Data on psoriasis treatment costs was compiled.

Results: Out of 188 patients approached, 102 (mean age 49 years, age range 17-82 years, 46 females, 56 males) participated in the study. Patients were taking an average of 3 medications (range 0-7). The DLQI scores showed a significantly better QoL for males compared to females ($p < 0.05$). As expected both the DLQI and the PDI scores, showed a significantly better QoL for patients with mild symptoms compared to those with moderate symptoms followed by patients with moderate symptoms compared to those with severe symptoms of psoriasis. The average yearly cost per patient is 266 Euro for psoriasis specific medications and 958 Euro for the out-patient clinic costs. Forty-four patients are prepared to pay between 60 and 120 Euro a month for treating psoriasis, 13 patients are ready to pay up to 60 Euro a month while 45 patients are not prepared to pay.

Conclusion: Cost of treatment does not correlate with the perception held by the patients on improvement of quality of life.

P-120

Quality of life and management of multiple sclerosis

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Aims: To evaluate the impact of quality of life of multiple sclerosis patients receiving interferon beta and to measure the cost of treatment.

Method: A controlled study was carried out where 20 patients (age range 22-67 years) were asked to complete the Multiple Sclerosis Quality of Life-54 (MSQOL-54) measurement instrument. The instrument includes a generic domain and a multiple sclerosis specific domain. An estimate of the direct costs of interferon beta 1a and 1b was calculated.

Results: Test group patients (16) were receiving interferon beta and control group patients (4) were not receiving any treatment. The average physical and mental health scores for the Test Group patients were 55 and 65 whereas those for the Control Group patients were 40 and 55 indicating no statistical difference between the two groups ($p > 0.05$). The direct cost of treatment was 13024 Euro per patient per year for interferon beta 1a which requires a once weekly intramuscular administration and 12842 Euro per patient per year for interferon beta 1b which requires a subcutaneous administration every alternate day.

Conclusion: There is no significant variation in the cost of therapy for interferon beta 1a and 1b. The study indicates that the use of interferon beta did not have a statistically significant impact on the patients' quality of life.

P-121

Development and evaluation of a Maltese drug reference handbook

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Introduction: The drug reference handbook commonly used by most healthcare professionals in Malta is the British National Formulary (BNF) that does not include all the products imported in Malta.

Aim: To explore the possibility to compile and evaluate an addendum to the BNF of those products available for use in local community pharmacies which are not included in the BNF.

Method: Data (proprietary name, generic name, dose, manufacturer, price) for medicinal products available in a community pharmacy that are not listed in the BNF was compiled. The Addendum was distributed for evaluation to 35 pharmacists and medical doctors.

Results: Out of around 1200 medicinal products in the pharmacy, 550 (46%) were included in the Addendum. The most common classes featured were: blood and nutrition- 96, infections- 62, respiratory- 61, musculoskeletal and joint diseases- 50. The evaluative comments by the health professionals were: useful- 97% (34), and sufficient information presented for each product- 89% (31). Health professionals (94%, 33) were ready to buy the Addendum with 63% (22) willing to pay 12 Euro and 49% (17) buying it every year.

Conclusion: The Addendum provided information on medicinal products that was not being presented in the currently used drug reference handbook. The health care professionals look forward to use the Addendum and are willing to pay for the publication. The information in the Addendum should now be extended to include all medicinal products imported in Malta that are not found in the BNF.

P-122

Readability and use of patient package inserts

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Introduction: Good information is essential for patients to be able to participate actively in patient care. Aims: To evaluate the availability and readability of package inserts (PIs) for medicines available in community pharmacies and to determine the attitude of the public towards PIs.

Method: The PIs presented with 150 medicinal products chosen randomly from a community pharmacy were analysed for patient-friendliness and readability using the Flesch-Kincaid Method. Flesch-Kincaid grade level scores were obtained. A Flesch-Kincaid score of 6-8 is accepted as the reading level of the average consumer. A questionnaire addressed to 150 consumers visiting five community pharmacies chosen by stratified random sampling was developed. The perception of the public of package inserts was evaluated.

Results: Out of the 150 medicinal products selected, 81% (122) contained a PI and of these, 96% (117) were directed towards patients. However, only 9% (10) had an acceptable readability level. Of the consumers interviewed, 87% (131) read PIs focusing on: a) side-effects (89%), b) dosage regimen (85%), c) indications (84%) and d) contra-indications (83%). Of those who read PIs, 33% (43) found them hard to understand.

Conclusion: A number of medications available in the local community pharmacy setting still lack a PI. The relatively large number of PIs with a reading level above that of the average consumer demonstrates that more needs to be done to make PIs more patient accessible.

P-123

Health promotion programmes in community pharmacies

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Aims: To evaluate the feasibility of setting up a health promotion programme in community pharmacies and to assess the impact of the service.

Method: The health promotion programme which was offered for one week at 32 community pharmacies consisted of presentation of information leaflets and posters on diabetes, hypertension and hypercholesterolaemia and on the measurement of blood pressure, blood glucose levels and body mass index. A questionnaire was addressed to the volunteers participating in the study and another questionnaire was administered to the community pharmacists practicing at these pharmacies.

Results: Out of 487 patrons approached, 372 volunteers (76%) participated in the study with 86% (320) stating that they usually ask the pharmacist for health-related information and 68% (253) accepting the provision of

diagnostic services from the pharmacists. All participants agreed that such health schemes should be organised in community pharmacies with 72% (267) being ready to pay 5 Euro for the service. Out of the 40 interviewed pharmacists, 75% (30) were ready to offer such a health promotion scheme with the majority costing the service at 6 Euro. The costs to set up the diagnostic equipment for the scheme is 230 Euro and the expenses for each volunteer are 4 Euro.

Conclusion: Volunteers were ready to accept this service from community pharmacies and were ready to pay a reasonable price for the service. A high number of pharmacists were ready to offer the service at the price patients were ready to pay.

P-124

Development of a diary card for infant colic

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Aim: To develop a diary card to be used by parents to record the occurrence and perceived severity of colic.

Method: The diary card was developed to reflect occurrence of colic (time and duration) over a 14-day period, perceived severity (using a Likert scale from 1 to 5) and interventions undertaken. An information sheet on the use of the diary card was also prepared. The diary card was evaluated by a group of experts (5) and subsequently presented to 90 mothers discharged after normal delivery during a 2-month period.

Results: Out of the 90 diary cards handed out, 29 (32%) diary cards were returned. Of these, 8 cases stopped filling the diary card because dietary intervention resulted in the management of the condition. For the remaining 21 cases, none of the infants had an average daily crying of more than 3 hours per day which is the criterion used to define occurrence of severe colic. The average crying time per day was 45 minutes occurring mostly between 2pm and 10pm (13 cases, 62%). The average severity rated by parents was 3 indicating a moderate severity. A change to low-lactose or soya-based milk was effected in 11 cases (52%) with 4 cases (36%) reporting an improvement in crying spells.

Conclusion: The completed diary card could be used by the practitioner to compile information on the occurrence of the condition and on the outcomes of recommended dietary and lifestyle modifications.

P-125

Chemotherapy patients' knowledge and expectations

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Aims: To assess the knowledge and expectations of breast cancer patients prior to receiving chemotherapy treatment, to establish incidence and severity of side effects and to evaluate effectiveness of education provided.

Method: A prospective study with 25 patients (mean age 58 years, range 27-89) receiving chemotherapy for breast cancer was carried out. Patients were interviewed at pre-treatment stage to assess their knowledge and expectations on chemotherapy. They were again interviewed after their 1st, 3rd and 6th cycle to evaluate incidence and severity of side effects after chemotherapy. Patients received an information booklet prepared by a pharmacist on chemotherapy and occurrence of side effects and the impact of the education received was evaluated.

Results: The most common regimen (72%) for chemotherapy was cyclophosphamide, methotrexate, fluorouracil. At pre-treatment, 48% (12) were satisfied with the information received about the treatment, 28% (7) were satisfied with the information received about side effects to be expected, and 96% (24) wanted more information. At post-treatment, patients reported that they found the treatment more difficult than expected (64%, 16), as expected (24%, 6) easier than expected (12%, 3). The most common side effects reported were hair loss (93%), nausea (88%), fatigue (85%). Patients rated the booklet distributed as useful (92%) and informative (92%).

Conclusion: Patients are not fully satisfied with the information received about chemotherapy and about side effects to be expected. Pharmacists' intervention in the provision of patient education directed to the individual patient's needs is required to provide essential support to patients receiving chemotherapy.