

# THE THIRD MALTESE MEDICAL SCHOOL CONFERENCE

29 NOVEMBER - 2 DECEMBER 1995  
NEW DOLMEN HOTEL, QAWRA, MALTA



# THIRD MALTESE MEDICAL CONFERENCE

## SUMMARY PROGRAMME

**Wednesday 29 November**

Reception

**Thursday 30 November**

**ROOM**                      **08.00-10.00**

ORACLE CIRCLE      A1-Endocrinology

DOLMEN ROOM      B1-Dermatology

C  
O  
F  
F  
E  
E

**10.30-12.30**

A2-Surgery

B2-Public Health I

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**14.00-16.00**

A3-Nephrology

B3-Gynaecology

C  
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E

**16.30-18.30**

A4-Radiology

B4-Poster I

**Friday 1 December**

ORACLE CIRCLE      A5-Paediatrics

DOLMEN ROOM      B5-Pharmacology

C  
O  
F  
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E

A6-Genetics

B6-Poster II

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C  
H

A7-Rheumatology

B7-Cardiology

C  
O  
F  
F  
E  
E

A8-Public Health

B8-Psychiatry

Banquet

**Saturday 2 December**

ORACLE CIRCLE      A9-Respiratory

DOLMEN ROOM      B9-Dental

C  
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F  
F  
E

A10-Oncology

B10-Poster III

L  
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C  
H

A11-Undergrad. Med.  
Education

B11-Obstetrics

C  
O  
F  
F  
E  
E

A12-Postgrad. Med.  
Education

B12-Poster IV

## FOREWORD

The **Third Maltese Medical School Conference** which is being held between the 29th November and 2nd December follows the pattern of the previous conferences in being multi-disciplinary and encompassing as wide a spectrum of the medical specialities as possible. The underlying theme, in most of the keynote lectures and reviews, is growing points in Medicine. The Conference also serves as another forum where local research can be presented. It provides doctors working in different specialities and disciplines the opportunity to be exposed to the advances in those areas of medicine which do not happen to be their speciality interest. It is an occasion where specialists, family physicians and even medical undergraduates can meet on common ground. This tri-annual Conference has provided an incentive to some of our overseas Maltese colleagues to visit their Alma Mater. Indeed colleagues from as far a field as Australia and the United States of America will be joining us.

The number of sessions in different areas have been increased and on this occasion we are holding a Symposium on Medical Education dealing with both the undergraduate and postgraduate programmes. Reforms envisaged in the undergraduate programme will be discussed and professional specialist training requirements will also be reviewed. At the moment we do not have a structured training programme for speciality training. The Faculty of Medicine & Surgery together with the Department of Health and the various speciality Associations and Colleges are discussing the establishment of an Academy of Medicine which would be responsible for the accreditation of speciality training in the various disciplines. Under its umbrella, the specialist bodies will organise and monitor the training of specialists to the standards set by the Speciality Boards of the Union of European Medical Specialists (UEMS) in Brussels. (Because of our size, we have to establish joint training programme with overseas postgraduate institutions). The establishment of such an Academy is vital for the future of Medicine in Malta. Its success depends on adequate funding and it is mandatory that the Government provides the required financial support.

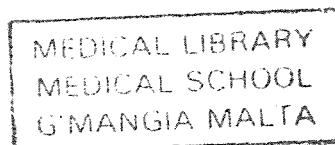
It is very pertinent that the speech by the Minister of Social Policy, Dr Louis Galea will be on "Reforms in the health fields - the way ahead". There is no country in the industrialised world where some reform on the health sector is not taking place. In Malta, it has been recognised for some time that reforms in the health services were required to meet the new challenges in this area. The growing demand of modern medicine, the dramatic improvement in medical science and technology and chronic disease in the aged are contributing to the increasing pressure in the health budgets. The transfer, where feasible of health care services to the primary care sector and the emphasis on prevention makes sound economic sense; however the pressure on the health budget is largely dependent on the hospital services. The requirements for a first class hospital service is (1) top medical technology, (2) first class medical personnel (3) top quality management. In 1995, the medical expertise present in Malta can deliver a top quality speciality service. It is in the field of professional management that there is a hiatus and the reforms in the hospital service are hopefully aimed to correct this. It has however to be realised that clinicians contribute and must be involved in the management process. The new hospital when built together with a refurbished St. Luke's Hospital will meet the medical needs of Maltese Society and also be of service to some of our Mediterranean neighbouring countries.

For the first time named lectures by distinguished academics will be delivered at this Conference. They will become a regular feature of future Conferences. We are grateful to the family of the late Mr Ralph Arrigo for setting up a Foundation which will be sponsoring an Annual Lecture; the first **Ralph Arrigo Lecture** will be given during the

Conference by Professor John Wass, Professor of Endocrinology at the University of Oxford and Linacre Fellow of the Royal College of Physicians of London. The Malta Branch of the British Medical Association will also be supporting an annual lecture and the first BMA Lecturer is Professor Alfred Cuschieri, a graduate of our Medical School who is Professor of Surgery at the University of Dundee. We are grateful to these friends of the Medical School and look forward to see their number increasing. Indeed, Dr Francis Portanier was the first donor to our Medical School when he provided the Medical School with its Audio-Visual Library. The Medical School, which has played a major role in the development of the health services in these islands to a standard which compares very favourably with much bigger countries in Europe, deserves the continued support of the Maltese Society that it has loyally served.

Professor F F Fenech  
Dean, Faculty of Medicine & Surgery

REFERENCE



222452

## **ORGANISING COMMITTEE:**

Professor M.N.Cauchi - Chairman  
Professor L Cutajar  
Dr Martin Ebejer  
Mr Donald Felice  
Professor F F Fenech  
Dr Carmel Mallia  
Dr Joseph L. Pace  
Dr Paul Vassallo Agius  
Mrs E. Saliba - Secretary

## **ACKNOWLEDGEMENTS**

We would like to thank the following sponsors:

University of Malta  
Medical and Health Department  
Dr L. Deguara, Parliamentary Secretary for Health  
Ministry for Social Policy  
The Postgraduate Medical Committee

This year, for the first time, a number of prizes and benefactions have been awarded as follows:

The British Medical Association, Malta Branch: To support one overseas speaker: This year the BMA lecturer is Professor A. Cuschieri, University of Dundee.

The Ralph Arrigo Foundation is supporting an overseas speaker: This year the lecturer is Prof. J. Wass.

The Association of Surgeons of Malta: prize of Lm 50.00 to a surgical trainee for the best surgical presentation.

We would also like to show our particular appreciation to the following exhibitors, without whose participation this Conference would not have been possible:

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Session A1: Thursday 30 November 8.00 am

ENDOCRINOLOGY/DIABETES

Chairmen: Prof J Wass  
Dr J Azzopardi

8.00	Chairman	Introduction
8.05	Johanssen K	The role of WHO in diabetes! the St. Vincent declaration action programme. Network and principles.
8.20	Azzopardi J, Xuereb G, Fenech F F	Malta as the Mediterranean centre for the implementation of the diab care programme.
8.35	Farrugia M, Azzopardi J	Presentation of data analysis concerning the risk factors for the development of diabetic nephropathy in the Gozitan diabetic population.
8.50	Cachia M J, Azzopardi J.	Major lower limb amputations in diabetic patients in Malta.
9.05	Fenech T	Results of vitreous surgery in the management of advanced diabetic eye disease since the introduction of vitreoretinal surgery in Malta.
9.20	Bellia Degiorgio T, Fiorini A, Serracino Inglott A	Screening for thyroid dysfunction in a sub group of elderly patients.
9.35	Bajada C, Bowman K Fenech F F	A review of 24 acromegalic patients attending the endocrine clinic, St. Luke's Hospital, between 1992 and 1995.
9.50	Spiteri Grech J, Hardy D, Catterall J F, Gunsalus G	Hormonal regulation of androgen receptor concentration and mRNA levels in Sertoli cells.

*Coffee Break*

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10.30	Ralph Arrigo Lecture Prof. J. Wass	Chairman: Prof F F Fenech The investigation and management of pituitary tumours - the year 2000 and beyond
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Session A2: Thursday 30 November 11.00 am

SURGERY

CHAIRMEN: Prof A Cuschieri  
Prof G Laferla

11.00	Chairman	Introduction
11.05	Caruana D, Giglio J	Electrochemical detection of anaesthetic agents.
11.20	Camilleri Brennan J Molnar I, Bernard A	2-5 year clinical follow up of patients with total knee replacements - the first series from Malta.
11.35	Zammit M.	Carotid Enderterectomy - Update on recent trials & practice guidelines.
11.50	Borg Hermann K, Swain C	Surgical problems in treating Gardner's syndrome.
12.05	Gatt D	Restorative proctocolectomy with ileal pouch reservoir, Which pouch? Is a defunctioning ileostomy really necessary.
12.20	Stellini M, Cachia M, Caruana Galizia A	The ERCP experience at St. Luke's Hospital.

*Lunch*

Session B1: Thursday 30 November 8.00 am

DERMATOLOGY

<b>Chairmen</b>	Dr J.L. Pace Dr D. Vella Briffa	
8.00	Chairman	Introduction
8.05	Pace J L	(History of Dermatology) - Dermatology and Psychiatry: Vincenzo Chiarugi (1759-1820).
8.20	Luppino G	Therapia ternale in pazienti con psoriasi le terme S. Venera di Acireale, Italia.
8.35	Mallia C	The natural history of psoriatic arthritis.
8.50	Borg E, Dalmás M, Pace J L, Gatt P	Malignant melanoma in Malta: the facts
9.05	Scerri L, Shall L	Stasis eczema or contact dermatitis.
9.20	Cleve N	Lasers in dermatology
9.35	Gatt P, Pace J L	Human lymphocutaneous sporotrichosis: a case report
9.50	Pace J L, Borg E	The alpha-hydroxy acids - real progress or simply so much hype?

*Coffee Break*

Session B2: Thursday 30 November 11.00 am

PUBLIC HEALTH I - INFECTIOUS DISEASE

<b>CHAIRMEN:</b>	Dr A Vassallo Dr P Cuschieri	
11.00	Chairman	Introduction
11.05	Mifsud A J, Watine J, Pitt T	Appropriate controls must be selected in the investigation of suspected outbreaks of infection.
11.20	Vella K, Amato Gauci A, Ali S	Epidemiology of AIDS in Malta.
11.35	Xuereb S, Amato Gauci A, Falzon D	Trends in food-borne disease in Malta.
11.50	Licari L, Amato Gauci A, Ali S	Surveillance of Hepatitis B in Malta - a 4 year trend.
12.05	Attard Montalto E, Portelli A, Mamo J	Hepatitis B infection in Malta.
12.20	Ebejer M, Schiavone M, Vella P, Fenech F	Audit of antibiotic use on two medical wards at St. Luke's Hospital.

*Lunch*

**Session A3: Thursday 30 November 14.00**

**NEPHROLOGY/UROLOGY**

**Chairmen:** Dr L Buhagiar  
Prof L Cutajar

14.00	Chairman	Introduction
14.05	Farrugia E	Renal disease in Malta - analysis of 114 biopsies.
14.20	Calleja R	Is there a place for conservative treatment of ureteric stones larger than 5mm?
14.35	Zammit J, Laferla G	Stenting in the management of ureteric calculi.
14.50	Zammit A, Schranz M, Cutajar C, Formosa N Wood C	Results of percutaneous ureteric stricture dilatation (PcUSD).
15.05	Formosa N, Cutajar C, Kunovski G, Mattocks S, Camilleri N	10 year experience (1986-1995) in the management of renal and upper ureteric calculi in Malta using percutaneous nephrolithotripsy.
15.20	Cutajar L	Transurethral electrovaporization of the prostate - video presentation.

*Coffee Break*

**Session A4: Thursday 30 November 16.30**

**RADIOLOGY/IMAGING SESSION ROENTGEN'S CENTENNIAL**

**Chairmen:** Dr Malcolm P Crockford  
Dr E. Mercieca

16.30	Chairman	Introduction
16.35	Zammit A, Sammut P, Wood C, Schranz M	The Insertion of vena caval filters.
16.55	Sammut P, Crockford M	Pituitary CT Scanning
17.05	Vassallo P	Comparison of US, CT and MR imaging for detection of hepatic metastasis.
17.25	Wood C, Crockford M	The value of compression in intravenous urography.
17.35	Samuel A, Paganelli G, Magani P, Chiesa R, Fazio F	Detection of prosthetic vascular graft infection utilising AVIDIN/ In-III-biotin scintigraphy.
17.55	Schranz M, Crockford M	Barium examinations of the small intestine: a retrospective review.
18.05	Zammit A, Gatt D, Galea Debono A.	Screening for extracranial carotid artery disease (ECAD).
18.20	Vassallo P	Differentiation of benign from malignant superficial lymphadenopathy with high resolution US.
18.35	Farrugia M, Padhani A, Crockford M	Spiral CT angiography in the preoperative evaluation of abdominal aortic aneurysms
18.50	Chairman	Concluding remarks.

**Session B3: Thursday 30 November 14.00**

**GYNAECOLOGY**

**CHAIRMEN:** Prof M P Brincat  
Prof L Cardozo

14.00	Chairman	Introduction
14.05	Cardozo L	The conservative management of female urinary incontinence.
14.35	Testa T, Brincat M, Galea R, Buhagiar A	Polycystic ovaries and endometriosis.
14.50	Formosa M, Brincat M, Cauchi M	Audit of a new miscarriage clinic.
15.05	Brincat M, Galea R, Muscat Baron Y, Xuereb Anastasi A	Changes in bone collagen markers in untreated and oestrogen treated postmenopausal women.
15.20	Muscat Baron Y, Brincat M, Galea R, Scerri C	Carotid artery wall correlates with skin thickness in postmenopausal women.
15.35	Mamo J L, Baldacchino A, Mamo D, Pace M, Felice D	Adolescent body image: age difference in Maltese teenage girls.
15.50	Debono M	Effective care in infertility treatment - the path to success.

*Coffee Break*

**Session B4: Thursday 30 November 16.30**

**POSTER SESSION**

**Chairman:** Prof M N Cauchi

Posters to be discussed 1-49

Poster 1-19	Pathology
Poster 20-29	Haematology
Poster 30-39	Genetics
Poster 40-49	Immunology

Session A5: Friday 1 December 8.00 am

PAEDIATRICS SESSION

Chairmen: Prof A Bellingham  
Dr P Vassallo Agius

8.00	Chairman	Introduction
8.05	<b>Keynote Speaker: Prof A. Bellingham</b>	<b>Trends in the management of haemoglobinopathies in childhood</b>
8.35	Felice A, Scerri C, Buhagiar S, Grech J et al	Clinical features & molecular biology of the B+[IVS-I,6C] Thalassaemia in Maltese children.
8.50	Attard Monalto S,Saha V, Eden O	Symptom interval in children presenting with cancer: medical ineptitude or nature of the beast?
9.05	Soler D,Vassallo Agius P	A one-year follow-up of babies discharged from the SCBU, St. Luke's Hospital Malta.
9.20	Spiteri N	The Child Development Assessment Unit (CDAU).
9.35	Parascandalo R, Felice A, Rizzo M, Vassallo Agius P	Newborn screening for congenital hypothyroidism in Malta.
9.50	Grech V, Elliot M, Wren C	Automation of data analysis in paediatric heart disease.
	General Discussion	
	<i>Coffee Break</i>	
10.30	<b>BMA (Malta Branch Lecture) Prof. A. Cuschieri:</b>	<b>Chairman: Prof. V G Griffiths Mini invasive surgery - the current situation</b>

Session A6: Friday 1 December 11.10 am

GENETICS

Chairmen: Prof A Cuschieri  
Prof A Felice

11.00	Chairman	Introduction
11.05	Cuschieri A, Galea Debono A, Agius Muscat H, Xuereb M Borg I	Prevalence of Huntington's disease in Malta and presymptomatic testing of relatives at risk.
11.20	Farrugia E	Polycystic kidney disease in Malta.
11.35	Swain C, Serracino Inglott F	Creating a register for familial adenomatous polyposis (FAP) in Malta.
11.50	Grech G, Felice A	Molecular identification of G6PD variants.
12.05	Portelli C, Serracino Inglott A, Zarb Adami M	Determination of acetylator phenotype in Malta using isoniazid.
12.20	Al-Shinawi	Two missense mutations (PRO 134 THR and ALA 244 VAL) in the coagulation factor VII gene from a Maltese kindred.

Session: B5 Friday 1 December 8.00 am

PHARMACOLOGY/THERAPEUTICS

Chairmen: Prof A Serracino Inglott  
Prof A Psaila

- |      |   |  |
|------|---|--|
| 8.00 | Chairman  | Introduction   |
| 8.05 | Zammit J, Laferla G                                     | Intrahepatic vs intravenous 5-Fluoro-uracil in the treatment of hepatic metastasis.                                    |
| 8.20 | Serracino Inglott A,<br>Zarb Adami M, Azzopardi L       | Chronopharmacology: A myth?  |
| 8.35 | Pullicino E, Vassallo M<br>Stellini M, Ciantar E        | Feasability of total enteral nutrition via percutaneous endoscopic gastrostomy (PEG) catheters at St. Luke's Hospital. |
| 8.55 | Ellul Micallef R,<br>Fenech A G                         | Effects of glucocorticoids on anti-oxidant defence systems in patients with bronchial asthma.                          |
| 9.05 | Pace D  | An audit on in-patient opioid prescribing.   |
| 9.20 | Schiavone M.R, Ebejer M                                 | Drug-related problems precipitating admission in heart failure patients.   |
| 9.35 | Montefort S, Camilleri R,<br>Lenicker H, Galea Debono A | Nasal ventilation - first experiences in Malta   |

*Coffee Break*

Session B6: Friday 1 December 11.00 am

POSTER SESSION II

Chairman: Prof F F Fenech

Posters to be discussed:

- |                |               |
|----------------|---------------|
| Poster 060-069 | Paediatrics   |
| Poster 150-159 | Endocrinology |
| Poster 160-179 | Medicine      |
| Poster 200-219 | Pharmacology  |

Session A7: Friday 1 December 14.00

RHEUMATOLOGY/METABOLIC BONE DISEASE

CHAIRMEN: Dr C Mallia  
Prof J L H O 'Riordam

- |       |   |  |
|-------|---|--|
| 14.00 | Chairman  | Introduction   |
| 14.05 | O'Riordan J L H   | Understanding rickets in the millenium.  |
| 14.35 | Camilleri F, Mallia C   | Systemic lupus erythematosus in Malta - A review of 37 patients.                 |
| 14.50 | Bajada C, Mallia C  | Glucocorticoid - induced osteoporosis.   |
| 15.05 | Xuereb Anastasi A,<br>Buhagiar A, Camilleri F<br>Cauchi M, Mallia C | Urinary excretion of pyridinum crosslinks in patients with rheumatoid arthritis. |
| 15.20 | Borg A, Davis M, Jones P,<br>Dawes P                                | Measuring pain in rheumatoid arthritis.  |
| 15.35 | Coleiro B, Camilleri F,<br>Mallia C                                 | Rheumatoid arthritis in Malta - a preliminary survey.                            |
| 15.50 | Mallia C.   | Rheumatology and dermatology - the interface.                                    |

*Coffee Break*

Session A8: Friday 1 December 16.30

PUBLIC HEALTH II- NON-COMMUNICABLE DISEASE

CHAIRMEN: Dr J Mamo,  
Dr H Agius Muscat

- |       |  |   |
|-------|--|---|
| 16.30 | Chairman   | Introduction  |
| 16.35 | Muscat Baron J M,<br>Yussufat T, Nasir S,<br>Ghnayen M | The epidemiology of coronary risk factors in the local population of the UAE.                       |
| 16.50 | Agius Muscat H,<br>Janulova L                          | Mapping Malta's health: a new methodology for showing differences in health status between regions. |
| 17.05 | Mifsud I,<br>Amato Gauci A, Sammut M,<br>Licari L      | Preliminary investigation on radon levels in local dwellings.                                       |
| 17.20 | Monteforte S   | Isaac (Malta) - first results for the 12-16 year old group.   |
| 17.35 | Balzan M V   | Age and sex distribution of adult asthma admissions: 5 year commulative prevalence                  |
| 17.50 | Mamo J, Swift C  | Preventive care of elderly persons in the community - a review for a proposal.                      |

Session B7: Friday 1 December 14.00

CARDIOLOGY/CARDIAC SURGERY

Chairmen: Prof A Fenech  
Prof J Muscat Baron

- |       |   |  |
|-------|---|--|
| 14.00 | Chairman  | Introduction   |
| 14.05 | Fenech A  | Recent advances in interventional cardiology.  |
| 14.25 | Manche A  | Establishing a local cardiac surgical programme.   |
| 14.45 | DeGiovanni J, Aquilina O,<br>Bonello G, Edgar R,<br>Hederington P | Electrophysiological studies and ablation therapy for arrhythmias using radiofrequency in Malta. |
| 15.05 | Fava S, Azzopardi J,<br>Aquilina O,<br>Agius Muscat H, Fenech F F | Outcome of unstable angina in diabetic and non-diabetic patients.                                |
| 15.20 | Xuereb R, Xuereb M,<br>Margonato A, Fragasso G,<br>et al          | ST elevation at site of recent transmural myocardial infarction during exercise stress testing.  |
| 15.35 | Xuereb M, Xuereb R,<br>Fragasso G, Chierchia S                    | Does computerised ECG analysis improve the accuracy of exercise stress testing?                  |

*Coffee Break*

Session B8: Friday 1 December 16.30

PSYCHIATRY

Chairmen: Dr L Gask  
Dr J Saliba

- |       |                                       |  |
|-------|---------------------------------------|--|
| 16.30 | Chairman                              | Introduction   |
| 16.35 | Gask L                                | Developing mental health services in the community: strengthening the relationship between primary and secondary care. |
| 17.05 | Cassar D, Sammut M                    | Increased liaison between GP and specialist in the community psychiatry pilot area: a review.                          |
| 17.17 | Buhagiar C, Saliba J R                | Costing quality care in depression.  |
| 17.29 | Vella J, Micallef M<br>Saliba J       | Individual vs small group behaviour therapy in an institutional setting.   |
| 17.41 | Saliba J, Grech A                     | A study of the neuroleptic malignant syndrome in Malta.  |
| 17.53 | Magro G, Saliba J,<br>Sant Fournier M | The rational use of Clozapine.   |

Session A7: Friday 1 December 14.00

RHEUMATOLOGY/METABOLIC BONE DISEASE

CHAIRMEN: Dr C Mallia  
Prof J L H O 'Riordam

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Session A8: Friday 1 December 16.30

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Session B7: Friday 1 December 14.00

CARDIOLOGY/CARDIAC SURGERY

Chairmen: Prof A Fenech  
Prof J Muscat Baron

- |       |   |  |
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*Coffee Break*

Session B8: Friday 1 December 16.30

PSYCHIATRY

Chairmen: Dr L Gask  
Dr J Saliba

- |       |                                       |  |
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**Session A9: Saturday 2 December 8.00 am**

**RESPIRATORY**

**Chairmen:** Prof R Ellul Micallef  
Mr D Gatt

- |      |  |  |
|------|--|--|
| 8.00 | Chairman:  | Introduction   |
| 8.05 | Fenech A G,<br>Ellul Micallef R  | Enzymatic antioxidants in Maltese patients suffering from bronchial asthma.  |
| 8.20 | Montefort S, Feather I,<br>Bardin P, Haskarad D,<br>Howarth P, Holgate S | Are the levels of circulating adhesion molecules in asthma elevated secondary to allergic or infective influences? |
| 8.35 | Cacciottolo J, Balzan M,<br>Buhagiar A                                   | Hospitalisation of adults for asthma and inhaled corticosteroid use in Malta.                                      |
| 8.50 | Ebejer M   | Clinical features and outcome of extrinsic allergic alveolitis in Malta.   |
| 9.05 | Azzopardi C, Fenech F F  | Bronchiolitis obliterans organising pneumonia  |
| 9.20 | Dalmas M   | Follow up of lung cancer cases registered in the Malta National Cancer Registry for 1993                           |
| 9.35 | Gatt D   | Thoracoscopic surgery in Malta - a review  |

*Coffee Break*

**Session A10: Saturday 2 December 11.00 am**

**ONCOLOGY**

**CHAIRMEN:** Dr S Brincat  
Dr H Sultana

- |       |  |  |
|-------|--|--|
| 11.00 | Chairman                                 | Introduction   |
| 11.05 | Grixti M, Cuschieri A                    | Cancer in an ageing population in the Maltese Islands.   |
| 11.20 | Agius Muscat H                           | 3-year survival of Maltese cancer patients.  |
| 11.35 | Degaetano J, Ali S                       | PSA and prostatic carcinoma - the local situation.   |
| 11.50 | Brincat S, Galea R,<br>Xuereb Anastasi A | The effect of pamidronate on bone density and bone resorption in patients with multiple myeloma. |
| 12.05 | Aquilina A, Ferrigi A,<br>Brincat S      | Neutrophil function in patients with malignant solid tumour.                                     |
| 12.20 | Xuereb J, Grochowska A                   | Leukaemia and multiple myeloma in the Maltese Islands: a ten year study.                         |

*Lunch*

**Session B9: Saturday 2 December, 8.30**

**DENTAL SURGERY**

**Chairmen:** Prof G Camilleri  
Prof J Portelli

8.30	Chairman	Introduction
8.35	Galea H	Inequalities in oral health.
8.50	Azzopardi A	The osseointegrated tooth root analogue: fill in the blanks.
9.05	Ciantar M L	Cutaneous sinus tract of dental origin - a case report.
9.20	Camilleri G, Galea J	Cysts of the jaws - the Malta experience.
9.35	Camilleri S, Mulligan A, Pace Balzan A	The prevalence of incisor irregularities in 14 year old Maltese schoolchildren
10.00	Coffee Break	

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10.30	<b>Keynote Speaker</b> Prof G. Zarb	<b>Osseointegrated dental implants: a paradigm for oro-facial rehabilitation</b>
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**Session B10: Saturday 2 December 11.00**

**POSTER SESSION III**

**Chairman:** Prof M N Brincat

Posters to be discussed

Poster 100-119	Obstetrics
Poster 120-129	Gynaecology
Poster 230-250	Miscellaneous

Session A11: Saturday 2 December 14.00

UNDERGRADUATE MEDICAL EDUCATION

Chairmen: Prof F Fenech  
Dr J L Pace

14.00	Chairman	Introduction
14.05	Antepohl A	The role of medical students in reforming medical education.
14.20	Galea I	Ancillary factors in medical education.
14.35	Cacciottolo J, Caruana Galizia A	The curriculum in medicine: an evaluation I
14.50	Caruana Galizia A Cacciottolo J	The curriculum in medicine: an evaluation II
15.05	Bouhuijs P	Problem - based learning as an educational strategy.

*Coffee Break*

Session A12: Saturday 2 December 15.30

POSTGRADUATE MEDICAL EDUCATION AND CME

Chairmen: Prof F F Fenech  
Dr J L Pace

15.30	Chairman	Introduction
15.35	Harvey L	The medical specialist in tomorrow's Europe - training requirements, certification.
15.55	Fenech F F	The Maltese Academy of Medicine - simply even more pomp or a guarantor of the highest levels of medical care?
16.15	Rodolico G	L'Universita fra tradizzjoni e sviluppo.
16.35	Cuschieri A	Training to be a surgeon in the 21st century.
16.55	Hon. Dr L. Deguara	Closing remarks

**Session B11: Saturday 2 December 14.00**

**OBSTETRICS**

**Chairmen:** Prof I Johnson  
Mr D Felice

14.00 Chairman Introduction

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**14.05 Keynote Speaker**  
Prof. I. Johnson **Magnetic resonance imaging (MRI) in obstetrics**

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- 14.35 Mamo J L, Pace M, Felice D Evaluation of sea-band acupressure device for early pregnancy nausea and vomiting.
- 14.50 Armatys A, Spiteri M, Rapa J, Mamo J Technique of selective myomectomy at Caesarean Section.
- 15.05 Saliba I, Micallef T, Buttigieg G, Portelli C Biophysical parameters and Doppler flows in patients with abnormal glucose tolerance in pregnancy.
- 15.20 Savona Ventura C, Nahal K Obesity and its obstetric implications.
- 15.35 Muscat Baron Y Reducing the incidence of brachial plexus injuries in obstetric practice 1980-1995.
- 15.50 Spiteri M Recording of symphysis - fundal height for detection of macrosomia

*Coffee Break*

**Session B12: Saturday 2 December, 16.30**

**POSTER SESSION IV**

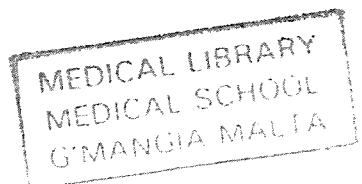
**Chairman:** Prof L Cutajar

Posters to be discussed:

Poster 050-059 Oncology

Postsr 180-199 Surgery

Poster 220-229 Radiology





## **ABSTRACTS**

#### **A01-1**

### **ROLE OF WHO IN DIABETES THE ST. VINCENT DECLARATION ACTION PROGRAMME - Network and Principles.**

**K S Johansen World Health Organisation, Regional Office for Europe, Denmark.**

Since 1989, the World Health Organisation, Regional Office for Europe (WHO/EURO) and the International Diabetes Federation.

Regional Organisation for Europe (IDF/EURO) have conducted a joint action programme for the improvement of diabetes health care within European countries. This unique public health initiative known as the "St. Vincent Declaration: Diabetes Care and Research in Europe" (SVD), involves all parties with an interest in diabetes care - health professionals, patients, governments, industry, third party payers - and contains goals, targets and measures for the improvement of diabetes health care. These targets are also in line with the two regional targets of Health for All: target 4, which aims at the reduction of major noncommunicable diseases, and target 31: which calls for a higher quality of patient care.

At the Regional Committee held in Lisbon in September 1991, all the European Member States endorsed the principles underlying the SVD and adopted a resolution on the prevention and control of Diabetes Mellitus (EUR/RC41/R3). The resolution called for the establishment of a European Action Programme on Diabetes (EuroDiabCare) based on SVD principles. Soon after that, the programme was established in order to support the Member States in their efforts to find the best approaches in developing and implementing their national diabetes action programmes (NADAP).

On the basis of EuroDiabCare a major effort has been undertaken to develop the technical guidance for NADAP development and to create an appropriate organisational structure indispensable for successful country programme implementation. This includes the appointment of the SVD Country Liaison/focal point as a person responsible for facilitation and monitoring of the overall NADAP implementation according to SVD principles, and the establishment of the local, regional and national SVD Task Forces to promote the SVD objectives accordance with local needs and resources.

As a result of these activities a multinational network of fifty-four SVD contact persons has been established in all fifty Member States. Their main tasks are: liaising with the SVD Secretariat at WHO/Euro. influencing national health authorities to promote SVD guidelines and activities, communicating with patient organisations and promoting patients' care and rights, prompting industry and other supporters to become actively involved in the NADAP implementation, particularly with regard to education and financing, and promoting the creation of national nodes for diabetes data collection based on quality principles. At the same time, a national SVD Task Force was set up, comprising government liaison officers, health professionals (general practitioners, nurses, pharmacists) representatives of patient organisations and professional associations, as well as consultants from insurance agencies, media and health economists representing forty-one European countries.

The existing network is intended as a tool in the successful realization of the recently adopted Acropolis Affirmation, and represents the joint commitment of all interested parties in future activities to implement the SVD.

#### **A01-2**

### **MALTA AS THE MEDITERRANEAN CENTRE FOR THE IMPLEMENTATION OF THE DIABCARE PROGRAMME.**

**J. Azzopardi, G. Xuereb, FF Fenech.**

The DiabCare programme is one of the initiatives arising from the St Vincent Declaration for the improvement of quality care for Diabetes in Europe. It is a means by which Diabetes centres throughout Europe record data on Diabetes care on a computer programme and compare standards with the rest of Europe through a central WHO co-ordinating centre in Munich. Malta has been closely involved in this project since its beginning.

The Mediterranean Group for the study of Diabetes has endorsed the programme and chosen Malta as the co-ordinating centre for the programme for the Mediterranean. Through the group the programme will spread throughout Mediterranean countries, including North African countries.

Malta is undertaking a pilot study involving centres in Italy, Tunisia, Spain, Israel, Libya, Slovenia, Turkey, Egypt, Greece, Algeria.

The paper will present an overview of the DiabCare programme together with details of Malta's involvement and results of the ongoing pilot study.

#### A01-3

### PRESENTATION OF DATA ANALYSIS CONCERNING THE RISK FACTORS FOR THE DEVELOPMENT OF DIABETIC NEPHROPATHY IN THE GOZITAN DIABETIC POPULATION

M Farrugia, J. Azzopardi, Gozo General Hospital, Malta.

The Risk variables studied were duration of diabetes, hypertension, the presence of renal impairment as specified by elevated values of serum creatinine and the need for insulin

#### A01-4

### MAJOR LOWER LIMB AMPUTATIONS IN DIABETIC PATIENTS IN MALTA

M J Cachia, J Azzopardi. St Luke's Hospital, Malta

Major lower limb amputation is a serious complication of diabetes associated with loss of mobility, employment and psychological trauma. This study was designed to determine the pattern of major lower limb amputations in Malta. Operation records at St Luke's Hospital were scrutinised to identify all above and below knee amputations (AKA and BKA respectively) occurring during 1993. The patients' medical histories were reviewed to determine diabetes status. Mortality data was determined death certificates. During 1993 there were 89 major lower limb amputations. The following analysis is based on 67 medical records. 60 amputees with diabetes underwent 64 major amputations. Age was  $70.8 \pm 8.9$  years (mean  $\pm$  1SD; range: 37.4-87.3); 30% of patients were below 65 years of age. Sex ratio was 31 males to 29 females. The number of surgical interventions per patient was  $2.2 \pm 1.1$  (mean  $\pm$  1SD). 15% of patients had an angiogram prior to operation. Mortality at one month was 20%, at one year 43%. Mortality at one year for BKA was 35.7% and AKA 50%. The main causes of death were ischaemic heart disease (42%) and infection (38.5%). Major lower limb amputation in diabetic subjects has a poor prognosis. We suggest a team approach needs to be developed for patients undergoing surgery. We also suggest that funds and staff need to be provided to initiate an intensive programme of preventive care and education focused on the lower limbs.

#### A01-5

### RESULTS OF VITREOUS SURGERY IN THE MANAGEMENT OF ADVANCED DIABETIC EYE DISEASE SINCE THE INTRODUCTION OF VITREORETINAL SURGERY

T. Fenech, Ophthalmic Department, St. Luke's Hospital.

Vitreoretinal surgery was introduced at St. Luke's Hospital 1993, and since then over 100 vitreoretinal procedures have been carried out. The principal indications for vitreoretinal surgery are complicated retinal detachments, advanced diabetic eye disease, and ocular trauma. Before the development of vitreoretinal surgery diabetic patients with advanced diabetic eye disease such as dense non-clearing vitreous haemorrhages and traction or combined traction / rhegmatogenous retinal detachments carried a very poor prognosis of regaining long term useful vision in these so effected eyes. Pars plana vitrectomy can restore useful vision in well over 50% of eyes with advanced diabetic eye disease. Since November 1993, 42 eyes underwent vitreous surgery for advanced diabetic eye disease, in the case of severe non clearing vitreous haemorrhages the visual acuity improved in 75% of cases, while in the case of diabetic traction or combined retinal detachments the improvement occurred in 60% of cases. The minimum follow up period was 3 months. Overall 4 eyes (10%) have been lost to blindness because of development of rubeotic glaucoma. To conclude although the risks of vitreous surgery are substantial, eyes with a successful result have much improved long term prognosis.

#### A01-6

### SCREENING FOR THYROID DYSFUNCTION IN A SUBGROUP OF ELDERLY PATIENTS

T Bellia<sup>1</sup>, A Fiorini<sup>2</sup>, A Serracino Inglott<sup>1</sup> <sup>1</sup>Department of Pharmacy, University of Malta, <sup>2</sup>Department of Geriatric Medicine

**Objectives:** (1) To examine the prevalence of previously recognised and unrecognised cases of hypothyroidism and hyperthyroidism in the elderly in Malta. (2) To see whether accepted clinical symptoms and signs of thyroid dysfunction correlated with laboratory findings. (3) To investigate the influence of drug therapy on thyroid function.

**Methods:** 873 consecutive patients seen at a unit of geriatric medicine were specifically assessed for symptoms and signs of thyroid dysfunction. Parameters measured included free T4, thyroid stimulating hormone (TSH) and mean cell volume (MCV). Past medical history and current medications were noted. Results were analysed using a BMDP statistical analysis program.

**Results:** 4.24% of patients had definite hypothyroidism (3.55% already on treatment; 0.69% newly diagnosed) on first contact with the department. 0.11% of patients had definite hyperthyroidism (0.11% history of treatment; 0% newly diagnosed) on first contact with the department. 9.16% of patients had abnormal thyroid function tests and required further follow-

**Results:** 4.24% of patients had definite hypothyroidism (3.55% already on treatment; 0.69% newly diagnosed) on first contact with the department. 0.11% of patients had definite hyperthyroidism (0.11% history of treatment; 0% newly diagnosed) on first contact with the department. 9.16% of patients had abnormal thyroid function tests and required further follow-up. Of these, 0.69% developed hypothyroidism that needed treatment. The correlation of a clinical diagnosis of thyroid dysfunction with laboratory findings was not significant. There was a significant correlation between amiodarone, diuretics and heparin with the higher TSH level, and between mefenamic acid with a lower free T4. Only weight gain, angina, depression, goitre and an MCV above normal had a significant correlation with documented thyroid dysfunction.

**Conclusions:** Since there was a poor correlation between doctors' diagnosis, classical symptoms and signs and laboratory results, a thyroid test screen might be indicated in all elderly people presenting with medical problems. It is important to remember that medications can influence the results of thyroid tests.

#### **A01-7**

### **A REVIEW OF 24 ACROMEGALIC PATIENTS ATTENDING ENDOCRINE CLINIC, ST. LUKE'S HOSPITAL BETWEEN 1992-1995**

C. Bajada, K. Bowman, F.F. Fenech, Department of Medicine, St. Luke's Hospital, Malta. 24 acromegalic patients (F 12, M 12), followed up at the Endocrine Clinic, St. Luke's Hospital between 1992-1995 were reviewed.

The age of patients at diagnosis, mode of presentation, mean growth hormone level at diagnosis, treatment, iatrogenic complications and outcome were analysed.

#### **A01-8**

### **HORMONAL REGULATION OF ANDROGEN RECEPTOR CONCENTRATION AND MRNA LEVELS IN IMMATURE RAT SERTOLI CELLS.**

J. Spiteri-Grech, D.O. Hardy, J.F. Catterall & G.L. Gunsalus. Dept. of Medicine, St. Luke's Hospital.

The Population Council Center for Biomedical Research, The Rockefeller University, 1230 York Avenue, New York, NY, USA. The role of follicle stimulating hormone (FSH) and androgens in the regulation of androgen receptor (AR) concentration and receptor mRNA in Sertoli cells has been studied but no data are available concerning the potential effects of other hormones and factors in combination with FSH or androgens. It has been postulated that growth hormone (GH) and/or insulin-like growth factor (IGF-I) can have a potentiating effect on gonadotropin action in the testis. We therefore studied the effect of FSH, testosterone (T), GH and IGF-I on AR levels and mRNA expression in immature rat Sertoli cells. Sertoli cells were isolated from 19-day old Sprague Dawley rats. After three days in culture under basal conditions, the cells were exposed for 48 hours to different concentrations of FSH, T, GH and IGF-I alone and in various combinations. AR levels were measured using tritiated mibolerone in the absence and presence of excess unlabelled mibolerone. Semi-quantitative measurement of androgen receptor mRNA was also performed using the reverse transcriptase polymerase chain reaction (RT-PCR) with primers for rat androgen receptor and rat glyceraldehyde-3-phosphate dehydrogenase (GAPDH) as an internal control. In summary, (1) FSH and T are the prime regulators of AR protein and mRNA levels in rat Sertoli cells in vitro and GH and IGF-I alone or in combination have no role. These results are in contrast to previous reports on the regulation of prostatic AR and are further evidence for differential tissue-specific regulation of the androgen receptor. (2) FSH and T have a potentiating effect on AR protein concentrations but not on mRNA levels. Possible mechanisms include a) interactions via different signalling pathways or b) distinct effects on message stability or c) receptor turnover. (Supported by NIH grant 1.

#### **A01-9**

### **THE INVESTIGATION AND MANAGEMENT OF PITUITARY TUMOURS - THE 2000 AND BEYOND**

J A H Wass, Department Endocrinology, Radcliffe Infirmary, Woodstock Road, Oxford. Pituitary tumours occur commonly and are frequently diagnosed many years after the initial symptoms. They present with either evidence of space occupation causing headaches and later visual field defects and more rarely with evidence of compression of cranial nerves in the cavernous sinus or even CSF rhinorrhoea. They may also present with endocrine manifestation either of hypopituitarism or with evidence of hypersecretion of one or other of the anterior pituitary hormones. Besides pituitary tumours, a large number of other conditions can simulate them and present with hypopituitarism.

The aetiology of pituitary tumours is currently poorly understood. A number of genetic abnormalities have been shown and 40% of patients with acromegaly have a GS alpha abnormality which results in continuous activation of the growth promoting adenylate cyclase signalling pathway. A small number of other non-functioning pituitary tumours have been shown to have genetic abnormalities but there is no consistent pattern that has emerged as yet. Diagnosis has been greatly enhanced by the use of MRI and particularly in small pituitary tumours such as those seen with Cushing's disease. MRI is significantly more effective in localising small adenomas than CT.

Replacement therapy, has radically changed and careful monitoring is essential. Growth hormone therapy which will shortly receive a licence for use in adults in the UK has effects on fat distribution, muscle strength, psychometric testing and lipids. 50% of patients in double blind trials show clinical improvement but whether this affects morbidity and mortality which is known to be increased in patients with hypopituitarism is not yet certain. Much research remains to be carried out.

Prolactinomas are the commonest of the hyper-secretory tumours. Recently Carbergoline a long acting Dopamine agonist has become available for the treatment of prolactinoma. This drug is more effective than Bromocriptine and less frequently associated with side-effects. Administrable once weekly it is the most effective treatment of prolactinoma.

Cushing's disease is most readily treated by surgery which cures 80% or so of patients. Work remains to be done on the long term sequelae of cortisol excess, particularly with regard to the effect on bones and osteoporosis.

Acromegaly, a disease which occurs more frequently than reported elsewhere in Malta seems to have an association with the development of pre-malignant polyps and colonic carcinoma. Untreated acromegaly has an increased mortality and current research is being aimed at deciding whether this can be reduced with effective treatment.

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#### A02-1

##### ELECTROCHEMICAL DETECTION OF ANAESTHETIC AGENTS

D. J. Caruana and J. Giglio, Department of Biomedical Sciences. University of Malta, Msida, Malta.

Halothane ( $\text{CHClBrCF}_3$ ) revolutionised inhalation anesthesia when it was introduced into clinical practice in 1956. Other halogenated hydrocarbons and ethers that have since been introduced as inhalation anesthetics have been modelled on halothane.<sup>1</sup> Although popular as an anaesthetic the margin of safety is not wide, below 1% there is risk of loss of anaesthetic effect, whereas prolonged exposure to concentrations greater than 4% may lead to irreversible liver damage or death.<sup>2</sup> Clearly, continuous measurement of the anesthetic agent in the inspired air is important.

Detection of polyhalogenated anesthetic agents is carried out by measuring the absorbance of IR light. These systems rely on the abstraction of a stream of gas from the patient's mask to the detector. We describe the fabrication of a small size gas phase electrochemical sensor that can be positioned in the patient's face mask during the administration of anesthesia.

The sensor composed of a gold and a Ag/AgCl in a sandwich configuration, is the first electrochemically based sensor responsive to halothane which is free from interference from oxygen.<sup>3-4</sup> The response to halothane is linear between 0.1 to 5.0% in air or 100% oxygen. The gold electrode exposed to the gas is covered with a thin ( $>100\mu\text{m}$ ) layer of a water based conducting gel.

#### A02-2

##### TWO TO FIVE YEAR CLINICAL FOLLOW-UP OF PATIENTS WITH TOTAL KNEE REPLACEMENTS - THE FIRST SERIES FROM MALTA.

J. Camilleri Brennan, I. Molnar, Mr A. Bernard. from St. Luke's Hospital, Malta. Over a three year period from February 1990 to February 1993, 78 patients of whom 63 were female and 15 were male with ages ranging from 45 to 82 years, had 95 total knee arthroplasties performed by the senior author at St. Luke's Hospital, this number being 42.2% of the total number of knee arthroplasties (225) done during this period. The diagnosis was osteoarthritis in 80 knees and rheumatoid arthritis in 15 knees. The prostheses used is a posterior stabilised knee prostheses with a metal-backed tibial component, (Insall - Burstein Mark 11). The patella was replaced in 77 knees.

79 knees in 64 patients were available for this study. 6 patients (7knees) had died less than three years after the operation. 8 patients (9knees) were lost to follow up. All of the 79 knees were intact at the time of the study. They were rated according to the scoring system of the

Knee Society. The average post-operative knee score was 95 points (60 to 100), and the average functional score was 64 points (7 to 100). The clinical function of the patellofemoral joint was also assessed.

#### **A02-3**

### **CAROTID ENDARTERECTOMY: UPDATE ON RECENT TRIALS AND PRACTICE GUIDELINES.**

**M. Zammit. Seattle, Washington, USA.**

Carotid atherosclerosis as a cause of preventable stroke has been debated for the last 25 years. Recent clinical trials have compared the benefit from carotid endarterectomy to best medical management. The role of surgery in the symptomatic patient with severe carotid stenosis is now well defined. Selection of surgical candidates in the asymptomatic stage is done in light of the natural course of carotid disease and low operative complications. Additionally, risk factors and co-morbid conditions should be closely scrutinized to attain long term benefit from the procedure. Practice guidelines are recommended on the basis of these considerations.

#### **A02-4**

### **SURGICAL PROBLEMS IN TREATING GARDNER'S SYNDROME**

**H. K. Borg, Department of Surgery, St. Luke's Hospital, Malta. C. Swain, Department of Surgery, St. Luke's Hospital, Malta.**

The problems encountered in the diagnosis of two siblings suffering from a high penetration variant of Gardner's syndrome are presented. The importance of recognizing the extra colonic manifestations of the syndrome at an early stage and technical difficulties encountered during colonoscopy are noted. Operative procedures available to treat multiple colonic polyps in Gardner's syndrome are discussed in relation to technical problems which may be encountered in the individual case.

Hopefully this presentation will highlight the importance of setting up a Familial Polyposis Coli Register in Malta in order to facilitate early diagnoses and treatment of the condition.

#### **A02-5**

### **RESTORATIVE PROCTOCLECTOMY WITH ILEAL POUCH RESERVOIR. WHICH POUCH? IS A DEFUNCTIONING ILEOSTOMY REALLY NECESSARY?**

**D. Gatt**

Twenty five percent of patients with ulcerative colitis and all patients with Familial Polyposis. Coli need total proctocolectomy. Since the introduction of restorative proctocolectomy with Ileal Pouch Reservoir in Malta by us in May 1988 our series has extended to 21 cases of which 2 were for familial polyposis. With increasing use of stapling devices, operating time was shortened from the initial 4.5 hours to 2. Three different Pouch designs were used the S the W and the J shapes. The first 13 patients had a defunctioning ileostomy postoperatively but this was used only in selected cases after that. In fact of the last 8 patients 5 had no defunctioning ileostomy. None of the pouches required catheterisation and nocturnal soiling occurred only in four cases for about 6 months. All patients are now fully continent and can distinguish between flatus and faeces. Pouchitis developed in four patients but responded to colifoam, metronidazole or mesalazine suppositories. This series highlights the facts that the W-shaped pouch is ideally suited for female patients because of the wider pelvis, whilst the J-shaped pouch which is easier to construct, fits better in males. As regards the creation of a temporary ileostomy the limiting factor appears to be the nutritional status of the patient at the time of surgery and therefore patients with Familial Polyposis can probably do away without it. In ulcerative colitis on the other hand this method has to be used more selectively. The simultaneous removal of the uterus in our oldest female patient produced impressively good results possibly because the space created in the large female pelvis further improved pouch capacity.

#### **A02-6**

### **THE E.R.C.P. EXPERIENCE AT ST LUKE'S HOSPITAL, MALTA.**

**M. Stellini, M.J. Cachia, A. Caruana Galizia. St. Luke's Hospital, Malta.**

We present 120 E.R.C.P.'s performed on 111 patients between January 1994 and June 1995. There were 57 male and 54 female patients. The age of these patients was  $65.9 \pm 14.3$  years (mean  $\pm$  1SD, range 21 - 88). The main indications for E.R.C.P. was painful jaundice (45%) or painless jaundice (29.2%). Stones were identified in 46 E.R.C.P.'s, successfully removed in 59% (35% of which had no further stones in the biliary system) and partially removed in another 13%. Sphincterotomies were performed in 57 E.R.C.P.'s with Dormia basket procedures in 31 cases. Of 89 abnormal common bile ducts (CBD) on E.R.C.P., 14 were

reported normal on ultrasound examination. There were 63 abnormal CBD on ultrasound examination of which only 4 were abnormal on E.R.C.P.. Where CT scan examination showed an enlarged pancreatic head (14 patients), E.R.C.P. showed a stricture of the CBD or the pancreatic duct in 64%. Cannulation was unsuccessful in 21% and stones were visualised in the CBD in a further 14%. In conclusion we have presented E.R.C.P. findings over 18 months and have compared them to radiological investigation of the biliary tract and pancreas.

#### **A03-1**

##### **RENAL DISEASE IN MALTA: ANALYSIS OF 114 BIOPSIES.**

**E. Farrugia, Department of Medicine, St Luke's Hospital, Malta.**

**Aim:** The spectrum of renal pathology in Maltese patients has not been studied. Renal biopsy was systematically employed to analyse diagnoses and prognosis in all patients who met established indications for biopsy. **Methods:** We conducted a retrospective study of 114 consecutive percutaneous renal biopsies performed between 1/93 and 8/95 at St. Luke's Hospital. Pertinent clinical and laboratory data were summarized. Histopathology utilizing light, immunoperoxidase, and electron microscopy was carried out in Bristol, UK. **Results:** 69 males and 45 females had 107 native and 7 renal allograft biopsies. At biopsy, mean age (range) was 43.3 years (0-74) in males and 44.5 years (8-74) in females. Indications for biopsy were: Isolated Haematuria 14 (12%), Haemoproteinuria with normal renal function 28 (25%), Nephrotic - Range Proteinuria or Nephrotic Syndrome 22 (19%), Impaired Renal Function 43 (38%), and Renal Transplant dysfunction 7 (6%). Histopathological diagnoses in native biopsies were: IgA Nephropathy (n=25), Focal Segmental Glomerulosclerosis (n=19), Mesangial Proliferative Glomerulonephritis or Mesangial Deposits with normal light microscopy, not IgA (n=19), Lupus Nephritis (n=8), Hypertension/Arteriolosclerosis (n=7), Vasculitis (n=6), Membranous Glomerulopathy (n=4), Membrano-Proliferative Glomerulonephritis (n=3), Others (diabetic nephropathy, Thin GBM disease, minimal change nephropathy, congenital nephrosis, etc.). **Conclusion:** The spectrum of renal disease seen at renal biopsy in Malta is similar to that observed in Western Europe and USA, with IgA Nephropathy being the most frequently encountered primary glomerulopathy.

#### **A03-2**

##### **IS THERE A PLACE FOR CONSERVATIVE TREATMENT OF URETERIC STONES > 5MM?**

**R.K.Calleja, N.A. Burgess, A. Doble, K.N. Bullock, P.T. Doyle, Department of Urology, Addenbrooke's Hospital, Cambridge, CB2 2QQ, U.K.**

Conservative management of ureteric stones has been criticised as irreversible renal damage, which may be silent, can ensue. Is there a place for conservative treatment of ureteric calculi, with a low likelihood of spontaneous passage by utilizing renography? A group of patients with a unilateral ureteric calculus sized >5mm were studied. MAG3 renography was performed within 48 hours of presentation. The indications for initial intervention were: a) solitary kidney, b) reduced renal function, c) normal renal function yet symptomatic obstruction. Asymptomatic patients with normal function underwent further renography monthly. Symptomatic patients initially having normal function and no obstruction, were reviewed at 4 weeks; intervention occurred in those with reduced renal function. Once stone free, MAG3 renography was repeated. Thirty six patients have been studied to date with ureteric stones between 5 and 7mm. Location was in the upper ureter in 14 (39%), mid-ureter in 7 (19%) and lower ureter in 15 (42%). 5 (14%) stones passed spontaneously. Initial intervention was necessary for reduced function in 13 (36%) and symptomatic obstruction in 7 (19%). Initial conservative treatment was superseded by intervention in 10 (63%) for reduced renal function. Intervention in five patients (31%) occurred for asymptomatic reduced function and obstruction. No patient had reduced function at follow up. A treatment policy of relying on symptoms to identify either obstruction or reduced function will underestimate the need for intervention. MAG3 renography will help identify at risk groups. Conservative management of ureteric calculi >5mm is then feasible and safe with spontaneous passage in 14% and minimal risk of a permanent reduction in function.

#### **A03-3**

##### **STENTING IN THE MANAGEMENT OF URETERIC CALCULI**

**J. Zammit, G. LaFerla, University of Malta, Medical School, G'Mangia**

Ureteric calculi >1 cm in diameter are unlikely to pass spontaneously and are usually associated with marked renal impairment. Surgical (endoscopic) extraction is therefore usually required.

The timing for extraction is controversial. Oedema of the ureter makes early extraction difficult. Late extraction may be associated with ureteric fibrosis and loss of renal function. We have therefore undertaken a study to assess the best time for stone extraction.

Patients who presented with unilateral ureteric colic and had calculi >1cm located in the upper and middle 1/3 of the ureter were entered into the study.

47 patients over a 4 year period satisfied these criteria. There were 20 females and 27 males with a mean age of 47.5 years. 15 patients underwent immediate ureteroscopy (Group 1). 16 patients underwent immediate stent insertion, followed by ureteroscopy at 6 weeks (Group 2). The remaining 16 patients (Group 3) underwent delayed (at 6 weeks) ureteroscopy.

**Results:**

Group	Stent Insertion	Ureteroscopy	Stone Fragmentation	P
1	—	10/15	7/10	0.05
2	15/16	15/15	13/15	0.05
3	—	14/16	8/14	

There was one guide wire perforation in Group 1 and Group 2 respectively.

**Conclusion :** Early stenting will relieve ureteric obstruction and reduce renal impairment. It abolishes pre-obstruction ureteric dilatation and therefore make subsequent stone .

**A03-4**

**THE RESULTS OF PERCUTANEOUS URETERIC STRICTURE DILATION(PCUSD)**

**A. Zammit, M. Schranz, C.L. Cutajar, N Formosa, C Wood Radiology(RD) / Surgery Departments,SLH, Malta, University of Malta**

**Introduction:** USD was under research at SLH from 5/91 both via the retrograde route by a urology/radiology team or via the antegrade route(PcUSD) in the RD.The antegrade approach has advantages over the retrograde approach in that it is less invasive and therefore it is more patient acceptable.

**Objective:** The aim was to follow up all cases of PCUSD done over the last 4 years thereby assessing the success or failure of the procedure.

**Design/Patients/Method:** 15 consecutive PcUSDs in 14 patients(M8:F6) were retrospectively follow up . The age range was 19-74years (mean age=41.5)years. All these procedures were carried out with LA and all had stenting or nephrostomy post-op. The distribution was almost equal on both sides(R7:L8). The sites of stricture were 9 PUJ, 3mid-ureter, 2lower ureter and 2upper ureter. The causes of obstruction were mainly congenital(5), Calculi(3) or unknown(3) with 2retroperitoneal fibrosis, 1tumour and 1radiotherapy/carcinoma. The criteria for outcome were subdivided into: primary failure(within 1month of procedure), secondary failure(return of gross hydronephrosis after 1month), restenosis(mild/ moderate hydronephrosis) and success(US normal on follow up).

**Results:** There were 9successes(60%), 3restenoses(20%), 2primary failure(13%), 1secondary failure(7%). The complications were UTI, restenosis leading to failure and no mortality resulted.

**Conclusion:** PcUSD is a safe but appreciably successful technique which is very useful in uroradiological practice particularly in the unfit for surgery and to avoid a higher risk of operation.

**A03-5**

**10 YEARS EXPERIENCE (1986-1995) IN THE MANAGEMENT OF RENAL AND UPPER URETERIC CALCULI IN MALTA USING PERCUTANEOUS NEPHROLITHOTRIPSY ALONE**

**L. Cutajar, N. Formosa, A. Zammit, G. Kunovski, S. Mattocks, N. Camilleri - Departments of Surgery and Radiology, St. Luke's Hospital, G'Mangia, Malta**

**Introduction:** Since the early 80s management of renal calculi was revolutionised by the introduction of Extracorporeal Shock Wave Lithotripsy (ESWL) and Percutaneous Nephrolithotripsy (PCNL). Modern management in urology centres is based on both ESWL and PCNL being available. With these techniques only 10% of patients need PCNL and only 2% need open surgery. As ESWL is not available in Malta we have had to deal with these calculi in 90% of cases with PCNL alone.

**Patient Selection/Method:** All stones which did not pass spontaneously were tackled except for those in a peripheral calyx not causing obstruction. Some staghorn calculi which needed ESWL were referred abroad (12) either to UK or Belgium. All 250 patients had metabolic lithiasis screening and 282 procedures were performed. Analysis of removed stones showed a high incidence of uric acid stones (21%).

**Results:** The results have been satisfactory as shall be seen from the full report. The main complications were significant bleeding (25 [2 needing open operation]), residual fragments needing revision (13), septicaemia (8) and recurrence of stones (11). Access was not possible in 7 patients but succeeded in 5 of them after a second attempt. 2 patients needed open operation to remove the stones.

**Conclusion:** Renal calculi are very common in Malta. The problems of residual and recurrent stones will definitely be helped by having available ESWL locally. These results could be improved by working in this facility.

#### **A03-6**

##### **TRANSURETHRAL ELECTROVAPORIZATION OF THE PROSTATE: A NEW TECHNIQUE FOR TREATING MEN WITH BENIGN PROSTATIC HYPERPLASIA.**

**C.L. Cutajar** Department of Urology, St. Luke's Hospital & Medical School.

Transurethral resection of the prostate is at present the 'gold standard' of surgical treatment of the enlarged benign prostate. Although the success rates are excellent, significant morbidity is associated with the procedure particularly bleeding, the hyponatraemia syndrome, retrograde ejaculation and incontinence. In an attempt to reduce the morbidity further a new technique has been developed involving the vaporisation of the prostate using a specially designed roller electrode. The results of the first twenty five cases are presented.

Transurethral electro-vaporisation of the prostate seems to have significant advantages over the conventional transurethral resection particularly as regards ease of performance, minimal blood loss, post operative patient comfort, early discharge from hospital and improvement in the patient symptom score.

#### **A04-1**

##### **The INSERTION of VENA CAVAL FILTERS(VCF)**

**A. Zammit, P. Sammut, C. Wood, M. Schranz,** Radiology Department(RD), SLH, Malta.

**Introduction:** VCF are inserted temporarily or permanently to treat recurrent pulmonary embolism (RPE) particularly when there is inadequate response to anticoagulants or anticoagulants are contraindicated. This technique was mainly introduced as an alternative to vena caval clipping or ligation which carry a mortality of 8% and 10-15% respectively and a morbidity from lower limb venous congestion in 75%.

**Objectives:** The aim was to assess the effectiveness and safety of the procedure.

**Patient/Method:** This technique is rarely requested and from 6/91 to date only 10 patients (M5:F5) with ages ranging from 40 to 82 years (mean age 64 years) were followed up. This represents a requested incidence of 1 in 140,000 persons P.A. Temporary filters, Gunther(Basket) filters, Bird's Nest filters and Tulip filters have all been inserted at the RD, SLH.

**Results:** There were no puncture site complications such as thrombosis nor any misplacement or migration of VCF. Many patients recovered from their marked dyspnoea after the procedure but 1 succumbed to her underlying disease of hepato-renal failure within one month (10% mortality as compared to 4% in large series).

**Conclusion:** Insertion of VC filter is a relatively safe and effective procedure and has a role to play in the treatment of a serious life threatening disease, RPE, which carries a mortality of 50% despite medical treatment.

#### **A04-2**

##### **PITUITARY CT SCANNING**

**P. Sammut - M. .P Crockford,** Department of Radiology, St. Luke's Hospital.

The imaging modalities available for viewing the pituitary fossa have shown gradual evolution and improvement as new technology has become available. The indirect methods of viewing the pituitary fossa, polytomography and pneumoencephalography were replaced by computed tomography in the seventies. Where available MRI has replaced computed tomography for pituitary imaging, due to its lack of radiation exposure, and because of its superiority in anatomical definition. This is most notable in the detection of microadenomas, where CT scanning is notoriously unreliable. CT scanning of the pituitary fossa requires 1.5 mm thickness slices in the axial plane with reconstruction in both coronal and sagittal views. Extended views, including the suprasellar region, are required when there is upward extension of pituitary pathology, for example adenomas, or when the primary pathological condition has extended into the pituitary fossa from above downwards, for example craniopharyngiomas. Extended views for every pituitary imaging are not recommended routinely, since this would imply an increased radiation dose to the lens of the eye and a prolonged processing time. This paper attempts to establish clinical, biochemical and plain radiological features which would guide the clinician when requesting these extended examination protocols.

#### A04-3

### COMPARISON OF US CT AND MRI FOR DETECTION OF HEPATIC METASTASES. P. Vassallo. University of Muenster, Germany and Memorial Sloan-Kettering Cancer Center, New York NY.

**Aim:** To evaluate the sensitivity of ultrasonography, CT and MR imaging in the detection of hepatic masses.

**Materials and methods:** This prospective study included 75 patients with gastrointestinal tumors all of whom were admitted for resection of primary tumors. Pre-operative ultrasonography was performed with 3.5 and 5.0MHz sector transducers. Three CT techniques were used in all patients: unenhanced CT scans, incremental bolus dynamic scanning, and delayed scanning 4-6 hours after injection of non-ionic contrast material (60g of Iodine). T1-weighted and T2-weighted spin echo sequences as well as breath-holding fast low angle shot (FLASH) 60° and FLASH 15° were obtained on a 1.5T MR scanner. All focal hepatic lesions (n=95) detected at surgery by palpation or intraoperative ultrasound were included in the study.

**Results:** Sixty-five lesions (68%) were detected by CT, 60 lesions (63%) were detected by MR imaging and 50 lesions (53%) were detected by ultrasonography. Although lesions 1-2cm were shown almost equally well by CT and MR (74% and 77%), the detection rate of smaller lesions (<1cm) decreased most drastically with US (20%) followed by MR (31%) and CT (49%). All imaging techniques has a sensitivity of 100% for hepatic lesions larger than 2cm in diameter. **Conclusion:** Detection of liver lesions is more reliable with CT and MR imaging than with US particularly for smaller lesions.

#### A04-4

### THE VALUE OF COMPRESSION IN INTRAVENOUS UROGRAPHY

C. Wood, M.R. Crockford, Radiology Department, St. Luke's Hospital, Malta.

Ureteric compression in the IVU has been in use for over 60 years, however there still exists much dispute as to its value in obtaining improved results from this technique. The decision to use compression during the IVU investigation is one that each department must make for itself. In the Radiology Department of St. Luke's Hospital it is routine practice to apply compression when there is no contraindication to this.

**Objective:** The aim of the study was to assess the value of compression in obtaining maximal dilatation of the calyceal system of the kidneys.

#### A04-5

### DETECTION OF PROSTHETIC VASCULAR GRAFT INFECTION UTILISING AVIDIN/ In-111-BIOTIN SCINTIGRAPHY.

A. Samuel, G. Paganelli, P. Magnani, R. Chiesa, F. Fazio, INB CNR, Department of Nuclear Medicine, Institute for Cardiovascular and Respiratory Disease, University of Milan, Scientific Institute H San Raffaele, Milan, Italy.

Prosthetic vascular graft infection is a rare but devastating complication of vascular surgery. It is associated with very high morbidity and mortality rates and thus timely diagnosis is important. Patients very often present with vague symptoms and radiological investigations are not always conclusive. This may lead to prolonged periods of observation before a final diagnosis is reached, further worsening the prognosis and increasing hospitalisation costs. This prospective study evaluates the use of avidin/<sup>111</sup>In-labeled biotin imaging in diagnosing prosthetic vascular graft infection. 25 patients with a total of 29 grafts were investigated. 18 patients (19 grafts) had a very low probability of disease while the remaining 7 patients (10 grafts) warranted surgical exploration based on clinical, laboratory or radiological evidence. Avidin was first injected i.v. followed 24 hours later by the administration of <sup>111</sup>In-labeled biotin. Whole-body images were obtained 10 min and 2 hr following injection of <sup>111</sup>In-labeled biotin, with SPET imaging being performed at 1 hr. Increased uptake along part or the whole length of the graft was considered evidence of graft infection. Avidin / <sup>111</sup>In-biotin scintigraphy correctly identified all infected grafts, as confirmed by culture of surgical specimens. In contrast, infection was correctly excluded in all but one of the grafts, long-term follow-up being used to assess the presence of infection in patients who did not undergo surgical intervention. In conclusion, avidin / <sup>111</sup>In-biotin scintigraphy proved to be a simple and reliable imaging method for the diagnosis of vascular graft infection and it may have a role in identifying the disease process in its initial stages, thus improving prognosis.

**A04-6.**

**BARIUM EXAMINATIONS OF THE SMALL INTESTINE - A RETROSPECTIVE REVIEW.**  
**M. Schranz, M.P. Crockford, Radiology Department, St. Luke's Hospital Malta.**

The small bowel follow-through and the small bowel enema are by far the commonest radiological techniques used in investigating suspected small bowel disease. This study attempts to analyse the clinical background leading to these investigations and looks at the results and subsequent patient follow up.

**Method.** This retrospective study covers a period of 18 months and reviews 860 consecutive follow-through examinations and 18 consecutive small bowel enemas. The relative symptoms and signs are listed and compared. The radiological findings are correlated with the subsequent patient management in order to evaluate their significance.

**Results.** It is observed that most referrals for follow-through investigations are from the surgical rather than the medical firms (1.9:1) while the majority of referrals for small bowel enemas occur from the medical side (6:1). The sex distribution was almost equal (male : female 1.2 :1) and there was no particular age group tendency. The positive yield of the follow-through technique was low (3.3%), which could not be explained by a significant false negative rate. The positive yield of the small bowel enema was 22.2% suggesting selective referral criteria. **Conclusion.** Despite the large number of requests for follow-through examinations it results that the value of his technique in influencing patient management is debatable, especially in the absence of reliable clinical indications of small bowel disease. Indiscriminate requests for follow through investigations could lead to unnecessary exposure to radiation and patient inconvenience.

**A04-7.**

**SCREENING for EXTRACRANIAL CAROTID ARTERY DISEASE (ECAD)**

**A. Zammit, A. Gatt MD, A Galea Debono Radiology / Medical, Neurology Departments, SLH, Malta.**

**Introduction:** The Radiology Department, SLH has provided a screening service for stroke related disease from 4/91 to date. This consisted of Duplex US screening for ECAD followed by Angiography or DSA if positive for significant disease.

The aim of this study was to evaluate the various criteria for assessment already established and to devise the best combination of these criteria to improve the detection of disease, thus improving the quality of service.

**Subject/Method:** We have screened 504 patients for stroke related disease. The Peak Systolic Velocity (PSV), the End Diastolic Velocity (EDV) from the Internal Carotid Artery (ICA) and Common Carotid Artery (CCA) were taken in all cases and plaque details were noted on imaging. Only patients who have had significant disease which required surgery were referred for angiography (12 DSAs in 6M:6F). Comparison of these two modes were made on 22 sides using Chi Squared Test for Multicentre Criteria (MCC), Modified Seattle Criteria (MSC) and Modified Washington Criteria (MWC).

**Results:** The Accuracy, Sensitivity, Specificity, Positive Predictive Value and Negative Predictive Value were calculated for the MCC, the MSC and the MWC for PSV. For the MCC the EDV, the Systolic Velocity Ratio and the Diastolic Velocity Ratio were also compiled. The chart of these % values will be presented.

**A04-8**

**DIFFERENTIATION OF BENIGN FROM MALIGNANT SUPERFICIAL LYMPHADENOPATHY WITH HIGH RESOLUTION US.**

**P. Vassallo. University of Muenster, Germany and Memorial Sloan-Kettering Cancer Center, New York, NY.**

**Purpose:** To assess the utility of high resolution US for distinguishing benign from malignant superficial lymphadenopathy.

**Materials and Methods:** Ninety-four superficial nodes (cervical=54, axillary=17, inguinal=32) in patients with suspected nodal disease were examined with 7.5MHz ultrasound probes to evaluate longitudinal-transverse diametric ratio (L/T (2 Vs <2), the central hilus, cortical widening and size. Histologic diagnosis was obtained after sonographic examination in 73 nodes (5 reactive, 35 primary nodal malignancies and 33 nodal metastases). The remaining 21 nodes after antibiotic or no therapy.

**Results:** L/T proved most reliable for distinguishing benign from malignant lymphadenopathy (sensitivity 85% and specificity 86%). A wide hilus was strongly suggestive of benign disease

(75%) whilst and absent hilus occurred predominantly with malignant disease (94%), however a narrowed hilus was found only slightly more often in malignant than in benign disease (48% Vs 35%). Lymph node size and cortical feature were unreliable for characterising lymph node disease.

**Conclusion:** High resolution ultrasonographic features of superficial lymphnodes are useful for distinction of benign from malignant lymphadenopathy.

#### A04-9

### SPIRAL CT ANGIOGRAPHY IN THE PREOPERATIVE EVALUATION OF ABDOMINAL AORTIC ANEURYSMS.

M. Farrugia, A. R. Padhani, M. Crockford, Department of Radiology, St. Luke's Hospital, Malta.

**Introduction:** Spiral CT angiography shows promise as an imaging technique for the routine preoperative evaluation of abdominal aortic aneurysms (AAA). This study determines its clinical utility and compares five visualisation modes.

**Design:** Prospective.

**Subjects and Methods:** Twenty five patients with AAA were evaluated on a Philip SR7000 scanner. Single or twin spirals with breath-holding were performed. Images were acquired following the injection of 50-100 mls of intravenous iopromide at a rate of 3ml/second. The reconstructed data was displayed as axial images, multiplanar reformats, shaded surface displays (SSD), maximum intensity projections (MIP) and true volume renderings. The images were assessed by two radiologists and a vascular surgeon. Information obtained included aneurysm extent, diameter, necks and run-off vessels as well as status of renal and visceral arteries. Images were assessed with regard to quality and accuracy of information obtained. Surgical and conventional angiographic correlation was obtained when available.

**Results:** Axial images with multiplanar reformats revealed maximum detail but anatomical features are difficult to appreciate in three dimensions. SSD showed excellent anatomical detail without overlapping structures. MIP depicted calcification well. Volume rendered images permitted the simultaneous display vascular lumen, calcification and mural thrombus.

**Conclusion:** CT angiography can replace conventional arteriography for the routine evaluation of AAA. All five display modes should be included as they provide complementary information.

#### A05-1

### TRENDS IN THE MANAGEMENT OF HAEMOGLOBINOPATHIES IN CHILDHOOD.

A. Bellingham

#### A05-2

### CLINICAL AND MOLECULAR BIOLOGY OF THE b + [ IVS-I, 6C ] THALASSAEMIA IN MALTESE CHILDREN.

A.E. Felice, C.A. Scerri, S. Buhagiar, J.L. Grech, M. Pizzuto, R. Galdies, M. Gauci, R. Parascandalo, A. Xuereb, and I. Muscat Baron.; Thalassaemia Clinic, and Laboratory of Molecular Genetics, Departments of Pathology, Paediatrics, and Obstetrics and Gynaecology, University of Malta, Msida, and St. Luke's Hospital G'Mangia, Malta. Using advanced molecular biology techniques we have established that the most frequent DNA mutation responsible for thalassaemia in Malta is a single nucleotide substitution of T to C at position number 6 in the first intervening sequence of the b globin gene i.e. b+ [IVS-I, 6C]. Genotype-phenotype studies show that the b+ [IVS-I, 6C] thalassaemia is a relatively mild allele although the Hb F levels of the homozygotes do not exceed 10%. Often, parents, who are obligate heterozygotes and other heterozygotes have borderline haematological and biochemical values which complicate carrier detection and counselling. Prospective clinical data have been obtained on ten b+ [IVS-I, 6C] thalassaemia homozygotes. The patients have been managed employing a semi-conservative hypertransfusion regimen through which haemoglobin levels were maintained at levels above 8 g / dL as long as good growth and development of children were maintained, and accompanied by parenteral iron chelator therapy. The blood requirements decreased with age and following splenectomy, such that, in contrast with developing children, adults may be managed for long periods of time without blood transfusion. However, new data on the occurrence of bone disease and collagen metabolism may lead to intensification of the transfusion regimen or supplementation with haematopoietic biotherapeutics in selected patients.

#### **A05-3**

### **SYMPTOM INTERVAL IN CHILDREN PRESENTING WITH CANCER: MEDICAL INEPTITUDE OR NATURE OF THE BEAST?**

**S.P. Attard-Montalto, V. Saha, O.B. Eden.**

Symptoms in children with malignant conditions. Consequently the diagnosis of cancer is often initially overlooked, resulting in a delay between the initiation of symptoms and diagnosis. This delay is defined as the symptom interval. This interval was assessed for 184 and 236 children admitted to a tertiary referral Paediatric Oncology Unit over a nine year period. The natural logarithm of the symptom interval nine year period. The natural logarithm of the symptom interval was correlated with patient's age, gender, diagnostic group, white cell count in those with acute leukaemia, clinical stage of disease in solid tumours, and event free survival. Increasing age was significantly associated with prolonged symptom interval. In the diagnostic groups, mean symptom interval ranged from 2.8 weeks in nephroblastoma to 13.3 weeks for brain tumours. Diagnostic group was predictive for symptom interval. Diagnostic group was predictive for symptom interval after adjustment for age, with for example, a significantly longer symptom interval was not predictive of event free survival. It is likely that symptom interval has other major determinants. When compared with previous studies, there appears to be a regional variation in symptom interval for diagnostic groups. This is probably due to geographical differences in the structure of local health care systems and is therefore yet another important determinant.

#### **A05-4**

### **A ONE YEAR FOLLOW-UP OF BABIES DISCHARGED FROM THE SCBU OF ST. LUKE'S HOSPITAL, MALTA**

**D. Soler, P. Vassallo Agius - Department of Paediatrics, St. Luke's Hospital, G'Mangia, Malta**

A population of 266 babies needing intensive or special care was followed up at the Children's Outpatients Department for a period of 1 year (June 1994 till May 1995). The follow-up includes a full physical and neurodevelopmental examination and is still being conducted at the present time. The age groups were all corrected for prematurity and categorised as follows: term, 6 to 8 weeks, 3 to 4 months, 8 to 10 months and 15 to 18 months.

The aims of the study are: 1. to monitor the efficacy of neonatal intensive and special care, and 2. the early detection of significant neurological deficits to provide early intervention. For the purpose of the developmental assessment a number of test cards was designed for different age groups. These were adaptations from the Dubowitz Assessment of Term Infants, the Denver Developmental Screening Test (Cardiff modification), Developmental Screening Examinations (Starte), (Hooper, Curtis Jenkins and Holt). Each child was categorized as normal, abnormal or equivocal.

The results obtained show:

1. definite abnormality in 11.7% (n=31)
2. equivocal signs in 3% (n=8)
3. definite normality in 85.3% (n=227). The abnormal group was subdivided into 3 subgroups:
  - i. Cerebral Palsy (Levine criteria) a. spastic quadriplegia + psychomotor delay (n=6) b. hemiplegia + variable psychomotor delay (n=3) c. spastic diplegia + squint (n=1)
  - ii. Tone abnormality: hypotonia (n=3)
  - iii. Developmental Delay (n=18).

The paper will describe in detail the standardized methodology of assessment, the identification of those babies at highest risk in the local setting, and the diagnostic criteria adopted for the purpose of this study.

#### **A05-5**

### **THE CHILD DEVELOPMENT ASSESSMENT UNIT (C.D.A.U)**

**N. Spiteri Paediatric Dept. - St.Luke's Hospital Malta.**

The C.D.A.U., a new unit built in the grounds of St.Luke's Hospital, between Karen Grech and the Medical School, caters for children with special needs. The main aim of the C.D.A.U. is that the Medical, Educational and Social aspects of children with developmental problems are addressed by a multi-disciplinary team based under one roof in the unit. The team assesses children with physical and/or mental disabilities and co-ordinates all services required. Children with special needs are referred to the C.D.A.U. immediately an abnormality is detected to enable the team to implement a programme of early intervention as soon as possible and to avoid further complications from developing. All children referred are first assessed by the paediatrician, then by all the members of the team. Assessments are carried out over a period of one week at the end of which the whole team meets at a case conference. Subsequently the best plan of management for the child and his/her parents is developed and on-going care is provided. Since its formation the multi-disciplinary team has assessed and co-ordinated

services for over 200 children with special needs. In conclusion, the C.D.A.U. by providing assessments and all the necessary therapy under one roof avoids the hardship of running around and waste of time for the child and his/her family. The team works out the best plan of management and provides on-going services. It serves as an excellent teaching unit for medical and paramedical students. It also serves as a Centre for on-going research on children with developmental problems.

#### **A05-6**

##### **NEWBORN SCREENING FOR CONGENITAL HYPOTHYROIDISM IN MALTA**

**R. Parascandolo, A.E. Felice, M. Rizzo, P. Vassallo Agius: On behalf of the Thyroid screening Committee, St. Luke's Hospital, Malta.**

Routine screening for Congenital Hypothyroidism (CHT) has been introduced because clinical features of CHT may not be evident before the baby is a few weeks old and treatment at this stage may already be too late. Since a newborn testing programme employing liquid cord blood for other conditions had already been developed in the University of Malta and the Department of Health, we explored the possibility of implementing newborn thyroid testing using liquid cord blood. A similar programme had been implemented successfully in Finland and Philadelphia. Between September 1989 and August 1995 around 32,000 newborns have been tested. This is nearly complete ascertainment. Preliminary testing was by radioimmunoassay for TSH. The sera of those with TSH levels more than 12.8 mU/l. were further tested for free T4. If the free T4 level was below 12 pmol/l, the babies were recalled for clinical evaluation and repeat testing. Other babies were recalled for technical reasons, giving a total recall rate of 3.94%. CHT was identified in seven newborns and treatment started within 3 weeks of delivery. One baby was reported normal on screening but was suspected to have CHT on clinical grounds at 3 weeks of age, confirmed biochemically. The incidence of CHT in Malta is therefore 1 in 4000.

#### **A05-7**

##### **AUTOMATION OF DATA ANALYSIS IN PAEDIATRIC HEART DISEASE:**

**V.E. Grech - Dept. of Paediatrics, SLH-Malta, M.J. Elliott - Cardiothoracic unit, Great Ormond Street Hospital for children NHS, London - U.K.**

**Introduction:** The availability of relatively inexpensive computer hardware has facilitated the development of software that provides the non-computer literate user with instant and painless access to statistical results in the medical specialties. These can readily be presented in graphical formats that are easy to comprehend.

**Methods:** Existing software has been utilised to apply this concept to paediatric heart disease in Malta. The stimulus to its development was the setting up of a research project to study the natural and unnatural history of congenital heart disease (CHD) in Malta. Patients are interviewed according to a predetermined questionnaire, examined, and the information is instantly entered into a database. Relevant data is coded using a Read Codes browser.

**Results:** It is already apparent that the incidence of CHD in Malta is at the upper range of that expected, that diagnosis and treatment occurs earlier and outcome has improved.

**Discussion:** The system incorporates an updating process that is fully automated. Various calculations are instantly performed and tables and graphical representations of the results are updated. The literature has not reported the utilisation of a computer-based system such as MAPCAD for the long-term follow-up of patients with CHD. Graphical and tabular output of information that is routinely collected would be far easier for us all to understand and appreciate.

#### **A05-8**

##### **MINI INVASIVE SURGERY - THE CURRENT SITUATION**

**Cuschieri A**

#### **A06-1**

##### **PREVALENCE OF HUNTINGTON'S DISEASE IN MALTA AND PRESYMPTOMATIC TESTING OF RELATIVES AT RISK.**

**A. Cuschieri<sup>1</sup>, A. Galea Debono<sup>2</sup>, H. Agius Muscat<sup>3</sup>, M. Xuereb<sup>1</sup>, I. Borg<sup>1</sup>.**  
**Neurogenetics Clinic: <sup>1</sup>Department of Anatomy, University of Malta; <sup>2</sup> Neurology Division, St. Luke's Hospital; <sup>3</sup> Department of Health Information.**

**Objective:** To estimate the prevalence of Huntington's Disease (HD) in Malta and of persons at risk who may require presymptomatic testing.

**Materials:** Ascertainment was from three sources: patients attending the neurogenetics clinic, long term patients at psychiatric hospitals and patients receiving tetrabenazine treatment.

**Results:** There were 59 known individuals affected with HD living in Malta giving a prevalence of 16.0 per 100,000. This is much higher than the prevalence in European countries which ranges from 5 to 12 per 100,000. 46 patients (78%) and their families attended the neurogenetic clinic and received counselling. 145 individuals had a 50% risk. 40% of the families had migrant relatives resident in Australia, Canada, UK or USA; 13 individuals among these were known to be affected. Patients referred to the neurogenetics clinic with varying degrees of dementia, behaviour disorders and involuntary movements were assessed and their relatives were given genetic counselling. Four individuals over 60 years with a clinical picture suggestive of HD and a negative family history were confirmed by DNA tests to have over 40 CAG repeats, presumed to be new mutations. Individuals at risk were given genetic counselling including the possibility of predictive DNA testing. Those who wished to take the DNA test were given further counselling and psychological self-assessment tests before taking the final decision for predictive testing.

#### A06-2

##### POLYCYSTIC KIDNEY DISEASE IN MALTA.

**E. Farrugia, Department of Medicine, St. Luke's Hospital, Malta**

**Aim:** To determine some basic epidemiological characteristics of Autosomal Dominant Polycystic Kidney Disease (ADPKD) in Malta.

**Methods:** All probands from 26 different kindreds with ADPKD followed by one physician at SLH from Jan. 1993 to Aug. 1995 were retrospectively studied.

**Results:** All geographic locations in Malta were represented. There were 11 females and 15 males; mean age at diagnosis was 47 years (range: 14-69). ADPKD was diagnosed as follows: (a) investigation of loin pain, urinary tract infection or haematuria in 10 cases, (b) work-up of hypertension in 5, (c) accidental discovery of abdominal masses in 4, (d) screening ultrasound in 3, and (e) nephrectomy in 1. Hypertension was recorded in 21/26 patients with ACE inhibitors and calcium channel blockers being the preferred therapy. Urolithiasis, predominantly due to uric acid, was evident in 5 patients. Hepatic cysts were reported in only 9 of the patients and were asymptomatic except for one female with massive liver enlargement. 14 patients (54%) had an elevated serum creatinine. During the study period, 3 patients reached ESRD requiring haemodialysis. Ultrasonographic screening of willing, previously untested family members was performed in over 50 cases, of whom a third had ADPKD.

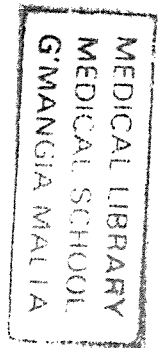
**Conclusion:** Even with limited single physician data, ADPKD is a relatively common disease in Malta. The setting up of an ADPKD registry is recommended. Recent clinical advances in knowledge about ADPKD allow improved patient care, including the potential for longer preservation of renal function.

#### A06-3

##### CREATING A REGISTER FOR FAMILIAL ADENOMATOUS POLYPOSIS (FAP) IN MALTA

**C. Swain, F. Serracino Ingloft - Department of Surgery, St. Luke's Hospital, G'Mangia, Malta.**

FAP is a rare hereditary disease characterised by the development of large numbers of adenomatous polyps (more than 100) in the colon and rectum, which in the absence of surgical intervention invariably progress to adenocarcinoma. This study will undertake to create a registry for FAP in Malta. Large registries already exist in the USA and European countries. Malta is an ideal population for such a registry due to its small population and its well-defined catchment area. These factors lead to an easier contact with patients and their families, increasing patient compliance and enabling comprehensive coverage of the families. The social implications of screening for hereditary disorders in a small community will be discussed. Establishing the register will require identification of the index case by means of a systematic review of pathology reports of patients notified as suffering from colonic carcinoma, backdating to the last 3 years. Screening for affected family members will be undertaken using a combination of non-invasive techniques such as indirect ophthalmoscopic examination (for hypertrophy of the retinal pigment epithelium) and gene probing, and invasive techniques such as colonoscopy. Data obtained from this study will give a clearer picture of the incidence and prevalence of the disease in Malta. It is hoped that increased screening will lead to smaller numbers of patients presenting with symptoms, leading to earlier prophylactic surgery which is more likely to be 'sphincter saving' and less likely to take place after large bowel carcinoma develops.



#### **A06-4**

### **MOLECULAR IDENTIFICATION OF GLUCOSE-6-PHOSPHATE DEHYDROGENASE (G6PD) VARIANTS FROM THE MALTESE POPULATION**

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Malta. Glucose-6-phosphate dehydrogenase (G6PD) is a cytoplasmic which catalyses the first step in the hexose monophosphate pathway, and produces NADPH required for reactions of various biochemical pathways, as well as for the stability of catalase and the preservation and regeneration of reduced glutathione (GSH). G6PD variants having normal or low enzyme activity were identified by isoelectric focusing using a cytochemical stain. The white blood cells were isolated from these samples and the DNA extracted. A set of primers to amplify each exon were synthesised, together with a sequencing primer for each exon. All the Maltese variants were checked for the presence of the common G6PD variants in the Mediterranean. In six cases, the nucleotide substitution G ( A at nucleotide 172 was found. In four cases the nucleotide substitution 376A ( G was confirmed. This mutation was found linked to the nucleotide substitution 680 G T. The nucleotide substitutions 1360 C ( T, 1361 G ( A, 636 A ( G and 1347 G ( C were found absence. Identification of mutations in variants with low activity is being performed by PCR-SSCP followed by direct sequencing. The high heterogeneity of G6PD at the protein level reflects a highly heterogeneous situation for the Gd gene in Malta.

#### **A06-5**

### **DETERMINATION OF ACETYLATOR PHENOTYPE IN MALTA USING ISONIAZID**

**C. Portelli, A. Serracino Inglott, M. Zarb Adami, Pharmacy Department, University of Malta.**

Studies carried out in different countries indicate the presence of an inherent variability as to how members of a given population metabolise drugs, which like the anti-tuberculous isoniazid, undergo metabolism by acetylation. Individuals have been categorised as slow or fast acetylators. Furthermore, these studies suggest an association between acetylator phenotype and the expression of spontaneous disorders such as systemic lupus erythromatosus, some types of cancer and diabetes mellitus . To date, no such epidemiological data has been gathered about the Maltese population. Furthermore, the Maltese people represent an ethnic group which possesses several characteristics which render it unique. These characteristics encourage the creation of a gene pool in which little variety is introduced into the genetic make-up of the people. Another interesting fact is that diabetes mellitus is very common among the Maltese; Malta has the third highest incidence of the condition in Europe. These combined facts established the basis for this study which sought mainly to determine the predominant acetylator status of the Maltese population and to establish an association between expressed acetylator phenotype and Types 1 and 2 diabetes mellitus. 129 volunteers for the study were chosen by computer which selected random samples from each of the 13 electoral districts of Malta. These volunteers were deemed acceptable after having been subjected to relevant inclusion and exclusion criteria. They were phenotyped following urine extraction of both drug and acetylated metabolite and U,V. spectrophotometric analysis according to the methods of Venkatamaran (1981) et al. & Eidus et al. (1985), This same sample served as a control group for a group of 50 diabetic patients who were similarly acetylator phenotyped. The results of this study indicate that 85.27% of the Maltese population are slow acetylators and that 14.73% are fast. A weak association between Body Mass Index (Kg/m<sup>2</sup>) and the rapid acetylator phenotype was also established. It was also verified that the gene for slow acetylation was inherited in a recessive manner. Comparison of the gene frequency for the allele controlling slow acetylation with those of studies carried out in different regions of the world indicate that Maltese gene frequencies are very similar to those of North Africa. No Association was found between acetylator phenotype and Type 2 diabetics, but a correlation between the rapid acetylator phenotype and Type 1 diabetes emerged.

#### **A07-1**

### **UNDERSTANDING RICKETS IN THE MILLENIUM**

**J L H O'Riordan, The Middlesex Hospital, London.**

Rickets and osteomalacia are most commonly due to an abnormality in the vitamin D endocrine system or to a defect in phosphate regulation.

Vitamin D can be made in the skin or absorbed from the diet. It is hydroxylated first in the liver and then in the kidney to give the active metabolite, namely 1,25 dihydrocholecalciferol. This is the hormonal form of vitamin D which acts through receptors in target tissues. True resistance to the action of vitamin D can be due to mutations in the gene for this perceptor protein. The effects of these mutations can be analysed by comparison with a crystal structure of the glucocorticoid hormone receptor protein reacting with DNA. This makes it possible to

analyse the genesis of this form of disease at the Angstrom level. A video demonstrating this will be shown. X-linked hypophosphatemic rickets is the commonest form of inherited rickets, the gene defect for this has now been identified and throws new light on the regulation of phosphate in man.

#### **A07-2**

##### **SYSTEMIC LUPUS ERYTHEMATOSUS IN MALTA REVIEW OF 37 PATIENTS.**

**F. Camilleri, C. Mallia. RHEUMATOLOGY UNIT, St. Luke's Hospital Malta.**

In 1994 we presented a review of thirty-two SLE patients attending the rheumatology clinic. To date, forty patients with more than 4 A.C.R. criteria have been studied; thirty-six females (90%) and four males (10%). Thirty-seven patients had complete data and the mode of presentation and disease pattern of these patients were documented and analysed. The mean age at presentation was thirty-two years and mean disease duration eight years. A family history of arthritis was seen in 7% of patients. The commonest modes of presentation were arthritis in 40% and cutaneous in a further 40% of patients. Multi-systemic involvement was noted in all patients. Constitutional symptoms occurred in 84%, mucocutaneous manifestations in 95%, musculoskeletal in 92%, neuropsychiatric in 46% and renal in 51% of patients. Systemic and cutaneous vasculitic features were documented in 46% and haematological abnormalities in 95%. Comparative analysis of our findings with results from previous series published, suggests a similar pattern of presentation and disease expression.

#### **A07-3**

##### **GLUCOCORTICOID - INDUCED OSTEOPOROSIS - a Review**

**C. Mallia, Department of Internal Medicine, St. Luke's Hospital Malta.**

Glucocorticoids (GCs) are drugs with potent anti-inflammatory properties: this was first dramatically demonstrated by Philip Hench in 1949 when he used them in patients suffering from rheumatoid arthritis. However, the enthusiasm that followed this observation was soon dampened when it was discovered that GCs could produce a large variety of side effects, some transient and relatively mild, but some continuous and potentially very severe. Prominent among this group of side effects is osteoporosis. Bone loss induced by GCs is greatest in the first few months of therapy, and is more severe in patients who receive the drugs in high dosage and for prolonged periods of time. The effects of low dose GCs (equivalent to a daily dose of 7.5 mg prednisolone or less) on bone loss are less clear, and different studies have yielded conflicting results. Although there are still several gaps in our knowledge of GC-induced osteoporosis, there have been a number of advances in the management of the condition. This paper reviews current concepts of the pathophysiology, prevention and treatment of GC-induced osteoporosis.

#### **A07-4**

##### **URINARY EXCRETION OF PYRIDINIUM CROSSLINKS IN PATIENTS WITH RHEUMATOID ARTHRITIS.**

**A. Xuereb Anastasi\*, A. Buhagiar, F. Camilleri#, M. Cauchi\* and C. Mallia#. University of Malta Medical School,\*Department of Pathology, and #Department of Medicine, Guardamangia, Malta. University of Malta, Statistics Unit, Msida, Malta.**

The object of the study was to determine whether there is a correlation between urinary pyridinium crosslinks and disease activity in patients with rheumatoid arthritis. Pyridinium crosslinks, pyridinoline and deoxypyridinoline, have been shown to be biochemical indicators of bone resorption. These crosslinks are found mainly in Type I collagen of bone and play an important part in the structural role of collagen. In the process of bone degradation, pyridinium crosslinks are released into the circulation and cleared by the kidney. The assay used for the determination of pyridinium crosslinks is a competitive enzyme immunoassay using a monoclonal anti-pyridinoline antibody conjugated to alkaline phosphatase to capture pyridinoline and deoxypyridinoline in urine. The values for pyridinium crosslinks in 41 patients with rheumatoid arthritis, expressed relative to creatinine, were found to be significantly higher when compared to those for controls matched for sex and age. Significant positive correlations were found between the excretion of pyridinium crosslinks and C-reactive protein (CRP), erythrocyte sedimentation rate (ESR) and articular index. An inverse correlation between pyridinium crosslinks excretion and grip strength was found. The data indicate that pyridinium crosslink concentration in urine is strongly associated with disease activity in patients with rheumatoid arthritis.

#### **A07-5**

##### **MEASURING PAIN IN RHEUMATOID ARTHRITIS**

**A. A. Borg\***, M. J. Davis, P. W. Jones, P. T. Dawes, \*Royal National Hospital for Rheumatic Diseases, Bath; Staffordshire Rheumatology Centre, Stoke-on-Trent, United Kingdom.

**Introduction.** Pain is an important feature of early and advanced RA. Measurement of this variable is difficult and its relationship to other measures of disease activity unclear. Many of the measures used to evaluate pain are potentially interchangeable and may allow the use of simpler and easier measures.

**Method.** We evaluated four variables frequently used in RA assessment that may be influenced by pain. Ritchie Index (RI), number of painful joints, early morning stiffness (EMS) and visual analogue scale (VAS) for pain were measured at 6 monthly intervals over a three year period in a cohort of 103 patients with active, seropositive RA and disease duration less than 36 months. No patients received DMARDs on initial assessment.

**Results.** A close relation was seen between the variables over the various time points with the correlation (Pearson)  $r$  values varying between 0.4 to 0.83 ( $p < 0.0001$ ). Weakest correlations involved EMS, with little difference in the strength of the correlations between the other 3 variables. Strongest correlations were between the RI and the number of painful joints. Their value over the time points varied from 0.47 to 0.83.

#### **A07-6**

##### **RHEUMATOID ARTHRITIS IN MALTA - A PRELIMINARY SURVEY**

**B. Coleiro, F. Camilleri, C. Mallia** - Department of Medicine, St. Luke's Hospital, G'Mangia, Malta

One hundred and twenty-five patients with rheumatoid arthritis (R.A.) attend regularly the Rheumatology Clinic. In 1995, we started a retrospective study on the demographic data, disease expression, progression, investigations and treatment modalities of these patients. To date, following random selection, 40 patients with more than 4 ACR criteria for R.A. have been studied and the findings analysed.

Of the 40 patients, 27 were female (67%) and 13 were male (33%). The mean age at presentation was 50.2 years. The mean disease duration was 8.9 years. A positive family history of R.A. was noted in 18%.

At 5 years from onset, 14% had not progressed beyond Stage I disease while 54% had Stage 3 or severe disease. At 10 years from onset there were no patients with Stage 1 or early disease. Erosive disease was documented in 79% of patients at 5 years and in 86% at 10 years. Anaemia occurred in 50%, neutropenia in 5% and thrombocytosis in 35%. Seropositivity was present in 85%.

Disease-modifying agents were introduced at some stage in 92%. They were prescribed within one year of onset in 37%. Gold injections were administered in 55%, sulphasalazine in 45% and methotrexate in 24%. Low dose (under 20 mg daily) oral corticosteroids were given in 76% of patients. Adverse effects necessitating withdrawal of treatment occurred in 14% of patients on gold and in 22% on methotrexate.

An analysis of these preliminary findings and comparison with previous series published, is presented.

#### **A07-7**

##### **RHEUMATOLOGY AND DERMATOLOGY - the Interface**

**C. Mallia, Department of Internal Medicine, St Luke's Hospital, Malta.**

Although the division of medicine into specialities according to different systems is convenient, it is also artificial, as the different systems interact and many diseases overlap both in their pathological features and clinical manifestations. We find many examples of these interactions in the so-called rheumatological diseases, where skin manifestations may be a prominent feature. In some the skin rash may be typical and a diagnostic marker, such as the butterfly rash of systemic lupus erythematosus, the heliotrope rash of dermatomyositis, and livedo reticularis in antiphospholipid syndrome, while skin manifestations can indicate the severity of the underlying disorder such as vasculitis in rheumatoid arthritis. Similar pathological changes can cause skin and joint manifestations in systemic diseases, such as pseudoscleroderma and limited joint mobility in diabetes mellitus, while certain infections can produce both skin and joint manifestations: these include a number of fairly common viral infections as well as the more recently described Lyme disease. Joint disease may also occur in "primary" skin conditions such as psoriasis. Finally, the skin may be the major target of toxicity from a number of drugs, particularly those that are used in the management of rheumatic disorders. This paper describes a number of these conditions as encountered locally, and stresses the

importance of team management: such an approach may lead to diagnosis and treatment at an early stage of the disease when organ damage has not yet become too severe.

#### **A08-1**

##### **THE EPIDEMIOLOGY OF CORONARY RISK FACTORS IN THE LOCAL POPULATION OF THE U.A.E.**

**J.M. Muscat Baron, T.Yusafat, S. Nastr, M. Ghnayen - Department of Cardiology, Dubai, U.A.E.**

The purpose of this study is to define the risk factors of the U.A.E. population for coronary artery disease. The study is being carried out in two areas which are predominantly inhabited by local residents and the study is designed to define the various risk factors and their importance.

In addition, the paper will discuss the relative incidence of ischemic heart disease in the form of myocardial infarction in U.A.E. citizens with statistics showing their inpatient course during the acute stage of myocardial infarction.

#### **A08-2**

##### **MAPPING MALTA'S HEALTH: A NEW METHODOLOGY FOR SHOWING DIFFERENCES IN HEALTH STATUS BETWEEN DIFFERENT REGIONS OF MALTA**

**H. Agius Muscat, L. Janulova Department of Health Information, Malta**

There is always great public interest in differences in health status among the various geographical regions in a country. These differences are mainly attributable to basic parameters such as the size, age-sex composition, and socio-economic condition of the population groups involved. However the tendency among the public is to ignore these parameters and to make unfounded assertions about the effects of local factors, particularly environmental ones, on health status. This happens mainly because of the considerable methodological difficulties involved in standardising available health data.

The Department of Health Information has devised a new regional structure for the Maltese Islands which overcomes some fundamental problems inherent in the structure presently used by the Central Office of Statistics. The smallest population unit used now is the Local Council, and councils are aggregated into regions which have greater homogeneity in size and social texture than the so-called 'Inner Harbour and Outer Harbour' regions. The Department has created a regional map which will be used for the pictorial depiction of differences in health status. These tools are the cornerstone of the new methodology which for the first time ever allows the calculation of standardised ratios for the Maltese Islands using the indirect method, as currently done in many other Western European countries. The methodology is illustrated by means of data from the national databases held by the Department.

#### **A08-3**

##### **PRELIMINARY INVESTIGATION ON RADON LEVELS IN LOCAL DWELLINGS**

**I. Mifsud, A.J. Amato-Gauci, M. Sammut, L. Licari. Department of Public Health, Valletta, Malta.. Toxicology Department, St. Luke's Hospital.**

Increasing awareness of the hazards associated with exposure to ionising radiation by the general public has led to residential radon being identified as one of the most important sources in European dwellings. This study involved a first attempt at quantifying radon concentrations in selected buildings throughout Malta using an electronic monitor. Readings were taken in 55 different towns or villages leaving the monitor on site for a 24 hour period. The resultant time weighted averages were then down loaded for direct analysis, according to the location of the selected room (basement, ground, first or higher floor), degree of ventilation and type of underlying bedrock. A single reading must not be interpreted as being representative of that particular locality. A median reading of 36 Bqm-3 was observed. Basements were found to have a higher concentration (median=102 Bqm-3) than ground floor rooms (median=37 Bqm-3) and rooms located on higher floors (median=22 Bqm-3). Rooms perceived to be well ventilated were found to have a markedly lower concentration than those poorly ventilated (medians=23 Bqm-3, 38 Bqm-3 respectively). Dwellings situated over bedrock consisting mainly of globigerina showed concentrations of radon higher than those on coralline formations (medians=42 Bqm-3, 16 Bqm-3 respectively). This preliminary study suggests that overall levels of residential radon are low. A comprehensive study using passive detectors for long term measurements should be carried out to assess the true extent of overall annual exposure.

**A08-4****ISAAC [MALTA] - FIRST RESULTS FOR THE 12 - 16 YEAR OLD AGE GROUP**

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The International Study of Asthma and Allergies in Children [ISAAC] is a world-wide project whose first phase was designed to describe the prevalence and severity of asthma, rhinitis and eczema in children living in different countries, and as standard questionnaires are used, to make comparisons within and between countries. Data collection for ISAAC [Malta] 12-16 yr old age group was carried out in the first half of 1995 and out of 4418 randomly chosen schoolchildren in 22 state secondary and trade schools 3893 [88.1%] answered our questionnaire. Of the questionnaires analysed to date, 27.2% said that they wheezed sometime in the past while 14.5% said that they did so within the last 12 mths, however only 10% said they had been told or thought they had asthma. The children who had wheezed sometime in the past or within the last year were more often smokers [ $p < 0.002$ ] and [ $p < 0.03$ ] respectively [14.2% of all respondents smoked cigarettes]. This group also tended to have an atopic relative [ $p < 0.0001$ ]. There were 52.6% of the children who had nasal problem with sneezing, rhinorrhoea and/or blockage at some time, with 48.1% of the total respondents having this problem also in the last year. These nasal problems occurred throughout the year but the period between June and October seemed to be the most problematic. Only 28.1% knew they were afflicted with 'hayfever'. Wheezing and nasal problems occurred in the same children in 69.3% of cases. 14.3% of the respondents had had an itchy rash which came and went for at least 6mths some time in their life while 10.7% had this rash in the last 12 mths with 10% knowing they had eczema. 5.3% of all these children taking part in the study had all three conditions studied. This data which are continuing to be analysed, together with other parameters collected, are sure to give us a clear picture of allergic conditions on our island and might also help us pinpoint some remediable factors to aid in the treatment of these conditions. Comparison to the situation in other countries will put Malta on a current global 'map' of allergic conditions. Future phases of ISAAC will be looking at other important factors in allergy such as genetics, environment and management in individual countries. ISAAC [Malta] hopes to be one such study centres.

**A08-5****AGE AND SEX DISTRIBUTION OF ADULT ASTHMA ADMISSION: 5 YEAR CUMULATIVE PREVALENCE**

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Objective-To establish whether the higher hospital admission rate for acute asthma in adult females is due to a higher prevalence rate of asthma admission or to a higher rate of admission per patient in females when compared to males. Design- A retrospective review of all acute adult asthma admissions so as to determine the five year cumulative prevalence of acute asthma admission. Setting- All adult medical admissions from 1989 to 1993 to Saint Luke's hospital, the only acute medical facility serving the whole of the island of Malta. Results-In 1993, 304 patients in the 20-59 age group had been admitted at least once in 5 years. The distribution of the age specific 5 year cumulative prevalence rates of asthma admission was a two peaked U shaped curve ( $\chi^2=26.38$ ,  $df=7$ ,  $p < 0.001$ ). The first peak was in the 20-24 age group 245.8 per 100,000 (95% CI:309.2-182.3) and the second peak was in the 55-59 age group 246.7 per 100,000 (95% CI:322.1-171.3). A trough was present in the 35-39 age group, 100.1 per 100,000 (95% CI:137.9 -62.3). In the whole 20-59 age group 61.8% patients were female ( $p < 0.01$ ). This female predominance was most evident in the 30-39 and 40-49 age groups, 64.1% ( $p < 0.05$ ) and 73.2% ( $p < 0.01$ ) respectively. In the 20-59 age group, 69 % of male patients were admitted only once in five years, 29.3 % 2-5 times, and 1.7% more than five times as compared to 66 %, 29.8 %, 4.2% respectively in females. Conclusion The female predominance in adult Asthma admission rates reflects a larger number of female patients who require hospital admission rather than higher admission rates per person in females as compared to males.

**A08-6****PREVENTIVE CARE OF ELDERLY PERSONS IN THE COMMUNITY - A REVIEW FOR A PROPOSAL.**

J. J. Mamo, C. Swift. International Institute on Ageing UN-MALTA; King's College Hospital, London.

Since the early identification of elderly persons as a particular risk group and the development of NGOs for the elderly in the immediate post WWII days, geriatrics and gerontology have come into their own as specialized fields of care in the health and social fields. The first attempt to address the needs of elderly persons in the community is attributed to screening

clinics in Scotland, the one at Rutherglen being the most famous (1952). Over the years the subsequent phenomenon of "unreported needs" described by Williamson (1964) lead to experimentation with various forms of screening in general practice. The mid 70s saw the first doubt on screening emerge, at least in part due to invalid projections of findings on middle aged persons "SE London Screening Group 1977". More recent versions proposed include preliminary high risk group identification, possibly by postal interview. In 1989, apparently without the consensus of most practicing NHS GPs, the UK Government established annual screening of over 75 year olds within the NHS contract. Recently, several CPs in Scandinavia developed screening of the elderly without contractual obligation. A review of 7 trials in 4 countries gives the impression of inconsistent benefits. While further research is necessary, it is timely to consider propositions for a similar holistic service in Malta.

#### A09-1

##### ENZYMATIC ANTIOXIDANTS IN MALTESE PATIENTS SUFFERING FROM BRONCHIAL ASTHMA

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Enzymatic antioxidants have recently been recognised to play an important role in modulating the inflammatory response, both *in vitro* as well as *in vivo*. This study investigated selenium-dependent antioxidants and superoxide dismutase in mild and severe asthmatics, as well as healthy controls. No age or gender-dependent variations were evident for the measured antioxidant profiles. Plasma selenium levels in control subjects were similar to those observed in asthmatic patients, and were higher than published data from other countries. Erythrocyte glutathione peroxidase levels were similar in both controls and asthmatics, and were comparable to published reference values. Plasma glutathione peroxidase levels, likewise proved to be similar both in patients and controls. Plasma selenium did not correlate with erythrocyte glutathione peroxidase in any patient group, but correlated with plasma glutathione peroxidase in control subjects ( $p < 0.05$ ). Lowered erythrocyte superoxide dismutase levels were observed in both mild and severe patients ( $p < 0.005$ ). The data suggests an adequate selenium-dependent antioxidant defence system in Maltese asthmatic patients. The relationship between selenium and glutathione peroxidase enzymes may suggest a selenium-saturated erythrocyte glutathione peroxidase synthesis, but an as yet unsaturated synthesis of the plasma enzyme. The way in which asthma appears to affect erythrocyte superoxide dismutase levels, as well as the clinical relevance of this observation, remain to be determined.

#### A09-2

##### ARE THE LEVELS OF CIRCULATING ADHESION MOLECULES IN ASTHMA ELEVATED SECONDARY TO ALLERGIC OR INFECTIVE INFLUENCES

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Dept of Immunopharmacology Southampton University, \*Dept of Rheumatology.

In a previous study we had demonstrated an increase in the level of circulating Interleukin Adhesion Molecule 1 {cICAM-1} and cE-selectin in acute asthmatic exacerbation. A study was carried out to investigate whether this elevation was due to an allergic or infective influence.

Nine atopic asthmatic {6M, 3F mean + SEM% pred FEV1 89.4 + 3.9% geo mean PC20H 5.5 mg/ml} who were known to be dual responders to allergen challenge were exposed to an inhaled concentration of allergen strong enough to make them experience a late asthmatic reaction. Serum samples were obtained at various time-points after the challenge {from 0 to 8 hours and levels of cICAM-1, cE-selectin and cVCAM-1 were measured in these samples by sandwich ELISA's. None of these circulating adhesion molecules was elevated significantly above baseline at any of the time-points examined.

Four asthmatics and four non-asthmatics were iatrogenically inoculated nasally with Rhinovirus {RV16} and serum samples were obtained before, 2 weeks into the cold and 8 weeks post-inoculation. The samples were again measured for circulating adhesion molecule levels by ELISA. This time there was a significant increase in cE-selectin levels during the RV infection from a median baseline level of 203.9U/ml to 272.7U/ml { $p < 0.05$ } and then returning to almost baseline levels after eight weeks.

These observations might partly explain what differential stimuli caused the rises seen in acute asthma for each individual circulating adhesion molecule.

### **A09-3**

#### **HOSPITALISATION OF ADULTS FOR ASTHMA AND INHALED CORTICOSTEROID USE IN MALTA**

**J M Cacciottolo, M V Balzan, A Buhagiar,**

**Background:**One of the indices of asthma morbidity is the need for hospital admission. The hospital admission rates for asthma appear to be increasing in several countries. However the clinical impression in Malta is that the rates are declining. We investigated trends in adult hospital admission rates for asthma in Malta and a possible association with concurrent trends in inhaled corticosteroid use in the community.**Methods:**The yearly prevalence rate of hospital admission for asthma among adults aged 15-59 years was determined retrospectively from 1989 to 1993 in a well-defined population served by a single medical facility offering emergency services. Concurrent yearly total dispensal of inhaled corticosteroids for the whole population was also calculated.**Results:** The age specific hospital admission rates for asthma decreased consistently from 96.2 (95% CI:109.7, 82.7) per 100,000 in 1989 to 38.1 (95% CI:46.4, 29.8) per 100,000 in 1993. The prevalence rates of admission from asthma decreased from 67.6 (95% CI:78.9, 56.3) per 100,000 in 1989 to 30.6 (95% CI:38.0, 23.2) per 100,000 in 1993. The dispensal of inhaled beclomethasone dipropionate (BDP) increased from 0.99 Defined Daily Doses (DDD) per 1000 population in 1989 to 3.28 DDD per 1,000 in 1993. Logistic regression showed that increasing dispensal of inhaled BDP by 1 DDD per 1,000 decreased the odds of an admission from asthma to 0.71 (95% CI:0.65, 0.78) times their previous value. Similarly, the odds of an individual being hospitalised because of asthma decreased to 0.75 (95% CI:0.67, 0.83) times their previous value.**Conclusion:**Amongst the population of the island of Malta, we recorded a progressive decrease in hospital admission rates for asthma in adults. This correlated well with increasing use of inhaled corticosteroids at a community level.**Joseph M Cacciottolo MD, DSc, FRCP, Senior Lecturer, University of Malta. Martin V Balzan MD, MRCP, Senior Registrar, St Luke's Hospital, Anton Buhagiar, PhD, Professor, University of Malta.**

### **A09-4**

#### **CLINICAL FEATURES AND OUTCOME OF EXTRINSIC ALLERGIC ALVEOLITIS IN MALTA** **M.J. Ebejer - Department of Medicine, University of Malta.**

**Introduction:** In Malta, EAA may be poorly recognised and underdiagnosed. The clinical features are variable and there is no information on this disease and its outcome in Malta.

**Method:**All cases of EAA encountered during the period September 1991 to July 1995 were analysed for the main clinical, laboratory and radiological features.

**Results:** There were 36 cases (10 male, including 4 boys <14 years). Adult age ranged from 30 to 80 years (mean 55.5); there were 3 smokers in each sex. Duration of respiratory symptoms ranged from <3 months in 9, to >5 years in 7 cases; 34 had crackles on auscultation, 2 had normal signs; clubbing was present in 7 (including 2 of the boys). The most common chest X-ray appearance was alveolar type of shadowing, present in 14, but 4 were normal and 6 had progressed to honeycomb lung. Pulmonary function was normal in 6 and not measured in 6; in 24 it showed a restrictive pattern. Avian precipitins were positive in 22, confirmatory histology was available in 9 and bronchoalveolar lavage, performed in 10. Half the cases had a high WBC count or ESR or both. Corticosteroids were used to treat 24 patients, 2 of whom also had immuno-suppressive agents added; in this group, 15 improved, 4 remained the same, 1 died of the disease. Advice on antigen avoidance was the sole intervention in 6 and all improved. There was no treatment or follow-up in 6. There was no correlation between the BAL cell count and the blood WBC count, or between either of these and outcome. In the short period of follow-up, only 4 of 25 patients who had the disease for less than 3 years failed to improve and 2 of these had no treatment or advice; in 9 who had the disease for more than 3 years, 5 failed to improve in spite of treatment.**Conclusion:**In Malta, EAA is not uncommon and bird antigens are the most frequent cause. Early treatment results in improvement, but many patients are inadequately assessed or followed-up either with pulmonary function testing or radiology.

**Acknowledgement.** Thanks are due to all colleagues who allowed me to study patients under their care.

### **A09-5**

#### **THREE CASES OF BRONCHIOLITIS OBLITERANS ORGANISING PNEUMONIA (BOOP).**

**C. Azzopardi, M.J. Ebejer\*, F.F. Fenech\*, Departments of Medicine, St Luke's Hospital, G'Mangia, Malta, and \*University of Malta, Medical School,**

**Objective:** To highlight the importance of BOOP in the differential diagnosis of unresolving pneumonia.

**Background:** Clinical features of BOOP include a short history of dyspnoea, cough, low-grade pyrexia, malaise, weight-loss, raised ESR, pulmonary crepitations and bilateral shadows on the chest X-ray. Lung histology reveals plugs of granulation tissue in the lumen of small airways extending into alveolar ducts and alveoli. BOOP may be idiopathic or associated with systemic disease, infection or drugs.

**Subject:** One male, 58 years, and 2 females aged, 53 and 68 years. All presented with a combination of signs and symptoms described above. Treatment in the community with antibiotics produced no improvement. A transbronchial biopsy in the first patient produced insufficient material, in the third patient, it supported the clinical diagnosis, and the second patient had an open lung biopsy, with diagnostic histology. The third patient had a long history of Raynaud's Disease but was RA and ANF negative.

**Treatment:** All patients received oral corticosteroids with early resolution of symptoms and signs. Laboratory features and X-ray signs were normal within 2 months in cases 1 and 2; in the third case, areas of linear scarring on the chest X-ray remained after a year of follow-up.

**Conclusion:** BOOP should be high in the differential diagnosis of unresolving pneumonia. Tissue diagnosis is desirable but not essential. Secondary associations should be identified and treated. The role of antibiotics remains unclear. Corticosteroids produce complete remission in up to 80% of patients.

#### A09-6

##### FOLLOW UP OF LUNG CANCER CASES REGISTERED IN THE MALTA NATIONAL CANCER REGISTRY FOR 1993

M. Dalmás Department of Health Information, MALTA.

The cancer registry is an essential part of any rational programme of cancer control. The information collected by the registry could be used as the primary resource not only for epidemiological research but also for planning and evaluating health services for the prevention, diagnosis and treatment of the cancer disease. This paper aims at showing some of the uses that can be made with the cancer registry's data and facilities. We evaluated the methods of diagnoses, outcome and effects of the therapy given, and survival of the Maltese residents diagnosed with lung cancer during 1993. With the help of all the cancer registry's staff each patient's cancer registration form and computer data which is compiled at the registry, confidential hospital file and radiotherapy department's notes where available were used for this study. Lung cancer has a very poor prognosis in almost all cases. Total number of cases was 116 patients. To date only 13 are still alive. Cases were treated differently according to age, extent of disease at diagnosis and general condition of patient. Treatment modalities used included surgery, radiotherapy, and chemotherapy. Some cases were not given any specific therapy at all. Treatment given, however did not affect survival in most cases.

#### A09-7

##### THORACOSCOPIC SURGERY IN MALTA - A REVIEW

D. Gatt, St Luke's Hospital

Although diagnostic thoracoscopy was first introduced by us in January 1986, therapeutic thoracoscopic surgery only became possible with the availability of the appropriate video and thorascopic equipment. The first thorascopic bullectomy and pleurectomy was performed in May 1992 followed by thorascopic cervical sympathectomy in November November 1992, and thorascopic partial pneumonectomy in January 1993. Our thorascopic surgical series culminated in the first Thorascopic Heller's oesophago-cardiomyotomy for Achalasia of the cardia in March 1995 which is the subject of a separate video presentation. The advantages of thorascopic surgery over traditional open thoracotomy are immense. The need to divide a rib for access, the inevitable fracture of other ribs in order to obtain adequate access, the crushing of the intercostal neurovascular bundles by means of self retaining chest retractors and the extensive large muscle division required for thoracotomy are eliminated by the thorascopic approach. Delayed post-thoracotomy pain is also abolished as there are no fractured ribs to heal. Furthermore the majority of bullectomies and pleurectomies for recurrent spontaneous pneumothorax are performed on teenage or early adult males who need as rapid a recovery as possible. At the other extreme open lung biopsies for severe parenchymal lung disease which

cannot be diagnosed adequately using standard percutaneous methods, ill tolerate a formal thoractomy. Apart from the above mobilisation during thoraco-abdominal oesophageal surgery, in the assessment of operability of carcinoma of the bronchus, in the diagnosis of hilar and pleural tumours and as a preliminary diagnostic aid in surgery for constrictive pericarditis. There was no morbidity or mortality related to the thoracoscopic procedures in our series. All patients made a rapid, uneventful, comfortable with no cases of past thoractomy pain.

#### **A10-1**

##### **CANCER IN THE AGING POPULATION IN THE MALTESE ISLANDS**

**M. Grixti, A. Cuschieri, V. Muscat.**

**Department of Anatomy, Cancer Research Laboratory, University of Malta; Radiotherapy Department, Department of Health.**

**Objectives:** To compare the incidence of different types of cancer in elderly men and women with that in younger people and estimate the effect of projected increases in the elderly population.

**Data Sources:** Data collected from the National Cancer Registry was analyzed according to age, sex and type of cancer. Demographic data were obtained from the Central Office of Statistics.

**Results:** Annual age specific cancer incidence increased from 2 per 1,000 at 45 to 50 years to a peak of 9 per 1000 at 80-85 years. It declined to 7.5 per 1000 in persons over 85 years. 68 % of all cancers occurred in elderly people over the age of 60 years. In elderly males the seven major cancers in increasing order of frequency were those of the rectum, colon, stomach, lung, urinary bladder, pancreas and prostate. 95% of prostatic cancers were in men over 60 years. In women over 60 years the corresponding seven cancers were those of the breast, lung, colon, rectum, urinary bladder, stomach and pancreas. The incidence of lung cancer was 30% higher in elderly women than in elderly men. 81% of all cancer deaths occurred in people over 60 years. As the frequency of elderly people in the population is projected to increase to about 27% in the year 2025, the incidence of cancer is expected to double indicating the need for adopting preventive measures.

#### **A10-2**

##### **THREE YEAR SURVIVAL OF MALTESE CANCER PATIENTS**

**H. Agius Muscat, M. Dalmas Department of Health Information, Malta**

Since 1991, national data on cancer incidence and on mortality in the Maltese Islands are recorded on a computerised information system at the Department of Health Information. The different databases are regularly checked and compared to a number of population databases in order to establish the survival of cancer patients.

The Department is now in a position to present one-year, two-year and three-year survival rates for those patients who developed a cancer during the year 1991. Out of a cohort of 1071 patients, 727 (67.9%) were alive after one year, 602 (56.2%) after two years, and 544 (49.2%) after three.

Survival varies greatly according to the type of cancer. In the case of lung cancer (n=112), survival after 1, 2 and 3 years was 25%, 12% and 10% respectively. The corresponding figures for other common cancers were: female breast (n=148) 95%, 87%, 81%; colon/rectum (n=110) 76%, 55%, 45%; stomach (n=63) 35%, 21%, 19%; bladder (n=65) 79%, 72%, 62%; pancreas (n=34) 15%, 12%, 9%; prostate (n=40) 78%, 53%, 35%; skin, non-melanocytic (n=176) 93%, 87%, 82%.

#### **A10-3**

##### **PSA AND PROSTATIC CARCINOMA; THE LOCAL SITUATION J. Degaetano,**

**S. Ali, J. Xuereb**

Prostate carcinoma is the most common form of carcinoma in males and the second leading cause of cancer death. In the Western world, the age adjusted incidence of prostatic carcinoma is 69 per 100,000. However, there is a marked discrepancy between the high prevalence of histological changes recognisable as cancer and the much lower prevalence of the clinical disease.

Prostatic specific antigen (PSA) has become a significant serum marker for prostatic cancer. Although it correlates well with the volume, clinical stage and pathological stage of prostatic cancer there is wide variation and overlap.

In general a PSA of 4 - 10 ug/L is associated with a 10 - 30 per cent chance of underlying cancer whereas a PSA greater than 10 ug/L is associated with a 40 - 60 per cent risk of prostate cancer. A PSA greater than 30 ug/L should suggest metastatic disease. The age adjusted incidence (per 100/000) of prostatic carcinoma in Malta for the year 1993 is 27.4 and for 1994, 21.6., much less than our neighbouring European countries. In spite of these figures, throughout the year 1994, there were 245 PSA values above 4 ug/L with 156 PSA values above 10 ug/L. This should translate to about 95 cases of carcinoma. Our records show only 50. Clearly Prostatic carcinoma is underdiagnosed in Malta. A 2 year study to try and identify the reasons for this discrepancy was undertaken. It appears that underinvestigation is the main problem. Too few biopsies are performed in patients with a raised PSA, when sextant biopsies is the recommended practice. Unfamiliarity by local pathologists with subtle changes of low grade carcinomas may be another potential problem.

#### **A10-4**

#### **THE EFFECT OF PAMIDRONATE ON BONE DENSITY AND BONE RESORPTION IN PATIENTS WITH MULTIPLE MYELOMA.**

**S. Brincat and A. Galea; Ray', Xuereb A Anastasi\*** Department of Oncology, Boffa Hospital, Floriana, Malta; Department of Obstetrics and Gynaecology, \*University of Malta Medical School, Department of Pathology, Guardamangia, Malta.

The object of this study was to monitor the effect of the biphosphonate, pamidronate, on bone density and bone resorption, as determined by collagen markers, in patients with multiple myeloma. The urinary excretion of the collagen crosslinks, pyridinoline and deoxypyridinoline, expressed as a ratio to urinary creatinine, has been determined using an ELISA method. Bone density was measured at 3 monthly intervals. Paraprotein levels, LFTs, calcium, CBC, U and Es, creatinine and collagen crosslinks were measured monthly. Patients who responded to treatment and remained clinically well showed an improvement in bone density and a fall in collagen crosslinks excretion, suggesting a reduced morbidity.

#### **A10-5**

#### **NEUTROPHIL FUNCTION IN PATIENTS WITH MALIGNANT SOLID TUMOURS.**

**A. Aquilina, A. Ferriggi, # S. Brincat, Pathology Dept., SLH. # Oncology Dept., SLH. Malta.**

Cancer patients are known to be at a higher risk of developing infections even prior to commencing chemotherapy.

This may be attributable to the cancer location itself, eg. NG of the lungs with recurrent lung infections, our study aims to define any defect in the non specific host immune defence mechanism which may predispose to infections.

Newly diagnosed patients with malignant solid tumours were included in the study. Neutrophil function was assessed by measuring Candida phagocytosis and Candida lysis by neutrophils. Age and sex matched controls were performed.

Se immunoglobulins IgG IgM and IgA together with complement C3 and C4 levels was also determined. Neutrophil function was assessed prior to starting chemotherapy, and at regular intervals after therapy was started.

**Comments:** Newly diagnosed cancer patients have a significantly altered candida lysis activity. Candida lysis occurs mainly as a result of neutrophil produced reactive oxygen intermediates (oxidative burst products). This defect alone may predispose these patients to bacterial and fungal infections. To our knowledge this defect has never been described in cancer patients. Our study is continuing as we are following up these patients and including newly diagnosed patients in the study. We also plan to study neutrophil function by other techniques including the NBT test and a direct assay for the oxidative burst using chemiluminescence.

#### **A10-6**

#### **LEUKAEMIA AND MULTIPLE MYELOMA IN THE MALTESE ISLANDS: A TEN YEAR STUDY**

**J. Xuereb, A. Grochowska, Department of Pathology; St Luke's Hospital, G'Mangia, Malta**

**Aim:** To determine trends in incidence, mean survival and age distribution at diagnosis of leukaemias and multiple myeloma in the Maltese islands during the 10 year period 1985 - 1994.

**Method:** Cases of leukaemias and multiple myelomas recorded in the department of haematology in the period 1985 - 1994 were included in the study. Additional information was obtained from the health information department and the electoral office.

**Results and Conclusions:** An increase in the number of cases of chronic lymphatic leukaemia and multiple myeloma was observed. Age and sex distribution did not vary from reported patterns. Survival data will be displayed.

#### **A11-1**

##### **THE ROLE OF MEDICAL STUDENTS IN REFORMING MEDICAL EDUCATION**

**Wolfram Antepohl, International Federation of Medical Students' Associations**

Medical students in many traditional educational settings do rather play a passive role as mere objects, recipients of medical education. It is the purpose of this paper to point out in which way this passive role can be changed into an active one.

Among the medical schools throughout the world that have changed their curriculum, including new educational approaches such as horizontal and vertical integration and problem-based learning, examples for changes that have been initiated by the "consumers" of medical education are numerous. These examples will be used to illustrate the different possibilities that medical students do or could have to influence their own education, ranging from the first step in every reform process, the evaluation of the status quo and the assessment of needs, until the implementation of concrete reform projects. Furthermore some natural advantages, such as flexibility, creativity and curiosity that medical students have and that predestinate them for a more active role in the change process will be discussed. A second focus will be put upon collaboration between students and their faculty: How can constructive ways of communication and cooperation be found and implemented, which obstacles and misunderstandings might occur, how could they be met. Finally, the training and supervision of students, willing to take over responsibility within a process of change will be taken up: What means are there to improve organizational and tutorial skills among students, how can they prepare themselves for leadership, what resources can be offered by IFMSA and other organizations and institutions.

#### **A11-2**

##### **ANCILLARY FACTORS IN MEDICAL EDUCATION.**

**I. Galea, Officer on Medical Education, Malta Medical Students' Association.**

A good medical education does not only depend on curriculum content and teaching method but also on various other 'satellite' factors. Such ancillary factors will be identified and discussed in the light of student feedback from the Medical Education Seminar held recently by MMSA as well as the last two medical education evaluation questionnaires. Among the most important are clinical orientation, medical education evaluation, student well-being, student-teacher relationship, Internet services.

#### **A11-3**

##### **THE CURRICULUM IN MEDICINE: AN EVALUATION I**

**J M Cacciottolo\*, A Caruana Galizia**

**Background:** An essential component of a program of studies is its own evaluation. Evaluative procedures furnish an index about the pertinence and efficacy of the learning experience. Such an index may then be used as a tool in order to improve or develop a particular curriculum. In June 1995 a group of 53 medical students sat for their final examination. Medicine was one of the three component subjects of this qualifying examination. The scope of our study was to evaluate broadly both the curriculum in medicine as well as the methods of examination. **Method:** 1. the final grade obtained by each candidate was split into its component marks, which were analyzed for correlation. Four components determined the final grade; an essay paper(I), an MCQ paper(II), a practical examination and course work assessment. 2. a questionnaire inviting both structured and unstructured comments was sent to candidates who were successful in the final examination, within 24 hours of publication of the result. **Results:** Performance in the final examination was as follows; above average (grade B), 3 (5.7%), average (grade C), 31(58.5%), below average (grade D), 14 (26.4%). Five candidates (9.4%) failed the examination. No performance merited award of grade A. The mean marks were; paper I, 12.9/20 (SD1.7), paper II, 10.3/20 (SD1.8), clinical examination, 37.3/60 (SD4.3) and course work assessment, 60.5% (SD6.4). Performance in the MCQ paper correlated much better than the essay paper both with the clinical component ( $r=0.47$ ) and especially with the course assessment ( $r=0.73$ ). The best correlation overall, was between the clinical examination and the course assessment ( $r=0.91$ ). As a measure of reliability, Cronbach's Alpha, confirmed that the essay paper was the least reliable part of the examination. **Conclusions:** 1. the skewing of the results towards the 'below average' end suggests an overall low performance by

candidates, the reasons for which are complex and multifactorial.2. essays as a means of examination in the final examination should be replaced by a more scientific test, such that affords accurate and reproducible marking.3. Although justifiably the clinical examination carries much more weight in determining the final mark, it was practically equal in reliability to the MCQ paper.

#### **A11-4**

##### **THE CURRICULUM IN MEDICINE: AN EVALUATION II**

**A Caruana Galizia\*, J M Cacciottolo.**

**Background:** Only through the scientific analysis of a programme of studies can one determine the extent to which educational objectives are being attained. Furthermore, evaluation of a particular curriculum may be used not only as ongoing quality control, but also as a baseline for improvement. The final qualifying examination for the MD degree held in May/June 1995 afforded us an opportunity for evaluating the teachers and teaching methods in undergraduate medicine in Malta. **Method:** On 16.06.1995, the results for the final examination in medicine were published. Of the 54 candidates registered, 48 passed, 5 failed and 1 was absent. On 17.06.1995, those students who had qualified received a 23 item questionnaire, also requesting comments and suggestions. Anonymity was guaranteed and the response rate was 83%. Questions sought opinions about quality and method of teaching, degree of preparedness (of newly qualified doctors and their teachers), and about self confidence. One particular question was aimed specifically at grading the consultant lecturers/tutors as teachers of fact, of method and by example. The unstructured comments were analysed individually and collated.

**Results:** Lectures were considered useful and relevant, while teachers were well-prepared to deliver facts but not to teach method. Lectures however scored poorly as a means of direction for further study. Tutorials were a very useful method of teaching but were criticized with regard to planning. They also failed to teach method for problem solving and often did not allow ample discussion. Bedside teaching was found adequate with regard to history taking and physical examination but failed to teach patient management and communication skills. Less than half of the responders felt that the course work in medicine prepared them adequately for responsibilities as house physicians, or indeed to communicate effectively with patients or nursing staff.

**Conclusions:** 1. There is a need to restructure the curriculum in order to allow for more bedside teaching, involvement in ward work and informal discussion generally. 2. The accent of teaching with regard to the curriculum in medicine should be more on method rather than on imparting facts. 3. Involving students in the work of medical firms would not only stimulate interest, but improve problem solving skills, facilitate the acquisition of practical skills and increase proficiency in communication with patients, medical and para-medical staff.

#### **A11-5**

##### **PROBLEM-BASED LEARNING AS AN EDUCATIONAL STRATEGY.**

**P.A.J. Bonhuijs, Department of Educational Research and Development, University of Limburg, Maastricht, The Netherlands.**

Problem-based learning is used in an increasing number of medical schools around the world as an answer to deficiencies in medical training. Depending on national differences and cultural varieties various formats have been developed. The common denominator is the emphasis on active learning using a problem as the stimulus and starting point for learning. The rationale behind this educational strategy will be the focus of the lecture. Some examples of PBL formats will be presented. The feasibility of this educational strategy for a small medical school will be discussed.

#### **A12-1**

##### **THE MEDICAL SPECIALIST IN TOMORROW'S EUROPE - TRAINING REQUIREMENTS, CERTIFICATION**

**Harvey L**

#### **A12-2**

##### **THE MALTESE ACADEMY OF MEDICINE - SIMPLY EVEN MORE POMP OR A GUARANTOR OF THE HIGHEST LEVELS OF MEDICAL CARE?**

**F.F. Fenech**

**A12-3**  
**L'UNIVERSITA FRA TRADIZIONI E SVILUPPO**  
**G. Rodolico**

**A12-4**  
**TRAINING TO BE A SURGEON IN THE 21ST CENTURY**  
**A. Cuschieri**

**B01-1****HISTORY OF DERMATOLOGY - Dermatology & Psychiatry: Vincenzo Chiarugi (1759-1820).****J.L.Pace, University Dept. of Dermatology, Boffa Hospital, Malta.**

In 1788 all mentally ill patients in Florence were housed, together with patients suffering from skin diseases, in a newly built centre L'Ospedale di Bonifazio with Chiarugi in charge as Primus Infirmarius. The conditions of such a hospital are described giving a valuable insight into the practice of medicine in one of the most progressive states in Europe. Possible reasons for the grouping of the two 'new specialities' are given and some excerpts from Chiarugi's publications including his ideas on the causation and treatment of scurvy with special reference to Captain Cook and his crew are

**B01-2****TERAPIA TERMALE IN PAZIENTI CON PSORIASI PRESSO LE TERME S. VENERA DI ACIREALE, ITALIA.****G I Luppino, Clinical Dermatologica, Università di Catania, Italia.**

Tra le terapie utilizzate nella cura della psoriasi, le acque termali hanno visto consolidare la propria validità terapeutica per le conoscenze più dettagliate delle loro caratteristiche fisico-chimiche. In questo studio abbiamo valutato l'attività terapeutica dell'associazione tra fango e bagno sulfurei salso-bromo-jodici radioattivi in uso presso le Terme di Acireale (Siracusa).

Abbiamo studiato 18 pazienti psoriasici, 9 maschi e 9 femmine, età 17-70 anni, con durata della malattia fra 1 e 15 anni. I risultati sono stati valutati attraverso l'indice PASI (Psoriasis Area and Severity Index). Su questi pazienti sono state effettuate 12 sedute di fango a 42°C per 20 min. e successivo bagno a 37°C per 20 min.

L'indice PASI era  $12 \pm 7.8$  e  $5.8 \pm 3.9$  ( $m \pm DS$ ;  $P < 0.0001$ ) all'inizio e alla fine dello studio, rispettivamente, indicando una riduzione di oltre il 50%. Abbiamo quindi analizzato l'effetto della terapia sulle varie componenti del PASI, riscontrando che l'effetto maggiore si osserva sulla componente desquamativa (riduzione di circa il 70%). La componente pruriginosa era scomparsa nel 70% dei casi. Nessun effetto collaterale è stato osservato durante la terapia.

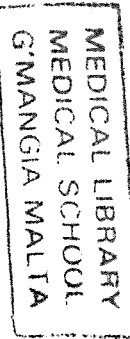
In conclusione la terapia con fanghi e bagni termali di Acireale ha determinato un significativo miglioramento del quadro sintomatologico e clinico della psoriasi nei nostri pazienti. Tale terapia può essere utilmente utilizzata per integrare altri trattamenti consolidati.

**B01-3****THE NATURAL HISTORY OF PSORIATIC ARTHRITIS****C. Mallia, Department of Medicine, St. Luke's Hospital.**

Psoriatic arthritis is an inflammatory arthritis, usually seronegative for rheumatoid factor, which occurs in association with psoriasis. It presents a number of clinical subsets with various combinations of peripheral and axial joint disease. Because of its features it is classified with the seronegative spondylarthropathies. The prevalence of arthritis in psoriasis has varied between 7 and 32% in various studies; it is doubtful whether there is any relationship between the extent and degree of psoriatic activity in the skin and in joints. The severity of the arthritis varies and different studies have described very different results in terms of joint inflammation and destruction. A review of 36 Maltese patients with psoriatic arthritis suggests that the disease is usually mild to moderate in severity in most patients. Long-term follow up of patients with psoriatic arthritis shows that while the number of inflamed joints decreases, the number of damaged joints increases: this suggests that joint damage, when it occurs, probably happens early in the course of the disease. A subgroup of patients with psoriatic arthritis can go on to develop severe and deforming arthritis: the identification of these patients is important, because early use of remittive drugs may help to reduce joint damage.

**B01-4****MALIGNANT MELANOMA IN MALTA: THE FACTS.****E. Borg, M. Dalmas, J.L. Pace, P. Gatt, University Dept. of Dermatology, Boffa Hosp., Health Information Unit, St. Luke's Hosp.**

A retrospective study of all cutaneous melanomas diagnosed between 1986 - 1995 is reviewed by the Department of Dermatology in collaboration with the Health Information Unit. A total of 95 cases were investigated in this 9 year period. The number of cases has shown a steady increase in the past few years with a four-fold rise between 1991 to 1995. Data on these patients is analysed and compared to similar data elsewhere.



#### **B01-5**

##### **STASIS ECZEMA OR CONTACT DERMATITIS?**

**L. Scerri, L. Shall. Department of Dermatology, Southampton University Hospital NHS Trust, Southampton.**

Eczema and contact sensitivity are common complicating factors of venous leg ulcers. Moreover, stasis eczema and allergic contact dermatitis to topical medicaments may be clinically indistinguishable. We studied 95 consecutive patients (40 men, 55 women) with chronic venous leg ulcers and eczematization of peri-ulcer skin.

Patch testing was carried out with the European Standard Series, the Leg Ulcer Series and any relevant additional medicaments. The patch tests were applied on the back under occlusion using Finn chambers on Scanpor, and readings were routinely taken at 48 and 96 hours. Palpable erythema was the minimum requirement for a positive patch test reading.

77/95 (81%) gave relevant positive patch test reactions to a wide variety of antimicrobials and additives. The 5 most common allergies were to lanolins (32), bacitracin (22), neomycin (20), Balsam of Peru (18), and chlorhexidine (14). Multiple allergies were elicited in 70 patients (74%), varying between 2 and 7 positive patch tests per patient. The patients and respective members of the health care team were consequently informed of the allergies and given appropriate advice on avoidance of the sensitizers.

The high rate of positive patch test reactions in our patient series lends overwhelming support to the fact that chronic venous leg ulceration is classical scenario for the development of dermatitis medicamentosa. It follows that one should make an effort to avoid the routine use of topical applications containing notorious sensitizers such as anti-microbials, lanolins and certain preservatives in such patients. Moreover, thorough patch testing is mandatory in all patients with venous leg ulceration complicated by eczema.

#### **B01-6**

##### **LASERS IN DERMATOLOGY**

**N. Cleeve - Dynamic Light Ltd, Australia.**

**Introduction:** Definition: What is a laser? A laser is a device that amplifies light into a higher state of energy by the stimulated emission of radiation.

**What a laser does:** The treatment of various vascular, pigmentary and tumorous lesions of the skin and specific cosmetic surgery to the skin of the face. It performs these functions by: Biostimulation, Photolysis (Denaturation, Photocoagulation, Vaporisation - these are all temperature dependant), Photodisruptive, Photodynamic effect using Dihaematoperplysin Ether and Gold Laser, Tissue Welding.

Some lasers used are: Copper vapour, Argon, K.T.P., CO<sub>2</sub>, C.W., Superpulse, UltraPulse, Timeable dye laser, Candella, Alexandrite, Q switched ruby and Yag.

The common goal of all these lasers except CO<sub>2</sub> is the treatment of vascular and pigmentary lesions of the skin. They vary in energy output, pulse characteristics and wave length so as to maximise selective photothermolysis.

Limitations of the Laser are recurrence due to treatment of the effect, not the cause, variable response to same lesion in different patients, nature of lesion, experience of operator, financial considerations, reaction of skin to previous trauma and posing an unanswered question.

#### **B01-7**

##### **HUMAN LYMPHOCUTANEOUS SPOROTRICHOSIS: A CASE REPORT**

**P. Gatt, J.L. Pace - University Dept of Dermatology, Boffa Hospital, Malta.**

A 48 year old male presented to the department with a 7 year history of an erythematous, nodular, ulcerating eruption on the dorsum of the right hand extending proximally to the mid-arm. Enlarged lymphatic channels and nodes were palpable in the forearm, antecubital fossa and axilla. A clinical diagnosis of sporotrichosis was confirmed histologically and he made a slow but steady recovery on oral potassium iodide. Sporotrichosis is a chronic granulomatous disease caused by the geophilic fungus *Sporothrix schenckii*. Human infection occurs after skin inoculation with organic matter containing spores of *S. schenckii* and from infected animals. Human sporotrichosis is exceedingly rare in semi arid climates and cases are very seldom reported. The treatment of choice is oral potassium iodide although itraconazole is also useful.

#### **B01-8**

##### **The ALPHA HYDROXY ACIDS - real progress in therapy or simply so much hype?**

**J.L. Pace, E. Borg. University Department of Dermatology, Boffa Hospital, Malta.**

The subtle promise of eternal youth and the powerful marketing abilities of the cosmetic industry are making AHA containing products one of the success stories of the mid 1990s with over 400 AHA containing products available in the US.

This presentation attempts to separate fact from mere wishful thinking by outlining mechanisms of action, potential indications and side effects. It concludes that the AHA group of agents, now rediscovered after the initial work of van Scott and YU in 1975, may be useful in various dermatoses either as sole agents or in combination with other medication.

#### **B02-1**

##### **APPROPRIATE CONTROLS MUST BE SELECTED IN THE INVESTIGATION OF SUSPECTED OUTBREAKS OF INFECTION**

**AJ Mifsud, J Watine, TL Pitt. Laboratory of Hospital Infection, Central Public Health Laboratory, London, U.K. and Laboratory of Clinical Biology, Hôpital de Rodez, Rodez, France.**

In recent years, a number of new techniques have been introduced to assist the investigation of nosocomial outbreaks of infection. Notable among these are pulsed field gel electrophoresis (PFGE) and arbitrary primed polymerase chain reaction. PFGE is now considered to be the reference method for the typing of bacteria. The process involves the digestion of bacterial DNA with rare cutting restriction enzymes to produce fragments sized between approximately 50 and 500kb. These are separated in a high voltage electrophoretic field. The interpretation of the results produced by these techniques has not, to date, been adequately validated. *Pseudomonas aeruginosa* serotype O12 was isolated from 20 patients at Hôpital de Rodez, France, between 1992 and 1994, and an outbreak was suspected. (*P. aeruginosa* O12 is usually multi-antibiotic resistant and has been implicated in several outbreaks in recent years). Isolates were collected and various phenotypic and genotypic typing methods performed. The results of all the typing techniques, interpreted in accordance with the usual criteria, initially suggested that an outbreak involving all but one patient had occurred at the hospital. Detailed epidemiological investigations could only directly link nine of the patients. Inclusion of unrelated control isolates showed similar PFGE patterns, suggesting that the usual criteria for the interpretation of PFGE profiles cannot always be applied and that appropriate controls should always be included in the investigation of a suspected outbreak.

#### **B02-2**

##### **EPIDEMIOLOGY OF AIDS IN MALTA.**

**K. Vella, A.J. Amato-Gauci. Department of Public Health, Valletta, Malta.**

Notifications of persons fulfilling the 1993 WHO/CDC definition are maintained in a confidential register at the Disease Surveillance Branch of the Public Health Department. AIDS, but not HIV, was added to the obligatory notifiable disease list on 1st March 1986, although the first official case had been reported in 1985. Only data on Maltese nationals or permanent residents is maintained. Up to 30 August 1995, 35 cases of AIDS have been notified - 33 in males and 2 in females. Of these, thirty have died. The overall mean length of life for all cases between the notification date and death is 6.7 months. This includes notifications of 14 cases which were reported when the patient was terminal or at death. A more realistic picture of longevity is 12.56 months - the mean of the 16 cases notified before presenting as a terminal stage. The median age group at notification is 30 to 34 years. The transmission categories in the males are homosexual/bisexuals (48.5%) followed by recipients of contaminated blood products (33.3%) and heterosexual contact (6.1%). One female was infected through mother-to-child (abroad) while the other through heterosexual intercourse. The mode of transmission was not established in 8.6% of cases. Data on AIDS cases usually reflects the situation of HIV transmission as at ten to twelve years previously. Sero-surveillance studies are now indicated to clarify the actual prevalence of HIV infection and the current transmission trends.

#### **B02-3**

##### **TRENDS IN FOOD BORNE DISEASE IN MALTA**

**S. Xuereb, A.J. Amato-Gauci, D. Falzon. Department of Public Health, Valletta, Malta.**

Data from cases of food borne disease collected through notifications, reports from the Microbiology Laboratory at St. Luke's Hospital, the Public Health Laboratory in Valletta and the Fever Unit in Boffa Hospital are routinely investigated by the Disease Surveillance Branch. These reports have been analysed to show trends over a five year period (1990 - 1994).

1643 individuals were confirmed to be suffering from food borne disease - 503 were individuals incidents while 1140 formed part of outbreaks. No deaths were reported. Of the 61 outbreaks recorded, data from 56 was analysed. Of these 29 (52%) were found to have occurred in commercial mass-catering premises (restaurants, canteens, hotels, and holiday complexes), 17 (30%) were associated with food prepared in private homes, and 10 (18%) in hospitals or residential institutions.

The commonest implicated contributory factors is believed to have been inappropriate storage, poor food handling with cross contamination and inadequate temperatures during

cooking. Salmonellosis is by far the commonest food borne disease, both in individual cases and as a cause of outbreaks. Poultry and eggs remain commonly implicated vehicles for Salmonella. Reducing the incidence of food poisoning will depend on prompt notification by doctors, high standards of hygiene in commercial outlets, farms and slaughter houses, as well as adequate education of both food handlers and the public on proper food safety and hygiene.

#### **B02-4**

##### **SURVEILLANCE OF HEPATITIS B IN MALTA - A FOUR YEAR TREND**

**L. Licari, A.J. Amato-Gauci. Department of Public Health, Valletta, Malta.**

A surveillance system for Hepatitis B was established in 1988 in order to improve prevention and control of transmission of this endemic disease. A disease register including data obtained mainly from notifications, laboratory reports and active case finding is established. This presentation shows the findings from 1990 to 1993. This system cannot claim to be complete however the findings suggest that some 14 clinically evident cases of Hepatitis B are confirmed each year. No rising trend has been seen. In any one year a prevalence of  $15.4 \times 10^{-5}$  HBsAg positive results in persons who had previously not known that they were positive may be detected. Six month follow-up of these persons reveals that some 39 persons become chronic carriers each year. This has implications both for the targeted vaccination programme as well as for the individual's chronic liver complications and treatment.

#### **B02-5**

##### **HEPATITIS B INFECTION IN MALTA**

**E. Attard Montalto, A. Portelli, J. Mamo, Pharmacist, Virology Laboratory, St. Luke's Hospital, Malta, Epidemiologist, Department of Public Health, University of Malta.**

Serological study was carried out on a random sample of pregnant women (n = 1252) attending the ante-natal clinics of St. Luke's Hospital (SLH), Malta and Gozo General Hospital (GGH), Gozo. The study was carried out over two years, between January 1992 and December 1993, using enzyme immunoassay techniques. It was found that only 8 of these women were positive for the surface antigen, accounting for a prevalence of approximately 6 per 1000 women. A second serological study was carried out on a population of drug dependent subjects attending the detoxification centre, SLH between January 1992 and December 1993. The sample consisted of 364 intra-venous drug users. Ten of the dependent drug users tested positive for the surface antigen, giving an approximate prevalence of 3% within this cohort. These two studies provide in broad terms an indication of the 'prevalence zone' or range and one may assume that the overall population prevalence rate for Malta lies between 1% and 3% which is a low or low-intermediate endemicity rate (as set by WHO).

#### **B02-6**

##### **AUDIT OF ANTIBIOTIC USE ON TWO MEDICAL WARDS AT ST. LUKE'S HOSPITAL**

**M.J. Ebejer\*, M.R. Schiavone, P. Vella, F.F. Fenech\* - \*University of Malta, Medical School, Department of Pharmacy, St. Luke's Hospital, G'Mangia, Malta.**

**Introduction:** Antibiotics are frequently used drugs, often intravenously (i.v.) and often at high expense. The aims of this study were to determine choice of antibiotic relative to indication, route of administration, clinical monitoring and costs.

**Method:** The records of all patients prescribed antibiotics on two medical wards over a 4 month period were analysed for patient characteristics, diagnosis, drugs used, treatment duration and mode of delivery, laboratory investigations, and adverse drug reactions. Cost was calculated from unit cost to the hospital multiplied by the number of doses given, for each drug in each patient.

**Results:** 126 patients received antibiotics; 54% males; 75.4%, >60 years old; 62% were admitted because of infection. Of the whole group, 8.7% received antibiotics with no evidence for infection and no indication for prophylaxis. There were 118 infections, 64% respiratory, 13.5% urinary and the rest of miscellaneous sites; 14% of infections were nosocomial. Microbiological studies were available in only 29% of infections. Six patients were given antibiotics contraindicated in impaired hepatic and renal function. There was one adverse drug reaction. The total drug cost was 2181.79 Lm; i.v. treatment accounted for 93% of this cost and ceftazidime 60%.

**Conclusion:** There is room for improvement in the choice of antibiotic and its route of administration. Laboratory diagnosis of infection and biochemical patient monitoring need to improve. Restricting i.v. treatment could reduce cost very substantially as well as the time used for its delivery by nurses and ward doctors.

**B03-1****THE CONSERVATIVE MANAGEMENT OF FEMALE URINARY INCONTINENCE**

L. Cardozo - Department of Obstetrics & Gynaecology, Kings College Hospital, London, U.K.

Genuine stress incontinence and detrusor instability are the commonest causes of urinary incontinence in women. As the appropriate treatment for these two conditions is completely different it is of paramount importance that an accurate diagnosis is made before therapy is instituted. This is particularly relevant when surgery is contemplated as the results may be irreversible. As genuine stress incontinence and detrusor instability are both very common conditions, it is not unusual for them to co-exist and this presents a management problem. The treatment for genuine stress incontinence is primarily surgical but conservative treatment should be tried in all cases before surgery is undertaken and is particularly suited to the younger woman who has not yet completed her family, the older woman who is medically unfit for surgery or where incontinence is a minor problem.

Conservative treatment usually involves some kind of physiotherapy, with or without electrical stimulation. Vaginal cones or a perineometer may be used to help with treatment. Recently occlusive devices have been undergoing evaluation which may prove helpful in the future.

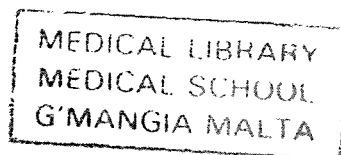
Although oestrogen therapy does not cure stress incontinence on its own, it may be helpful in conjunction with an alpha-adrenergic agonist such as Phenylpropanolamine.

Detrusor instability is usually treated non-surgically. Women with mild or intermittent symptoms may only require reassurance and simple measures such as decreased fluid intake, avoidance of tea, coffee and alcohol or a change in voiding habits. The majority, however, will require treatment and the methods which are used are either those to improve conal control, such as behavioural innervation, or to alter detrusor innervation using drugs, or finally, as a last resort, surgical techniques. The drugs which are commonly employed are anticholinergic agents which may unfortunately have unpleasant side effects.

In view of the possible adverse features of all forms of treatment for urinary incontinence it is important to select the right treatment for each patient on an individual basis and based on a correct diagnosis.

**B03-2****POLYCYSTIC OVARIES AND ENDOMETRIOSIS**

T. Testa, M. Brincat, R. Galea, A. Buhagiar

**B03-3****AUDIT OF A NEW MISCARRIAGE CLINIC**

M. Formosa\*, M. Brincat\*, M. Cauchi, Department of Obstetrics and Gynaecology\*, Department of Pathology. St. Luke's Hospital, Malta.

Out of 72 patients referred to the clinic, 17 are currently still undergoing investigation, and 12 have been lost to follow-up.

Of the group who have completed their investigation, 16 were normal, 18 had endocrine problems (4 polycystic ovarian syndrome) 8 had anatomical pathology, 5 auto-immune disease (2 cases of anti-phospholipid syndrome) while 7 were found to have other miscellaneous causes.

Sixteen pregnancies have been reported in the study group, of which 5 have miscarried while 11 have delivered live healthy babies. Only 2 of the 4 cases of PCOS conceived but both pregnancies ended in abortion.

The idiopathic group (29% of the total) are being randomised into 2 groups; 1 to have aspirin 75 mg pre-conceptionally and the other to have aspirin 75 mg and prednisolone 15mg daily also pre-conceptionally.

To date 10 pregnancies have been reported from this group of which 2 miscarried while 8 delivered a live healthy baby.

One patient with antiphospholipid syndrome delivered a live healthy child following treatment with warfarin, prednisolone and aspirin in pregnancies.

**B03-4****CHANGES IN BONE COLLAGEN MARKERS IN UNTREATED AND OESTROGEN TREATED POSTMENOPAUSAL WOMEN.**

M. Brincat, R. Galea, Y. Muscat Baron, A. Xuereb Anastasi - Dept. of Obstetrics & Gynaecology, St. Luke's Hospital, G'Mangia, Malta

Postmenopausal bone loss is due to oestrogen deficiency and can be prevented and reversed to a degree by Oestrogen Replacement. There is considerable variation in postmenopausal bone loss in women. The resultant bone mass is the result of bone formation and bone resorption. This study was carried out in an attempt to determine to what degree bone

resorption and bone formation changed post menopausally and how this varied with Oestrogen replacement.

**Patients and methods:** Two hundred postmenopausal women had bone density parameters measured using a Norland DEXA. The Collagen Markers, urinary Pyridinium crosslinks as a marker of bone resorption and serum Pro Collagen I C-terminal peptide (PCICP), Metra Biosystems, California were assessed. The women were divided into two groups, those on Oestrogen replacement, Prempak C 0.625 and 1.25 mg (Wyeth) and those on no treatment. This represents a change of 14.5% which correlates with a change in L2-L4 in the same groups of 13.8%.

**Results:** Women on HRT (n=65) had a mean drop in Pyridinium crosslinks excretion of 27.2% indicating a reduction in bone resorption, when compared to the women on No treatment (n=113) (p<0.001). Women on HRT also showed a mean drop in PCICP of 12.7% compared to controls indicating a reduction in Bone formation (p<0.05).

**Conclusion:** Postmenopausally women experience change in turnover in bone mass. Hyperoestrogenaemic women have accelerated formation but an even higher rate of resorption. This trend is reversed with Oestrogen replacement.

#### B03-5

### CAROTID ARTERY WALL CORRELATES WITH SKIN THICKNESS IN POSTMENOPAUSAL WOMEN

Y. Muscat Baron, M.P. Brincat, R. Galea, C. Scerri - Department of Obstetrics & Gynaecology, St. Luke's Hospital, Malta.

The behaviour of an intermediate blood vessel, the carotid artery with years past the menopause and its correlation to skin thickness and lipid profile was carried out. The different layers of the carotid were also analysed and differences noted.

142 postmenopausal women had the external wall of their left carotid artery wall measured by high resolution ultrasound (Osteoson Minhorst). The thickness of each of the three layers of the external carotid artery wall could be measured by a technique developed for the purpose. Dermal skin thickness measurements were then carried out using the same apparatus. Fasting serum cholesterol and triglycerides were also assessed.

Highly significant correlations (p<0.01) were found between carotid artery wall thickness and skin thickness. This was particularly so with the media which showed a higher degree of correlation with skin thickness (p<0.001). The intima on the other hand showed a negative correlation with skin thickness. The more years past the menopause the woman was, the thicker the intima and the thinner the skin. The intima also positively correlated with serum cholesterol (p<0.001). Skin thickness and Carotid Artery media becomes thinner with increasing menopausal age and is symptomatic of the general connective tissue loss that occurs after the menopause.

#### B03-6

### ADOLESCENT BODY IMAGE: AGE DIFFERENCE IN MALTESE TEENAGE GIRLS

J. Mamo, A. Baldacchino, D. Mamo, M. Pace, D. Felice - Department of Obstetrics & Gynaecology, St. Luke's Hospital, G'Mangia, Malta

**Introduction:** The physical alternations confronting teenagers has profound effects on their attitudes towards body image, sexuality and contraception.

**Aim:** The difference in attitude to body image between young teenagers and the older adolescents was assessed.

**Method:** Two hundred adolescent girls were interviewed and a questionnaire filled in by each.

**Results:** Although 72% were not happy with their appearance, only 45% were overweight, and 62% had been on a weight reducing diet. Young teenagers have a tendency to be more concerned about their breast size. Acne and increased body hair tend to be perceived as more of a problem by the sixteen to nineteen year olds. Only 30% get their sexual education from their parents. With lower standards of education there is increased risk taking sexual behaviour and reduced contraceptive compliance.

**Conclusions:** Adolescent girls have an age dependent different attitude to their body image.

#### B03-7

### EFFECTIVE CARE IN INFERTILITY TREATMENT - THE PATH TO SUCCESS

M. Debono

It is the duty of every clinician to strive to the liver effective clinical care within the financial pressures of a health service budget. It is therefore important that less effective care, which in the long-term may be more costly, is identified.

With the advent of the Cochrane Pregnancy and Childbirth Database (CCPC) and the Cochrane Database of Systematic Reviews (CDSR), clinicians can be kept up to date with the most effective treatment available to them. The use of properly conducted randomised controlled trials, brought together in the form of meta-analysis, has helped researchers answer many clinical questions which, otherwise would have remained unanswered. This presentation will focus on effective care in infertility service and will cover a variety of issues such as:

- The use of clomiphene citrate in unexplained infertility
- Anti-oestrogens in male subfertility
- Bromocriptine in unexplained infertility
- Danazol in unexplained infertility
- FSH vs HMG for PCO patients
- GnRH-analogues + HMG/FSH vs HMG/FSH
- Ovulation suppression for endometriosis-related subfertility
- Tubal flushing with oil-based media
- Gift vs IVF treatment

The issues of clinical audit in achieving effective clinical care will be discussed.

#### B05-1

### INTRAHEPATIC VS INTRAVENOUS 5-FLUOROURACIL IN THE TREATMENT OF HEPATIC METASTASES

J. Zammit, G. LaFerla, University of Malta, Medical School, G'Mangia

Colorectal carcinoma is the second most common tumour in the western world. Mortality has not changed mainly due to hepatic metastasis. Indeed 24% of patients have hepatic metastasis at the time of presentation and 25% developed metastases within 2 years of colonic resection.

No ideal chemotherapeutic agent for the treatment of metastasis exists, although 5 Fluorouracil (5-FU) appears to offer some hope. However, high concentrations of the drug within the liver cannot be achieved. We have therefore studied, the effect of intravenous versus intrahepatic 5-FU in patients with colorectal hepatic metastasis.

37 patients (22 females and 15 males) were entered into this study over a six year period. All had undergone colonic resection and all had liver metastasis at the time of presentation. More than half of the liver volume was replaced by tumour - as detected by CT scan.

18 patients, (12 females and 6 males) were randomised to receive intrahepatic chemotherapy. They had intra-arterial ports implanted at the time of initial surgery (Group A).

19 patients (10 females and 9 males) were randomised to receive intravenous chemotherapy (Group B).

Liver metastases were assessed after 3 months by CT scan.

#### Results

	Group A	Group B	
Survival (mo)	16.7 + 3.2	12.9 + 2.1	P-not significant
Liver Volume of metastases (cc)	pre R, 850+10 post R, 465+88	845+78 980+113	P=0.01

**Conclusion:** Initial studies suggest that intrahepatic 5 Fluorouracil treatment as in the schedule above offers improved survival and more effective reduction in the volume of hepatic metastasis from colorectal carcinoma.

#### B05-2

### CHRONOPHARMACOLOGY: A MYTH?

M. Zarb Adami, A. Serracino Inglott, L. M. Azzopardi, Pharmacy Department, University of Malta Msida.

Perceptopharmacology may be defined as the effect of perceptions such as smell, environment (a hospital ward or a disco) and distress on drug action. The philosophy of perception as it influences life has amply been investigated as has its influence on diseases such as cancer development and prognosis.

The care exerted today in providing the 'right' drug at the 'correct' time to the 'real' patient is justified and accepted as an indispensable professional service. We have also shown through studies carried out by our department that 'talking' to the patient also reduces side effects. Investigating a group of 32 breast cancer patients we found that there was significantly less

( $p < 0.05$ ) nausea in patients who were advised verbally and through the distribution of specifically prepared literature.

The chronopharmacological response independent of perception of sensory features such as alternating sunlight and darkness needs careful investigation. The cyclic occurrence of epilepsy is associated with menstruation and referral to the cyclic moon changes is sometimes made as an indication of the 'time'. In Malta epilepsy is often referred to as "tal-qamar" - disease of the moon. Methods of treatment of epilepsy could be perhaps improved by applying chronopharmacological knowledge.

William J.M. Hrushesky, Professor of Medicine and Oncologist at Albany Medical College in New York, addressing the New York Academy of Sciences in 1994 stated that "Time is Everything - In sickness, as in health, rhythm is a critical factor. Effective treatments must work with the body's clocks, not against them." Methods and examples to determine the 'therapeutically wise' time of day when a drug should be administered are given for areas such as cardiovascular, allergy, asthma, and cancer treatment.

#### **B05-3**

### **FEASIBILITY OF TOTAL ENTERAL NUTRITION VIA PERCUTANEOUS ENDOSCOPIC GASTROSTOMY (PEG) CATHETERS AT ST. LUKE'S HOSPITAL.**

**E Pullicino, M.Vassallo, M. Stellini, E. Ciantar. Department of Medicine (Gastroenterology and Clinical Nutrition), St Luke's Hospital.**

In January 1995 we initiated a program of home-based total nutritional support using catheters placed percutaneously using the endoscopic method. A preliminary risk-benefit analysis is presented. Twelve patients with severe permanent dysphagia were referred for PEG feeding. Five patients were considered unsuitable (endoscopic access impossible, abdominal wall herniation, hepatomegaly, bronchopneumonia, patient and / or carers unable to cope with feeding). 20-French Gauderer-Ponsky PEG catheters (Bard Ltd, USA) were inserted in six males and one female aged  $68.6 \pm 12.5$  years weighing  $61.4 \pm 6$  kg suffering from stroke with bulbar palsy ( $n=4$ ) or progressive motor neurone disease ( $n=3$ ). Mean procedure time was  $40 \pm 9$  mins. Cricopharyngeal spasticity led to transient difficulty in introducing the endoscope in three subjects suffering from stroke. Five subjects had an uncomplicated post-operative course. Two subjects were successfully treated with antibiotics for a Pseudomonas wound infection which in one subject led to a subcutaneous abscess which required surgical drainage. Four subjects were discharged from hospital after a period of  $17.6 \pm 13$  days. Two subjects died from brainstem re-infarction and one from pneumonia. Surviving subjects fed by boluses of polymeric feeds (largely self-administered). The energy intake of  $27.8 \pm 4.8$  kcal/kg/day produced a mean weight gain of  $0.98 \pm 0.3$  kg/month. Technical problems (eg tube blockage) experienced at home were dealt with on an out-patient basis. Patients unanimously reported preference of the PEG method to the nasogastric route and were able to return to their usual life style. Initial results suggests that nutritional repletion and subsequent weight maintenance using bolus PEG feeding is feasible but morbidity and difficulties in feeding can be minimised by patient selection and counselling

#### **B05-4**

### **EFFECTS OF GLUCOCORTICOIDS ON ANTIOXIDANT DEFENCE SYSTEMS IN PATIENTS WITH BRONCHIAL ASTHMA**

**R. Ellul-Micallef, A.G. Fenech, Department of Clinical Pharmacology and Therapeutics, University of Malta, Msida, Malta.**

Reactive oxygen species released during an asthmatic reaction, are known to induce smooth muscle contraction, damage the respiratory epithelium, stimulate arachidonic acid metabolism and enhance the degree of airway hyperresponsiveness. Defence against this destructive potential is afforded by an array of antioxidants, whose role, is the neutralisation of these reactive moieties. The present study investigated the selenium, glutathione peroxidase (GSH-Px) and superoxide dismutase (SOD) levels in asthmatic patients, and the effects of inhaled and oral glucocorticoid therapy on them. A significant increase in plasma selenium was observed in severe asthmatics after low dose oral prednisolone therapy ( $p < 0.005$ ). Erythrocyte SOD levels were significantly reduced in all asthmatic patients ( $p < 0.005$ ). These levels remained low irrespective of therapy. Administration of high dose inhaled beclomethasone dipropionate did not exert any demonstrable effect on the measured antioxidant profile. Within the severe asthmatic group, plasma GSH-Px was found to correlate with the degree of disease severity as measured by spirometry ( $p < 0.05$ ). Prednisolone may possibly affect the renal handling of selenium, or contribute to a redistribution of this element within the body compartments. The correlation of plasma GSH-Px levels with the degree of severity of asthma, might be the result of an oxidative stress-dependent increased enzyme demand in the airways.

## **B05-5**

### **AN AUDIT ON IN-PATIENT OPIOID PRESCRIBING**

**D. Pace. Diploma in Palliative Medicine, Oncology Department, Boffa Hospital, Floriana, Malta.**

The object of this study was to determine the pattern of opioid prescribing in the in-patient setting at St Lukes and Boffa Hospitals. An audit of prescription charts of patients on opioids was performed using palliative care recommendations as a standard. Data was collected on age, sex, diagnosis, type of opioid, dose, form and frequency of prescribing, and concurrent prescribing of other analgesics, laxatives and antiemetics. Patients in the first post op week were excluded from the study. Several deficiencies were identified such as lack of provision of breakthrough doses; the use of prn opioids in the absence of regular opioids, the use of short acting opioids at infrequent intervals for chronic pain and lack or delay in prescribing regular laxatives with opioids. Guidelines are given for the rational prescription of opioids.

## **B05-6**

### **DRUG RELATED PROBLEMS PRECIPITATING ADMISSION IN HEART FAILURE PATIENTS.**

**M.R. Schiavone, M.J. Ebejer\*. Department of Pharmacy, St. Luke's Hospital, G'Mangia, Malta and \* Department of Medicine, University of Malta Medical School.**

**Introduction:** Heart failure is common and if untreated carries a poor prognosis. Treatment is not without side-effects and the natural progression of heart failure itself may be accelerated, or episodes of heart failure induced, by drugs. The aims of this study were to quantify drug related problems, their severity and to what extent they may have been preventable.

**Method.** Admissions to the medical wards were screened every third day from Jan-Jun 1995. Heart failure patients who did not have voluntary drug abuse, significant lung disease, myocardial infarction or malignancy were included. Demographic details, social and cardiac history, past and present drug history were recorded. Patients were followed up throughout their hospital stay and outcome was recorded.

**Results.** There were 139 patients (85 females); mean age 71.5 years and a total of 63 drug-related problems in 49 cases. Drug-related problems included: adverse drug reactions (25), non-compliance (21), adverse drug interactions (11), failure to receive required treatment (5), and inadvertant discontinuation of treatment. Heart failure was probably or possibly exacerbated by drugs in all 49. There were also a case of ACE inhibitor-induced cough and 2 cases of gout. B-blockers and NSAIDs were commonly involved in aggravating heart failure. Non-compliance with diuretic therapy occurred in 17 patients, reasons included forgetting to take the medication, elderly patients unable to get their prescriptions and side-effects. Ten patients died but only 2 had a drug related problem and in neither of these was it considered a contributor to death.

**Conclusion.** In patients admitted to hospital in heart failure, drug related problems occurred in 35%. Many could be prevented by taking measures to improve compliance and increasing general awareness of fluid retention by NSAIDs and their adverse interaction with diuretics

## **B05-7**

### **NASAL VENTILATION - FIRST EXPERIENCES IN MALTA**

**S. Montefort, R. Camilleri, H.M. Lenicker, A. Galea Debono Dept of Medicine & Paediatrics, St. Luke's Hospital, Malta**

Nasal Ventilation enables clinicians to aid patients with ventilatory problems without the invasive intervention of endotracheal intubation or tracheostomy or the encumbent 'cuirasse'. In Malta this modality of ventilation is relatively novel and in this last year we have introduced Nasal Intermittent Positive Pressure Ventilation [NIPPV] and Nasal Continuous Positive Airway Pressure [nCPAP] ventilation to patients with the appropriate clinical and physiological indications. We have started three patients [1M-15y, 2F-42y, 38y] all suffering from severe forms of muscular dystrophies with resultant severe hypoventilation onto nocturnal NIPPV. Two of the patients were in extreme hypercapnia [pCO<sub>2</sub> 94 & 82 mmHg] and in a terminal state and all three had complained of drowsiness, headaches and severe lethargy. Within hours of starting NIPPV the severely hypercapnoeic patients showed marked improvement [PCO<sub>2</sub> down to 62 and 52 mmHg] and felt symptomatically better and this improvement has been sustained. The third has been improving steadily over the last few months. We are also following up another 16 yr old patient on NIPPV started in the UK some years ago because of Ondine's curse secondary to pertussis. Four male patients [mean age

45y] in executive or professional posts, with proven obstructive sleep apnoea [diagnosed by partial sleep studies at SLH] which did not respond to years of conservative management, were initiated on nocturnal nCPAP. All were very symptomatic and had secondary effects such as hypertension, chest pains, sinoatrial block etc and this OSA was ruining their careers and endangering their lives [3 had been involved in MVAs]. Since on NCPAP, symptom scores [mean before vs mean after with a max of 10] daytime somnolence [7.5 vs 1.5], noisy snoring [9.25 vs 0.25], nocturnal choking sensation [4 vs 0], sleepiness while driving [6.75 vs 0], concentration [5.25 vs 8] and general well-being [4.5 vs 8.5] all improved significantly. After a mean of six months on these ventilators compliance remains good. The use of these nasal ventilators is sure to increase in our community with better awareness of this condition and the availability of better diagnostic and therapeutic tools in our hospital.

#### **B07-1**

##### **RECENT ADVANCES IN INTERVENTIONAL CARDIOLOGY**

**A. Fenech. Dept. of Medicine, St. Luke's Hospital, G'Mangia.**

In recent years several new techniques have emerged in an attempt to treat Coronary Artery Disease. Balloon angioplasty (PTCA) remains a widely accepted procedure in this field, although it too has limitations. These include restenosis and abrupt closure as well as the limited success in tackling diffuse disease, ostial lesions, chronic occlusions and the presence of thrombus.

In order to tackle these problems a number of devices have been developed with varying degrees of success. These include Atherectomy devices (Directional, Rotational and Extraction), Intracoronary Stents and Laser Angioplasty.

The roles of these Techniques will be discussed, as well as the impact on their procedural success resulting from the development of Intravascular Ultrasound and Angioscopy.

#### **B07-2**

##### **ESTABLISHING A LOCAL CARDIAC SURGICAL PROGRAMME.**

**A. Manche. Dept. of Cardiothoracic Surgery, St. Luke's Hospital, G'Mangia.**

The early experience of a resident cardiac surgical team is summarised. In particular the following points are discussed: the recruitment and training of medical and nursing staff, establishing a niche within main operating theatres, ICU and the wards, pre-operative assessment and post-operative follow-up, compiling and dealing with the waiting list, keeping a data base, audit and continuing education.

A summary is presented of the patients accepted for surgery during the first few months. Results and complications are compared with previous years and a financial comparison is also presented. Future plans are outlined.

#### **B07-3**

##### **ELECTROPHYSIOLOGICAL STUDIES AND ABLATION THERAPY FOR ARRHYTHMIAS USING RADIOFREQUENCY IN MALTA**

**J.V. De Giovanni, O. Aquilina, G. Bonello, R. Edgar, P. Hetherington - Birmingham Children's Hospital, Birmingham, U.K.**

Electrophysiological mapping and radiofrequency ablation therapy was introduced in Malta in 1994. The mapping evaluates the nature and substrate of the arrhythmia and, when appropriate, radiofrequency therapy is used as a curative measure.

During the two visits to St. Luke's Hospital, 21 patients underwent electrophysiological studies. Ten were female and 11 male. The age range was between 18 and 56 years with a mean of 37.

Out of the 21 patients who underwent electrophysiological studies, 17 underwent ablation therapy for the following conditions: accessory pathway in nine patients (overt in eight and concealed in one), AV node re-entry tachycardia in four patients, fascicular tachycardia in one patient and atrial flutter in two patients.

All the patients with accessory pathways either lost conduction through the pathway completely resulting in a complete cure or there was sufficient modification of the pathway to prevent any recurrence of tachycardia. All patients who had AVNRT had successful ablation of the slow pathway although the patients with atrial flutter did not benefit from radiofrequency therapy. The patient with ventricular tachycardia, a potentially fatal condition, had successful ablation of the fascicles through the left ventricle. There were no deaths or complications.

Electrophysiological studies provide detailed information about the nature and substrate of the arrhythmia leading to therapeutic radiofrequency ablation in the majority of cases.

**B07-4****OUTCOME OF UNSTABLE ANGINA IN DIABETIC AND NON-DIABETIC PATIENTS**

S. Fava, J. Azzopardi, O. Aquilina, M. Agius Muscat, F.F. Fenech, St. Luke's Hospital, Malta.

**Aim:** To study the outcome of unstable angina in diabetic and non-diabetic patients.

**Patients/Method:** A retrospective analysis of the patients admitted to the coronary care unit with unstable angina.

**Results:** 129 diabetic and 143 non-diabetic patients were admitted with unstable angina during the study period. The age- and sex-standardised 3-month mortality was 7.58% (95% confidence intervals, CI = 2.9 - 12.0%) in diabetic patients and 1.4% (CI = 0.9 - 1.9%) in non-diabetic patients ( $p < 0.02$ ). The standardised 1 year mortality was 13.4% (CI = 7.5% - 19.3%) in diabetic patients ( $p < 0.03$ ). The rate of re-admission with unstable angina, acute myocardial infarction and of revascularisation procedure (coronary angioplasty/bypass grafting) was the same in both groups.

**Conclusion:** Diabetic patients with unstable angina have a higher mortality than non-diabetic patients. This largely accounted for by early mortality (first 3 months).

**B07-5****ST ELEVATION AT SITE OF RECENT TRANSMURAL MYOCARDIAL INFARCTION DURING EXERCISE STRESS TESTING: A SIGN OF RESIDUAL MYOCARDIAL ISCHAEMIA**

R. G Xuereb, M. Xuereb, A. Margonato, G. Fragasso, C. Landoni, F. Fazio, S.L. Chierchia. Istituto Scientifico H San Raffaele, Milano, Italy.

The assessment of residual myocardial viability in infarcted areas is important for subsequent management but requires expensive technology. To evaluate the possibility that simple, easily obtainable clinical markers may detect the presence of within-infarct viable tissue, we assessed the significance of exercise-induced ST elevation occurring in leads exploring the area of recent Q wave myocardial infarction (MI).

**Methods:** We studied 18 patients (pts), 15 male, (age  $57 \pm 8$  years), with recent Q wave MI ( $\leq 12$  months) who, on exercise stress testing (EST), developed ST segment elevation  $\geq 1$  mm at site of previous MI (Group A). Sixteen pts, 13 male, (age  $54 \pm 9$  years), also with recent transmural MI, but without ST segment changes during EST formed the control group (Group B). All 34 pts were submitted to coronary arteriography, stress/rest Tc-99m MIBI myocardial scintigraphy and Positron Emission Tomography (PET) to assess regional myocardial glucose metabolism, using  $^{18}\text{F}$ -fluorodeoxyglucose (FDG).

**Results:** Scintigraphic imaging showed perinfarction ischaemia in 10/18 pts in Group A (56%) but only in 3/6 pts in Group B ( $p < 0.05$ ). FDG uptake was present in 18/18 pts in Group A but only in 9/16 pts (56%) in Group B ( $p < 0.01$ ). The sensitivity, specificity and predictive accuracy of exercise-induced ST segment elevation at site of previous Q wave MI in detecting the presence of residual tissue viability were 67%, 100% and 74% respectively.

**Conclusion:** Exercise-induced ST segment elevation at the site of recent Q wave MI reliably indicates the presence of residual viable myocardium prone to develop ischaemia.

**B07-6****DOES COMPUTERIZED ECG ANALYSIS IMPROVE THE ACCURACY OF EXERCISE STRESS TESTING?**

M. Xuereb, R. G Xuereb, G. Fragasso, S. L Chierchia. Istituto Scientifico H San Raffaele, Milano, Italy.

In order to determine whether computerized ECG analysis (CEA) of the ST segment shift improves the accuracy of exercise stress testing (EST) as compared to visual interpretation of the raw ECG (RE), we studied 200 consecutive patients (pts), 153 males, age  $55 \pm 9$  years, who underwent EST and thallium-201 ( $^{201}\text{Tl}$ ) myocardial scintigraphy as part of their diagnostic work-up for coronary artery disease. All pts performed EST on a treadmill using a Marquette Electronics INC computer assisted system for exercise (Case 12) according to the modified Bruce protocol. The raw exercise electrocardiograms were read in blind by two experienced cardiologists. The criterion for a positive test was taken as  $\geq 1$  mm ST segment depression. CEA and RE were then correlated to  $^{201}\text{Tl}$  scintigraphy.

**Results.** Of the 139 pts with ischaemia on scintigraphy, RE was positive in 101 whereas CEA

was positive in 104 (sensitivity 73% vs 75%,  $p = \text{NS}$ ). Among the 61 pts with no evidence of ischaemia on scintigraphy, RE correctly identified 47 whilst CEA correctly identified 35, the number of false positive results being 14 and 26 respectively (specificity 77% vs 57%,  $p < 0.03$ ). RE and CEA were concordant and correct in 95 pts with positive scans and in 33 pts with scans negative for ischaemia (69% vs 54%,  $p = 0.05$ ). The predictive accuracy of RE was 74% as compared to 70% for CEA ( $p = \text{NS}$ ).

**Conclusions:** Computerized ECG analysis does not improve the predictive accuracy of exercise testing. Although it is as sensitive as visual interpretation of the raw ECG, its specificity is significantly lower and therefore cardiologist interpretation of the raw ECG remains mandatory.

#### **B08-1**

##### **DEVELOPING MENTAL HEALTH SERVICES IN THE COMMUNITY: Strengthening the relationship between primary and secondary care.**

**L. Gask, University of Manchester, UK.**

More than 95% of mental illness is cared for in the community although there is evidence throughout the world that primary care workers, for a number of reasons, often fail to adequately diagnose or effectively treat the morbidity that presents to them. Within the UK efforts to improve the care received in primary care have been taking place at the same time as there has been increasing pressure to transfer the care of patients with neurotic illness to primary care, and to involve GPs in the care of people with severe and enduring mental illness who are currently being rehoused in the community as mental hospitals are closed.

These developments require close collaboration between primary and secondary care services and have led to a number of tensions. Mental health professionals and GPs have devised methods of liaising at the interface between primary and secondary care which will be described in this presentation. These are "shifted out-patients clinics, community mental health teams, attached mental health professionals and consultation-liaison-schemes". Unfortunately evaluation has not kept pace with the speed of these developments.

Public health/Educational interventions designed to improve the quality of mental health care provided within primary care will also be described, with specific reference to the Defeat Depression Campaign and the RCGP Mental Health Fellowship in the UK.

#### **B08-2**

##### **INCREASED LIAISON BETWEEN GP AND SPECIALIST IN THE COMMUNITY PSYCHIATRY PILOT AREA: A REVIEW**

**D. Cassar,\* M. Sammut\*\* - \* Department of Psychiatry, Mount Carmel Hospital, Attard, \*\*Qormi Health Centre, Malta**

Developed countries with strong Primary Care services have promoted coordination between the primary sector and Mental Health services. This allows provision of more effective, efficient and acceptable care to individuals with psychological distress and mental illness.

With the GP in Malta being the major and most acceptable care giver for many, Mental Health services are now developing to include the GP as an important pillar in community care.

The Pilot Area is being used to evaluate outcome of increased liaison between the GP and specialised services. Involved GPs have undergone two training programmes. Their satisfaction with these and their confidence in having developed general and specific skills will be assessed.

A review of the number and quality of interdisciplinary referrals and consultations will be described and the resulting implications discussed. Finally GP and patient satisfaction with service will be assessed.

Most data will be collected by questionnaire. Since the Pilot Project only commenced in June, valid data collection could not be presented and discussed at the time of abstract submission.

#### **B08-3**

##### **COSTING QUALITY CARE IN DEPRESSION**

**C. Buhagiar\*, J.R. Saliba\*\* - \*Department of Pharmacy, University of Malta, \*\*Department of Psychiatry, Mount Carmel Hospital, Malta.**

Economic forces are dramatically affecting the practice of psychiatry. Major depressive disorders are associated with high societal costs through morbidity, high uptake of psychiatric and medical services, and expensive pharmacotherapy. Their chronic nature and high incidence makes them ideal candidates for economic evaluation.

The authors wish to evaluate the quality of therapy provided to these patients using the Donabedian criteria of structure, process and outcome. The cost of the process and outcome

phases of therapy will be evaluated using cost benefit and cost utility analysis. The structural background for care is beyond the scope of the study. Indicators for process include the evaluation of the degree, type and quantity psychiatric intervention and the medication regimens used.

Outcomes will be divided into therapeutic and economic and patient outcomes. Therapeutic outcomes will be measured in terms of control of the disease process, morbidity, mortality, functional limitation and sequelae of pharmacotherapy. Instruments used will include ICD-10, Hamilton Scale, Quality of Life Scales and a drug event reporting scheme. Economic costs will be evaluated as direct costs resulting from the cost of medication and other treatments and all physician consultation time. Indirect costs will result from loss of productivity and functional limitation. Patient outcomes will be assessed in terms of patient well-being, dependence, psychosocial limitation, disruption of family and social life and personal response to therapy using self-assessment tests for patient well being.

#### **B08-4**

##### **INDIVIDUAL vs SMALL GROUP BEHAVIOUR THERAPY IN AN INSTITUTIONAL SETTING.**

**J. Vella, M. Micallef, J.R. Saliba. Mount Carmel Hospital, Attard.**

Since the mid-fifties, psychological research has led to a change in approach to learning disability so that it is no longer held that such individuals are incapable of benefitting from education, and research such as that of Tizard & O'Conner demonstrated this. Individualized programmes could be expected to produce better results than group approach but there are economic considerations.

Further, education needs to be actively pursued beyond normal school leaving age and to some extent this occurs in Malta. Those, however, who were admitted to Mount Carmel Hospital, do not have such opportunities and have become institutionalized.

This paper sets out to describe a study in which selected residents from the hospital learning disability unit receive a behavioural training programme either on an individual or in a group setting. Patients are randomly assigned to the two groups and level of function is tested before and after the programme by independent raters using the Vineland Adaptive Behaviour Scale and the Weschsler Adult Intelligence Scale.

The main aim of the study is to demonstrate that improvement in functioning can be registered in a relatively short period of time. The secondary aim is to find out whether individual therapy offers a clear advantage over small group therapy.

The preliminary findings of this study will be presented and discussed.

#### **B08-5**

##### **A STUDY OF THE NEUROLEPTIC MALIGNANT SYNDROME IN MALTA.**

**J.R. Saliba, A. Grech. Department of Psychiatry, Mount Carmel Hospital, Attard.**

This paper describes Malta's first sample of Neuroleptic Malignant Syndrome (NMS) and reviews the current literature. A retrospective sample of all diagnosed cases of NMS was reviewed using Pope's (1986) criteria. Twelve cases were identified yielding an incidence of 0.67%. The range of associated risk factors and complications agreed with other reports. There were also two cases of uncontrolled diabetes. Treatments commonly used were Bromocriptine and Levodopa. There were no deaths due to NMS and no recurrence on re-exposure.

The sample is too small to draw any statistically significant conclusion, however, the results are mostly in line with those obtained from larger samples. Malta's incidence is towards the lower end of the reported range of 0.02% to 3.23%, but higher than that reported in centres trying to recognise NMS early and reduce risk factors. This suggests that Malta could benefit from trying to adopt such measures. Given Malta's small size it would be relatively easy to disseminate such information. Keck et al describe the following measures for the early detection of NMS.

1. Increase in clinical awareness of the cardinal features of NMS.
2. Treating neuroleptic induced extrapyramidal and autonomic side effects at their earliest emergence.
3. Minimising risk factors such as the use of intramuscular neuroleptics.

The other noteworthy point is the previously reported association of non-ketotic diabetic coma with NMS. This study, despite its comprehensive sample, failed to reveal any other reported cases. Nor has it been demonstrated that diabetics were at higher risk of developing NMS or its complications. It would be important to explore these possibilities further in future studies.

#### **B08-6**

##### **THE RATIONAL USE OF CLOZAPINE**

**G.M. Magro, Dept of Pharmacy, University of Malta; J.R. Saliba, Dept of Psychiatry Mount Carmel Hospital & Sant Fournier M, Dept. of Pharmacy, University of Malta.**

Clozapine, an atypical anti-psychotic agent, was first synthesized in 1958 and by 1966 there was unequivocal evidence of its efficacy in neuroleptic resistant schizophrenia. Its clinical use was however abandoned because of its propensity to potentially lethal leucopenia. Recently it has been reintroduced under very tight monitoring control of white cell count and is used in Malta with these same restrictions. It is of interest that locally concern has focussed on economic as much as on safety aspects.

This paper describes the pilot phase of an audit study into the clinical practice and cost effectiveness of Clozapine use for treatment-resistant Schizophrenia in Malta with a view to assisting local professionals in its correct use. The study sample is being collected between February 1992 and February 1996 by reviewing all Mount Carmel Hospital files for patients with a confirmed ICD-10 diagnosis of Schizophrenia. Patients for inclusion are first screened for severity of disorder using the Brief Psychiatric Rating Scale (BPRS) and confirmed with the Scales for Negative and Positive Symptoms (SANS & SAPS). Severely affected patients are only considered for Clozapine therapy after having been on at least two different classes of anti-psychotic drugs in therapeutic dosage for at least six weeks without significant improvement. In the second phase of the study, both those previously on and those started on Clozapine during the study will have their treatment costed before and during Clozapine. In another part of the study, a semi-structured schedule is used to assess health care workers knowledge on Clozapine therapy both before and after an informational presentation and leaflet on the subject.

#### **B09-1**

### **INEQUALITIES IN ORAL HEALTH**

**H. Galea, Dept. of Dentistry.**

A small proportion of the population will develop the more severe stages or outcomes of the more common oral diseases, others remain free of disease. Society recognises the right of every citizen to enjoy oral health and the dental profession can offer an acceptable level of care to all who require it. There are individuals and groups of people whose needs for care are not normally recognised or met by the public and private dental services.

Social deprivation lowers oral health and there are also regional differences in the susceptibility of Maltese children to dental caries, periodontal disease, and dental accidents. The incidence of edentulousness in the institutionalised elderly is also much higher than the national average. Rigid subdivisions in the different components of a health delivery system and the attitudes of dentists, paraprofessionals and students working in public and private settings may compromise the quality of care provided.

Within the general framework of the WHO Strategy of Health for All (Target 1) these differences should be reduced by at least 25% by improving the level of health of disadvantaged groups.

Indicators of disease risks can become evident from the presentation of data alone. An action plan should reflect differences in recording systems, treatment and care in the hospital, primary care or general practice settings.

#### **B09-2**

### **THE OSSEOINTEGRATED TOOTH ROOT ANALOGUE: Fill in the blanks.**

**A. Azzopardi** Dental surgeon Department of dental surgery St. Lukes Hospital. Branemarks 1977 publications and ensuing reports established osseointegration as a dental discipline with predictable results which has changed the future of the edentulous and partially edentulous patients. The results of tooth decay, periodontal disease and trauma, constantly face the dental profession. Restoring the edentulous and partially edentulous dental arches to acceptable levels of health, function and appearance takes up a large part of our clinical time. Conventional fixed restorations for single or multiple missing teeth require the elimination of non-replaceable sound enamel and may be difficult to maintain and construct. Removable restorations are bulky difficult to keep clean and can be dislodged by sticky food or muscular movement. The osseointegrated tooth root analogue offers an alternative, more conservative treatment option, when replacing single or multiple missing teeth. Where the vertical height, width and quality of the remaining alveolar bone are adequate, implant supported restorations are more predictable over an extended period of time. The oral / slide presentation highlights the Planning, Surgical and the Prosthetic stages of treatment for a 32 year old female with a missing upper right first premolar. The patient wanted a restoration that would satisfy her aesthetic and functional requirements, without damaging adjacent teeth and gingiva. In conclusion the clinical results of restoring single or multiple single missing teeth with implant supported restorations are shown and discussed.

**B09-3****CUTANEOUS SINUS TRACT OF DENTAL ORIGIN**

**M. Ciantar** Department of Dental Surgery, University of Malta Medical School G'Mangia Malta.

Case Report Persistently draining cutaneous sinuses in the region of the face and neck may be of odontogenic origin. Most often they mimic skin infections and are treated accordingly. However the source of infection i.e. a necrotic dental pulp is left untreated with the consequent reappearance of a facial or cervical sinus. This case report describes the clinical presentation, diagnosis and management of a 10 year old boy who was referred to the Dental Department following a two year history of a persistent cervical sinus.

**B09-4****CYSTS OF THE JAWS, THE MALTA EXPERIENCE.**

**G. Camilleri. J. Galea.** Dept. of Dental Surgery, University of Malta.

This study reviews the clinical, radiographic and histopathologic features of 459 cysts of the jaws, for the period 1955-1994, whose details are kept at the Department of Dental Surgery. The number of cysts has increased every decade (1955-64=43; 65-74=81; 75-84=138; 85-94=197). Although early records may have been deficient this is not the case for the last two decades. The percentage of radicular inflammatory cysts has not risen so that it cannot be attributed to more endodontic treatment. The cyst types are Radicular (including residual) 65%, Follicular 16%, Nasopalatine 7%, Odontogenic keratocysts 5%, miscellaneous 4%, no records 3%. The incidence of cyst types are largely similar to surveys abroad. The male/female ratio was 3:2, whilst age incidence was evenly spread with the majority (79%) in the 10-59 yr bracket.

The residual cysts were probably originally all of inflammatory radicular origin and these have been considered together. The ratio of residual to radicular cysts was similar in all decades (approx 20%) except the 55-64 decade when 42% were residual. 273 (73%) were in the maxilla and 55 (18.5%) in the mandible. There were no records for 24 radicular cysts. The male/female ration was 175/121.

There were 27 odontogenic keratocysts (6%). Three of these cases were suffering from the Gorlin-Goltz Syndrome (Basal cell nevoid syndrome). The greater number (13) were diagnosed in the 20-39 year group with a range of 6 year to 70. There was a definite recurrence of the cyst in 7 of 24 cases (29%). About half of the 77 follicular cysts were associated with maxillary canines (16) or mandibular third molars (22) with a male/female ratio of 48/26.

The nasopalatine duct cyst was usually noted in the older patient, the majority in the 6th decade with a M/F ratio of 16:13.

**B09-5****THE PREVALENCE OF INCISOR IRREGULARITIES IN 14 YEAR OLD MALTESE SCHOOL CHILDREN**

**S Camilleri, K Mulligan and A Pace Balzan.**

A random sample of 298 14 year old children was taken from State and Private schools in Malta and Gozo. The children were examined for number and condition of upper and lower anterior teeth, presence of crossbites with and without displacement, overjet, overbite, and signs of active orthodontic treatment. The results were compared to those of similar surveys abroad and show that while the general pattern of our occlusion is similar to the European, there seems to be a higher prevalence of anterior crossbite and ectopic permanent canines.

**B09-6****OSSEOINTEGRATED DENTAL IMPLANTS: A PARADIGM FOR ORO-FACIAL REHABILITATION.**

**G. Zarb,** Faculty of Dental Surgery.

The advent of the osseointegrated dental implant is largely an outgrowth of basic research and longitudinally documented clinical evidence. The technique has profoundly influenced dental practice and education, and a new era of therapy has emerged. This paper will seek to reconcile current interpretation of the osseointegrated response with published studies of clinical efficacy and effectiveness in diverse clinical situation.

**B11-1****MAGNETIC RESONANCE IMAGING IN OBSTETRICS.**

**I R Johnson.** Department of Obstetrics & Gynaecology, City Hospital, Nottingham.

In the last 10 years Magnetic Resonance Imaging (MRI) has become a well recognised imaging technique widely used in many areas of medicines. This has not been so in obstetrics because

of the difficulty of motional artefact and the moving fetus. A series of short papers have been produced from a variety of centres using conventional MRI mainly investigating fetal abnormality. Using conventional MRI very little extra information has been added to that obtained from ultrasound. The exceptions are to do with maternal anatomy and the precise positioning of the placenta in cases of placenta praevia. The expansion of MRI in to clinical practice in obstetrics has consequently not been extensive.

The development of echo-planar imaging (EPI) has allowed us to take a snapshot of the fetus, removing the problems associated with movement and allowing a more detailed study of the fetus. In collaborations between the departments of physics and obstetrics and gynaecology in Nottingham a series of pregnant women have been imaged at gestations between 18-24 weeks. Initially in all cases the pregnancies were deemed to be abnormal in some way, because of problems with the placental site, uterine anomalies, unexplained antepartum haemorrhage, intra uterine growth retardation or pregnancy induced hypertension. More recently ethics committees have allowed us to image normal volunteers during pregnancy. All patients have been imaged using the 0.5T superconductive magnet with the modulus-blipped echo planar sequence. The experiments have all been performed within the safety guidelines of the National Radiological Protection Board, and permission for each study has been obtained from local ethical committees.

In a series of studies on these patients total fetal volume has been measured and compared with birthweight. The correlation allows prediction of fetal weight with an accuracy of 3%. Individual fetal organs have also been measured and it has been demonstrated that prediction of intra uterine growth retardation is possible at an early stage. Analysis of three dimensional images of the fetus shows great promise in evaluating fetal and planning obstetrics care. Work currently in progress includes a longitudinal study of a cohort of women in normal pregnancy to establish accurate figures for normal growth of the fetus and its organs. At the same time, women with diabetes and pregnancy induced hypertension or growth retarded fetuses are being imaged. Investigation of blood flow in the placenta and the uterine arteries in normal and abnormal pregnancy is at an early stage. Spectroscopy of the fetus, even with EPI has problems with motional artefact, but these problems are being addressed and the potential for in vivo, non-invasive biochemical analysis still beckons.

#### B11-2

### EVALUATION OF SEA-BAND ACUPRESSURE DEVICE FOR EARLY PREGNANCY NAUSEA AND VOMITING

J. Mamo, M. Pace, D. Felice - Department of Obstetrics & Gynaecology, St. Luke's Hospital, G'Mangia, Malta.

**Introduction:** Nausea and vomiting in the first trimester of pregnancy is a common complaint. Psychological support and pharmacological methods of treatment are the mainstay of management. The use of non-pharmacological acupressure device is assessed.

**Aim:** A prospective trial was set up to assess the effect of a wrist band acupressure device in relieving early pregnancy sickness.

**Method:** 38 women presenting with severe nausea and vomiting in the first trimester of pregnancy were randomized into two groups. Group A was asked to apply a pair of wrist-bands (Sea-bands). Group B received no wrist-bands but were counselled and given dietary advice.

**Results:** In Group A, 11% needed anti-emetic drugs compared with 17% in Group B. There were no significant differences in the need for hospitalization.

**Conclusion:** Treatment for early pregnancy vomiting with seaband acupressure device reduces the need for pharmacological treatment.

#### B11-3

### TECHNIQUE OF SELECTIVE MYOMECTOMY AT CAESARIAN SECTION.

A. Armatys, M. Spiteri, J. Rapa, J. Mamo - Department of Obstetrics & Gynaecology, Gozo General Hospital, Victoria, Gozo.

**Introduction:** Myomectomy during Caesarean section presents two major challenges, namely minimisation of blood loss and prevention of post operative adhesions.

**Aim:** A specific surgical technique using a single vertical uterine midline incision is described.

**Method:** Thirty patients having a myomectomy during Caesarian section, were reviewed. The same technique was used in all patients.

**Results:** Reduction of post operative morbidity by a specific surgical technique was evident by no increase in post operative pyrexia. There was no increased need of blood transfusion compared with other Caesarian sections.

**Conclusion:** Removal of fibroids at Caesarian section is a safe procedure if performed in selected patients using the above specific surgical technique.

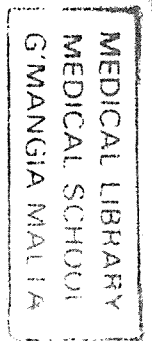
**B11-4****BIOPHYSICAL PARAMETERS AND DOPPLER FLOWS IN PATIENTS WITH ABNORMAL GLUCOSE TOLERANCE IN PREGNANCY**

I. Saliba, T. Micallef, G. Buttigieg, C. Portelli - Department of Obstetrics & Gynaecology, St. Luke's Hospital, G'Mangia, Malta.

A preliminary presentation of an ongoing study, in which patients with abnormal glucose tolerance in pregnancy (W.H.O. criteria) are recruited beyond 32 weeks of pregnancy and assessed at least weekly to delivery. On each occasion a Manning score is performed, fetal weight is estimated, the RI of the arcuate artery and the A/B ratio of the fetal umbilical artery measured as well as maternal blood glucose level. These results are then correlated to fetal outcome.

Results indicate that high maternal blood glucose levels correlate well with the expected findings of fetal weight above the 50th centile, large liquor pools and abnormal Doppler flows.

A liquor pool in excess of 7 cm and an RI of the arcuate artery of more than 6, have the highest ppv for abnormal fetal outcome. These findings may provide additional guidelines to the clinical situation in the management of patients with abnormal glucose tolerance.

**B11-5****OBESITY AND ITS OBSTETRIC IMPLICATIONS**

C. Savona Ventura, K. El Nahhal - Department of Obstetrics & Gynaecology, St. Luke's Hospital, G'Mangia, Malta.

Obesity has long been regarded as an obstetric hazard. This study identified 300 primipara patients aged 20-29 years who were classified according to the estimated pre-pregnancy Body Mass Index (BMI). The study population was sub-divided into the lean (BMI < 25kg/m<sup>2</sup>, n=189), the overweight group (BMI 25-29, n=73), and the obese group (BMI > 30, n=38).

The obese group had a statistically higher incidence of hypertensive disease ( $P < 1.0 \times 10^{-7}$ ) when compared to the lean group. They also had a statistically higher incidence of oedema ( $P = 1.0 \times 10^{-7}$ ), glycosuria ( $P = 0.004$ ), vaginal infections ( $P = 0.004$ ) and impaired glucose tolerance ( $P = 0.122$ ). There was no statistical difference in the incidence of a past history of a fetal loss, and a history of vaginal bleeding in the first two trimesters. Antenatal follow-up of the pregnancy in the obese group was more difficult requiring more frequent ultrasonic investigations. The obese group had a tendency towards a prolonged labour but there did not appear to be any difference in the mode of delivery. Infants of obese women had significantly lower 1 minute APGAR scores ( $p < 0.05$ ). These infants were significantly larger than those born to lean women. There was no increase in the incidence of post-partum problems.

**B11-6****REDUCING THE INCIDENCE OF BRACHIAL PLEXUS INJURIES IN OBSTETRIC PRACTICE 1990-1995.**

Y. Muscat Baron, M. P. Brincat, R. Galea, A. Muscat Baron. Department of Obstetrics & Gynaecology, St. Luke's Hospital, Malta.

Over a 10 year period (1980-1990) the incidence of brachial plexus injuries following obstetric trauma was 2.9 per 1000 live births. During the last five years (1991-1995) the incidence of brachial plexus injuries fell significantly to 1.3 per 1000 live births. A number of factors have been attributed to the significant decrease in the incidence of brachial plexus injuries over the last five years. Fastidious antenatal control (dietary and when required insulin) of gestational diabetics and overweight patients may have reduced the degree of macrosomia in these patients. The percentage of babies weighing 4000g and over in 1991-1994 was 10.2% of the baby population. More attention to abnormal labour patterns may have avoided difficult vaginal deliveries resulting in shoulder dystocia. A liberal policy of delivering macrosomic babies may have avoided a traumatic delivery. The Caesarean section rate for breech presentation has increased throughout the period 1980 to 1994. There were 13 breech deliveries in the period 1980-1990 which were complicated by brachial plexus injuries. One Erb's palsy occurred after a breech delivery during the years 1991-1995. The total Caesarean Section rate has increased from 9.7% in 1980 to 13% in 1994. Caesarean section is not without fetal complications. During this 15 year period there were 4 instances of brachial plexus injuries following abdominal delivery of macroscopic babies.

**B11-7****RECORDING OF SYMPHYSIS FUNDAL HEIGHT FOR DETECTION OF MACROSOMIA - Spiteri M.**

**P-001**  
**ANTIBIOTIC SENSITIVITIES OF HOSPITAL AND COMMUNITY ISOLATES IN THE MALTESE ISLANDS**

M. N. Borg, P. Cuschieri. Dept of Pathology, St. Luke's Hospital, Malta.  
The antibiotic sensitivities of the bacterial strains isolated at St. Luke's Hospital Bacteriology Laboratory within 1994 are presented. Resistance prevalence was highest from Gram negative bacteria, particularly members of the Enterobacteriaceae family. In comparison, high grade antibiotic resistance was rare in Gram positive bacteria. The highest resistance rates were found for ampicillin, trimethoprim and sulphonamides.

**P-002**  
**TRENDS IN SALMONELLA ISOLATES 1984 - 1994**

M.N. Borg, P. Cuschieri. Dept of Pathology, St. Luke's Hospital, Malta.  
The trends in isolation rates of Salmonella spp. at St. Luke's Hospital Bacteriology Laboratory over the ten year period 1984 - 94 are investigated together with the changes in species prevalence over the same time interval.

**P-004**  
**ROTAVIRUS GASTROENTERITIS IN CHILDREN: ANTIGEN DETECTION USING ENZYME IMMUNOASSAY TECHNIQUES**

A. Portelli, C. Barbara - Virology Laboratory, Department of Pathology, St. Luke's Hospital, G'Mangia, Malta.  
Rotaviruses are reoviruses which are the major cause of diarrhoeal illness in infants and children. Between 500 million to 1 billion cases of rotavirus infection have been estimated to occur worldwide per annum. About 50-60% of cases of acute gastroenteritis of hospitalised children are caused by rotavirus.  
A Study was carried out at the Virology Laboratory, St. Luke's Hospital, involving 1988 cases taken over the period 1990-1994. Stool specimens or rectal swabs from children up to the age of 5 years suffering from gastroenteritis were examined. Other age groups and patients without classical features of gastroenteritis were excluded from the study. 374 of the samples submitted were found to be reactive for rotavirus by enzyme immunoassay using specific antigen detection methods. The study also involved correlations of rotavirus infection according to age groups and seasonal variations.

**P-005**  
**YEAST INFECTIONS AND ANTIFUNGAL SUSCEPTIBILITY PATTERNS IN MALTA**

L. Vella\*, C. Barbara\*, P. Cuschieri\*, F. Todaro Luck\*\* - \*Department of Pathology, Microbiology Laboratory, St. Luke's Hospital, G'Mangia, Malta; \*\*Istituto di Microbiologia, Facolta di Medicina e Chirurgia, Universita' di Messina, Italia.  
This presentation is part of a larger two-year study, the aims of which are to assess the incidence of fungal infections in the Maltese Islands. This is a preliminary report involving 122 specimens taken during the period 1st May to 31st July 1995, from a total of 94 patients. A total of 130 different yeast isolates were cultured of which *C. albicans* was the most represented in 73.4% of all patients.  
The patterns of antifungal susceptibility show that there is no emergence of resistance to the polyenes and the commonly used azoles.

**P-006**  
**MOLECULAR ECOLOGY OF CRYPTOCOCCUS NEOFORMANS IN MALTESE ISLANDS**

Lo Passo C.\*, Pernice I\*, Gallo M.\*, Barbara C.ª, Todaro Luck\*\*, Criseo G.ª, Istituto di Microbiologia, Facolta' di Scienze\* and Facolta' di Medicina\*\*, Messina (Italy). Department of Pathology, Microbiology laboratory, University of Malta.  
*Cryptococcus neoformans* is the etiological agent of cryptococcosis, a rare disease of the nervous system, which has recently increased because of AIDS. This species is represented by two varieties and five serotypes with different geographical distribution and different epidemiological significance.

**Aim:** To elucidate the distribution of *C. neoformans* in Malta, the prevalence of serotypes and the genetic variation in both clinical and environmental strains.

**Methods:** Environmental samples and CSF were processed by conventional methods. Isolated strains were serotyped with monoclonal monofactorial antisera. DNA extraction was performed by a modification of Restrepo and Barbour's method. PCR-fingerprinting was performed by methods of Meyer et al. (1993) and Crampin et al. (1993). The oligonucleotide primers used were: the microsatellite DNA sequence (GTG)<sub>5</sub>, (GACA)<sub>4</sub>, and the phage M13 core sequence (GAAGGGTGGXGGTCT) in Meyer's RAPDs and 8 mer (GCGCACGG) in Crampin's method.

**Results:** Seventy-eight strains were recovered from pigeon droppings from several sites in Malta, and two from Eucalyptus tree. Clinical strains were isolated at St. Luke's Hospital from two fatal cases of meningeal cryptococcosis in AIDS patients. All strains were *C. neoformans* var. *neoformans* serotype A.

The random PCR of thirteen isolates, one for each geographical location, shows genetic diversity within this population of closely related strains despite an apparent homogeneity in the phenotypic characteristics. Genetic similarity between environmental and clinical strains from the same geographical area confirms the hypothesis that the pigeon droppings could be the source of infection.

#### **P-007**

##### **HISTOPATHOLOGICAL PRESENTATION OF OPPORTUNISTIC FUNGAL INFECTIONS IN THREE IMMUNOCOMPETENT HOSTS.**

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Opportunistic fungal pathogens have increasingly become a cause of both nosocomial and community-acquired infections in patients with underlying disease. Since the invasive form is rare in healthy hosts, we are presenting a collection of unusual fungal infections in immunocompetent patients. The hypothesis that a hot, humid climate, building works and the therapeutic use of corticosteroids could have been cofactors in the emergence of these infections is proposed. Corticosteroids not only affect the conidial activity of human macrophages, but also probably enhance the growth rate of some *Aspergillus* species.

The aim of this paper is to increase the awareness of the risk of systemic fungal infections in apparently previously healthy subjects.

**Case 1:** a patient with multiple infection characterised by disseminated zygomycosis, pulmonary invasive Aspergillosis and *Candida* colonisation.

**Case 2:** a patient affected by rapid, fatal, invasive pulmonary Aspergillosis. Both patients were immunocompetent, without any underlying disease. The diagnosis was made histologically following autopsy, with PAS and Grocott's special stains.

**Case 3:** a diabetic patient with a rare, localised mycotic keratitis due to a member of the taxonomic group of Zygomycetes.

The incidence of systemic fungal infection in Maltese patients is still under investigation. A close collaboration between clinician, microbiologist and histopathologist is essential.

#### **P-010**

##### **FIBROMYXOMATOUS TUMOUR OF THE LUNG - A DIAGNOSTIC AND A PROGNOSTIC PROBLEM. CASE STUDY**

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A 74 year old male smoker with longstanding chronic obstructive pulmonary disease presented with weight loss and a totally collapsed left lung. He subsequently sustained a tonic-clonic primary generalized seizure. A clinical diagnosis of disseminated malignancy was made. Bronchoscopy revealed a fibromyxomatous tumour in the left main bronchus with histological features suggestive of malignancy. A conservative therapeutic approach was adopted and he was discharged. He re-presented one year later, with a re-expanded left lung. At bronchoscopy, remnant original tumour tissue was visualized; biopsy revealed normal mucosa. It is assumed that the original tumour desloughed enabling re expansion of the lung. This case is being presented due to the rarity of such cases; in spite of having a histological diagnosis and carrying out the required investigations the wrong prognosis was considered. A 30 year literature search revealed a paucity of such cases with variable nomenclature. History, imaging and slides are presented and discussed.

#### **P-011**

##### **MYELODYSPLASTIC SYNDROMES IN THE MALTESE ISLANDS: A 5 YEAR STUDY.**

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**Aim:** Establishing the incidence of Myelodysplastic Syndromes and age distribution.

**Methods:** Cases of Myelodysplastic Syndrome diagnosed and recorded in the Department of Haematology in the period of 1990-1994.

**Conclusion:** We conclude that Myelodysplastic Syndromes incidence continues to rise into very old age. However, difficulties in case ascertainment hamper reliable estimates of true incidence.

P-018

**FIBROPTIC BRONCHOSCOPY - INDICATIONS, RESULTS AND PICK-UP RATES OF VARIOUS SAMPLING MODALITIES**

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An audit of the 328 fiberoptic bronchoscopies carried out by one respiratory physician [SM] at SLH in last 27mths [40.1% of all bronchoscopies in SLH in study period] was carried out in order to study the local picture of the indications, results and pick-up rates of various sampling modalities used during this useful procedure. Of these 328 bronchoscopies, 251 were carried out on males [age 12-90 yrs] and 77 on females [age 19-89yrs], with the 70-79 year old age group being the most prevalent in both genders. 76 [23.2%] of these bronchoscopies were carried out in the ITU setting, both as emergency therapeutic measures [common indications: lobar collapse, bronchial toilet for increased secretions] and as diagnostic procedures [better sampling for c/s]. All but two of the other bronchoscopies were carried out using Alfentanil as sedation and topical xylocaine as local airway anaesthesia. Unresolving pneumonias and CXR abnormalities were two of the commonest indications. In the case of haemoptysis only 9 out of the 46 patients referred with this indication proved to have a bronchial malignancy and all 9 had abnormal CXR and were smokers. In all there were 69 cases of malignant tumours diagnosed [23%] and these were Squamous cell Ca [42.1%], Small cell Ca [20.3%], Adenocarcinoma [14.5%], Large cell Ca [5.8%], Undifferentiated Ca [13%] and others [4.3%]; only 4 [5.8%] of these patients were deemed suitable for surgery. Bronchial brushings were used in 98.3% of all these bronchoscopies and yielded a positive result in 85.2% of the times while bronchial lavage was used in 82.7% and had a positive yield in 66.6% - these two methods were equally successful in central, segmental and peripheral airways. Biopsies were used in 60.3% and their +ve yield was 80%, but these were by far most useful in central lesions. Combination of these three sampling methods gave us a sensitivity of 98.9% as only 2 negative bronchoscopies were not confirmed by sputum and pleural aspirate. Transbronchial biopsies and Fluoroscopy-guided brushings were carried out 12 times and had a 41.6% +ve yield; however 2 of the negative samples were confirmed on percutaneous biopsy while in the others BAL gave some equivocal clues to diagnosis and prognosis.

P-019

**HOW USEFUL ARE OUR DIFFERENTIAL CELL COUNTS ON BRONCHOALVEOLAR LAVAGE FLUID (BAL) IN PATIENTS WITH INTERSTITIAL LUNG DISEASE (ILD)?**

**M.J. Ebejer - Department of Medicine, University of Malta.**

**Introduction:** BAL is increasingly being used to assess inflammation to aid diagnosis and management of patients with ILD. Its usefulness depends partly on the underlying disease, the technique and the expertise in interpretation. In this study, the quality of BAL fluid and its usefulness in demonstrating inflammation were evaluated.

**Method:** The BAL result of all patients with suspected ILD was assessed for volume instilled and recovered, differential cell counts, percentage bronchial epithelial cells, the site used and final diagnosis. Patients with neoplasia and infection were excluded.

**Results:** There were 42 cases (15 male), age range 12-78 years. Volume instilled ranged from 40-120ml (mean 70) and that recovered, from 10-50 ml (mean, 27). The middle lobe was used in 29 cases, right upper lobe in 3, the lingula in 2. In 8 there was no record. In 7, the sample was rejected because of low volume or high epithelial cell contamination. In the remaining 35 cases, cell counts were normal in 5, difficult to interpret in 3 and showed inflammation in 26 (62%). In 1 case it was diagnostic of alveolar haemorrhage. Of these 26 cases, 14 were neutrophilic, 8 lymphocytic, 3 macrophagic and 1 eosinophilic. The diagnoses included: cryptogenic fibrosing alveolitis, extrinsic allergic alveolitis, sarcoidosis and bronchiolitis obliterans organising pneumonia. In 4, no diagnosis other than ILD was made.

**Conclusion:** In our laboratory, BAL can indicate inflammation and cell type in 62% of cases. This could improve to 80% with better technique. When the 5 normal results and the 1 diagnostic case are included, then BAL was useful in 76% of cases. Interpretation and contribution to diagnosis and management should only be done in the context of full clinical information.

**P-021**

**A NEW DIAGNOSTIC METHOD FOR LEISHMANIA DONOVANI USING PCR.**

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The object of this study was to test a new method for the early detection of *L. donovani* using PCR. The designed PCR was based on the detection of the Lmet2 which is an imperfect 60-bp repeat sequence and is specific to *L. donovani* complex. Two PCR primers, Lmet2A and Lmet2B and a short capture probe, Lmet2P are used. Lmet2B and Lmet2P are labelled at the 5' ends with digoxigenin and biotin respectively during their commercial synthesis. Lmet2P is present throughout the PCR but does not take part in the reaction because the annealing temperature is too high for this oligonucleotide to bind to its target sequence. After PCR, any product is denatured and the temperature of the reaction is then dropped to allow Lmet2P to anneal to its complementary product sequence. After hybridization, the biotin label on the Lmet2P enables hybrids to be captured in avidin-coated microtitre plates. The captured hybrids are then detected with anti-digoxigenin alkaline phosphatase antibody conjugate by virtue of the digoxigenin labelled Lmet2B which were incorporated into the complementary strand of the PCR. Preliminary results have shown that this method is diagnostic for *L. donovani* in peripheral blood of mammalian hosts.

**P-022**

**CHARACTERISATION AND LOCUS ASSIGNMENT OF TWO (-GLOBIN VARIANTS FOUND IN THE MALTESE POPULATION: HB ST LUKE'S AND HB SETIF**

**S. Bezzina Wettinger, R. Galdies and A.E. Felice, Laboratory of Molecular Genetics, Dept of Pathology, University of Malta.**

Routine isoelectric focusing of blood from antenatal mothers and from all Maltese newborn shows that an (-globin variant is found in 0.2% of the Maltese population. One group of variants had a mobility that was close to Hb S, another group was slightly more cathodal than Hb S. A select group of variants were studied further. Variant haemoglobins were quantified and isolated using anion-exchange chromatography on DEAE-cellulose columns and glycine-KCN-NaCl developers. The variants with mobility similar to Hb S had % Hb Ax +Hb A2x of around 12%, the other variants were expressed at around 17%, but one had a level of only 6%. Tryptic maps were produced by reverse-phase HPLC separation. In one sample the a-T11 peptide gave rise to two peptides of different mobility, one is more hydrophilic, the other is slightly more hydrophobic than the normal a-T11. This would be expected for Hb St Luke's. In the other variant, the aT-11 peptide had a slightly shifted mobility. Selective amplification of the a-globin genes was carried out, followed by dideoxy DNA sequencing. One type of variant had a CCG to CGG transition in codon 95 of the a1-globin gene, giving rise to Hb St Luke's. Another type of variant had a GAC to TAC transition in codon 94 of the a2-globin gene, resulting in Hb Setif. Rsa I restriction enzyme digestion of a2-globin genes from samples with Hb Setif confirmed this mutation. A co-existant b-thalassaemia decreases the level of Hb Setif from around 17% to 6%. One sample with Hb Setif and co-existant b-thalassaemia still maintained a level of abnormal haemoglobin of 17%. Restriction enzyme digestion showed that no normal a2-globin gene was amplified by PCR in this sample, suggesting the co-existence of an a-thalassaemia. These data show that the Hb St Luke's mutation in the Maltese population is found on the a1-globin gene, whereas the Hb Setif mutation is found on the a2-globin gene. The data obtained thus far indicate that the different levels of expression of the variant haemoglobins depends on post-translational interplay between protein stability and assembly of heteropolymers, rather than on the differential expression of the a1- and a2-globin genes.

**P-025**

**FIRST REPORTED CASE OF MODERATELY SEVERE APLASTIC ANAEMIA (AA) TREATED WITH IMMUNOSUPPRESSION AT ST. LUKE'S HOSPITAL, MALTA**

**C. Azzopardi, F.F. Fenech - Department of Medicine, St. Luke's Hospital, G'Mangia, Malta**  
**Subject:** 42 year old female with moderately severe idiopathic AA without a sibling bone marrow donor.

**Treatment:** Intravenous antilymphocyte globulin followed by oral cyclosporin-A continued for a total of six months and tailed off gradually.

**Result:** Near correction of all myeloid elements in the peripheral blood after few weeks of starting treatment.

**Progress:** Sustained response of blood count one year after withdrawing cyclosporin-A.  
**Conclusion:** Patients with moderately severe and severe AA for whom bone marrow transplantation is not possible can be treated with immunosuppression. This is the first reported successfully treated patient in Malta.

P-026

#### ISSUES IN THE DIAGNOSIS AND MANAGEMENT OF ESSENTIAL THROMBOCYTHAEMIA

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Essential Thrombocythaemia (ET) is a clonal myeloproliferative disorder characterized by an uncontrolled rise on peripheral platelet count. Recently, we observed two young patients with ET including a male with coronary disease needing bypass surgery. The aim of this report was to determine the clinical and laboratory data of this disease over a 10-year period at St. Luke's Hospital. ET has a low frequency in Malta. A definitive diagnosis of ET at initial diagnosis is seldom possible. The criteria of the Polycythaemia Vera Study Group for the diagnosis of ET are provided, as are the clinical and laboratory features that help to distinguish ET from reactive thrombocytosis. ET patients have a significantly increased risk of thrombohaemorrhagic complications, either at initial examination or at follow-up. A major controversial issue in the management of patients with ET is the determination of which patients require specific therapy.

P-030

#### THE USE OF FISH IN THE DIAGNOSIS OF ATYPICAL AND CLASSICAL WILLIAMS SYNDROME

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A small pilot study has been carried out in order to assess the reliability of the detection of hemizygosity at the elastin locus by fluorescence in situ hybridisation (FISH) analysis, as a diagnostic test in both atypical and classical cases of Williams syndrome (WS). Five individuals with WS and five others in whom a diagnosis could not be confirmed on clinical criteria alone, were evaluated. Hemizygosity at the elastin locus by FISH analysis was detected in all classical Williams syndrome cases and in three of the five atypical individuals. Furthermore, a combination of a few specific facial features found to be present in all individuals with the elastin gene hemizygosity, has been suggested to aid the index of clinical suspicion. Acknowledgements We would like to thank the patients and their parents for their co-operation in this study. The confocal laser microscope attachment was provided by the Medical Research Council as part of the Human Genome Mapping project. FISH (fluorescence in situ hybridisation) is a relatively new technique which allows the characterisation of chromosomal aberrations through the application of molecular genetic technology on the chromosomal level.

P-033

#### A FURTHER CASE OF DANDY-WALKER MALFORMATION, CYSTIC DYSPLASTIC KIDNEYS AND CONGENITAL HEPATIC FIBROSIS: POSSIBLY A NEW SYNDROME

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We present a further report of a child with Dandy-Walker malformation, cystic dysplastic kidneys and congenital hepatic fibrosis. The proband, the first child of non-consanguineous parents, was born at 34 weeks gestation by spontaneous vaginal delivery. He died 4 hours after birth. Prenatal ultrasonography had shown a cyst in the posterior fossa of the brain, small echogenic kidneys and oligohydramnios. At birth, facial dysmorphism and flexion deformities of the limbs were noted. Neonatal ultrasonography confirmed the presence of a large cyst in the posterior fossa of the brain. The diagnosis was established after histological examination which revealed cystic renal dysplasia and typical congenital hepatic fibrosis in an otherwise normal looking liver. These findings are strikingly similar to the other 5 reported cases from Japan and Australia. The importance of a thorough histological examination at autopsy, in cases with ultrasound evidence of kidney and central nervous system malformations, is highlighted. Acknowledgements We would like to thank Ms T. Micallef for the ultrasound pictures.

**P-036**

**WARDENBURG SYNDROME PRESENTING AS PRIMARY AMENORRHOEA IN TWO SISTERS**

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The Waardenburg syndrome (WS) is an autosomal dominant inherited disorder. Clinically WS is classified into type 1 and type 2 on the basis of the presence or absence, respectively, of dystopia canthorum. WS1 has been mapped to the distal part of chromosome 2q and the gene identified as PAX 3. The first case was referred for chromosome analysis after investigations for primary amenorrhoea had revealed Mullerian (paramesonephric) hypoplasia. She was noted to have features of WS type 1 but denied a positive family history for WS and primary amenorrhoea. Four months later her 14 year old sister was referred for chromosome analysis in view of the same complaint and findings. She too was found to have features of WS1. Their karyotypes were found to be normal. There have been many reported cases of WS1 with other associated congenital anomalies. A review of the literature has revealed only one previously reported case of absence of Mullerian structures in a patient with WS1. Although WS1 and Mullerian Aplasia are described as separate autosomal dominant conditions, it is unlikely that both these conditions have been independently inherited in these two sisters. This associated congenital anomaly in WS1 might shed further light on the expression pattern of the PAX 3 gene in the embryo and adult.

**P-040**

**IGA NEPHROPATHY IN MALTA: A CLINICOPATHOLOGIC STUDY**

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IgA Nephropathy (IgA-N) is the commonest primary renal disease world-wide but no data is available in Malta. Aim: To study frequency, clinical and pathological features of IgA-N in Malta. **Methods:** 29 patients (4 in 1989, 25 in 1993-95) with biopsy-proven IgA-N were retrospectively identified and their records abstracted. **Results:** 18 males and 11 females had a mean age of 44 years at time of biopsy. At biopsy, all patients had an abnormal urinalysis; >1G/day proteinuria was found in 44% of males and 64% of females. A classic history of synpharyngitic haematuria was present in only 28% of males and in only 1 (9%) female. High blood pressure (62%) and elevated serum creatinine (52%) frequently coexisted. Light microscopy revealed typical mesangial cell and matrix expansion with varying degrees of global and segmental glomerulosclerosis. In 4/29 patients, crescentic change involving 20-57% of all glomeruli was also evident. Immunoperoxidase staining revealed granular mesangial deposits of IgA in 100%, IgG in 52%, IgM in 41%, C1q in 37% and C3 in 33%. All patients had mesangial dense deposits on electron microscopy and 27% had glomerular basement membrane deposits as well. Although with a short follow up, 3 (10%) of patients progressed to endstage renal failure requiring dialysis. **Conclusion:** IgA-N is a common diagnosis in nephrological practice, that can present in a variety of clinical syndromes. The renal prognosis is guarded in patients who exhibit heavy proteinuria, elevated creatinine or hypertension.

**P-042**

**ANTI-NEUTROPHIL CYTOPLASMIC ANTIBODY (ANCA) IN IGA NEPHROPATHY**

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ANCA with a perinuclear staining pattern are most often associated with small-vessel vasculitis such as microscopic polyarteritis. ANCA are predominantly of IgG class although IgA ANCA has been observed in a small number of Henoch-Schönlein Purpura (HSP) sera but not in IgA Nephropathy (IgA-N). We reviewed the medical records of all p-ANCA positive cases and found three patients with IgA-N. Case 1: 27 year old female with biopsy-proven crescentic IgA-N progressed from a serum creatinine of 111  $\mu\text{mol/l}$  to endstage kidney failure over 30 months. p-ANCA was persistently positive at a titre of 1:640. Isotype analysis at a different lab disclosed >1/320 IgG ANCA, 1/320 IgM ANCA, and 1/320 IgA ANCA. The patient is doing well on CAPD. Case 2: 73 year old male presented with palpable purpuric rash and leucocytoclastic vasculitis on skin biopsy. Because of a mildly raised creatinine, an active urinary sediment and a positive p-ANCA, a renal biopsy was performed which showed segmental necrotizing glomerulonephritis and arteriolitis. Immune staining revealed dominant granular IgA deposits. Steroids were employed with stabilisation of renal function. Case 3: 55 year old female presenting with 2 g/day proteinuria and normal renal function was found to have persistently positive 1/40 p-ANCA. Systemic features were absent. Renal biopsy showed mesangial IgA deposits and one crescent. A six-month course of low-dose steroids considerably diminished her proteinuria. In conclusion, IgA nephropathy complicated by crescents and small vessel involvement, as well as HSP, should be added to the list of causes of a positive p-ANCA.

## RAYNAUD'S PHENOMENON CAUSED BY GIANT CELL ARTERITIS

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Giant cell arteritis can produce a wide variety of manifestations which can be systemic or arteritic, the latter being due to ischaemia or necrosis of structures supplied by the involved vessels. Headache is the best known symptom, while blindness from ocular involvement is the most dreaded complication. Involvement of the subclavian vessels, sometimes with Raynaud's phenomenon, has been uncommonly described. One such patient is presented.

**Case Report:** A 69-year old female patient presented with a 6 month history of myalgia, generalised arthralgia and morning stiffness but no headaches. She recently developed Raynaud's phenomenon in her left hand. Clinical examination was unremarkable but arterial pulses in both upper limbs were absent. The temporal arteries felt normal. Erythrocyte sedimentation rate (ESR) was high (120 mm); no antinuclear antibodies or cryoglobulins were detected. Arch aortogram showed subtotal occlusion of the subclavian arteries and focal stenoses of the internal mammary and vertebral arteries. Temporal artery biopsy showed an infiltrate of inflammatory cells including giant cells and luminal obliteration in keeping with giant cell arteritis. The patient was treated with prednisolone in an initial dose of 60 mg daily. Symptoms, including those of Raynaud's phenomenon, settled since starting treatment and ESR went down to 25 mm.

### Conclusion:

1. Temporal arteritis can produce a wide range of symptoms and diagnosis requires a high index of suspicion.
2. Biopsy of clinically 'normal' arteries can show typical vasculitic changes.

### P-044

#### APATITE-ASSOCIATE DESTRUCTIVE ARTHROPATHY

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Hydroxyapatite crystals may be associated with a number of clinical entities ranging from calcific peri-arthritis to acute synovitis, chronic monoarthritis and apatite-associated destructive arthropathy or the 'Milwaukee shoulder' syndrome. (MSS). The major feature of MSS, first described in 1981, is the severe destructive nature of the disease. It predominantly affects females over 70 years, who characteristically present with a short history of pain, swelling and impaired function of affected joint. The shoulder joint is the site of predilection though knees, ankles, hips and elbows may be involved. The disease results in extensive damage to cartilage and subchondral bone. Our patient was a 70 year old female who in 1991 presented with pain and stiffness in her left knee and right shoulder. There was swelling, crepitus and subluxation at the knee while right shoulder movements were reduced and painful. The diagnosis of MSS was based on the following reasons: the short history from onset of symptoms to severe joint damage the particular joints involved the severe destructive changes seen on X-rays in the affected joints knee aspirate showing scanty leukocytes, abundant erythrocytes but no crystal synovial biopsy showing necrotic material with areas of calcification and bone formation. Identification of apatite crystals in synovial fluids is difficult because of the lack of a simple reliable analytic procedure. However searching for apatite and other BCP crystals is rarely of any clinical value.

### P-052

#### CONSTITUTIONAL MUTATION IN EXON 8 OF THE P53 GENE IN A PATIENT WITH MULTIPLE TUMOURS: MOLECULAR AND IMMUNO HISTOCHEMICAL FINDINGS

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We report a constitutional mutation of codon 273 in exon 8 of the p53 gene. The affected individual developed a series of multiple independent malignant tumours - Hodgkin's Disease, Adenocarcinoma of the stomach and large intestine, and squamous cell carcinoma of the lung. He and his family had some but not all the features of the Li-Fraumeni Syndrome. His mother and sister had multiple tumours and died at an early age.

**Objective:** To identify and characterise the gene mutation in tumour and peripheral blood lymphocytes.

**Methods:** Amplification of lymphocyte and tumour DNA from the index case was performed using the PCR reaction, SSCP analysis and direct sequencing. Immunohistochemical staining for p53 was performed using a streptavidin - biotin-peroxidase system.

**Results:** The mutation was found in blood lymphocyte and lung carcinoma. It was identified as a cytosine to thymidine (C-T) transition at codon 273 of exon 8 of the p53 gene, resulting in an amino acid change from arginine to cysteine. We also demonstrated the same C-T mutation at codon 273 in formalin fixed tissues from previously removed tumours, indicating

mutation at codon 273 in formalin fixed tissues from previously removed tumours, indicating that the mutation was constitutional and probably transmitted through the germline. All tumours showed immunohistochemical positivity with three antibodies to the p53 protein. However, lymphocytes from the index case were negative indicating that p53 staining may not be unique for constitutional p53 mutations.

**P-059**

**CASE PRESENTATION: TWO CASES OF BILATERAL ONCOCYTOMA.**

**S. Mattocks, S. Gniadzik, P. Zammit, C. L. Cutajar.**

Renal oncocytoma is a less well known form of renal cancer. When it occurs bilaterally it is very rare and only a small number of cases are described world-wide. This report deals with two separate cases of bilateral oncocytoma occurring within a few months of each other. In these cases the important point to note is that nephron sparing surgery was carried out with success in one of the patients and both are alive today.

**P-060**

**HIGH INCIDENCE OF HYPERTENSION AT PRESENTATION IN CHILDREN WITH ACUTE LYMPHOBLASTIC LEUKAEMIA.**

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Though hypertension is known to be a complication of acute lymphoblastic leukaemia (ALL), its true incidence in this disease is unknown. In this study the blood pressure profiles in all children newly diagnosed with ALL were reviewed over an 18 month period. Hypertension was defined as a daily mean diastolic blood pressure (BP) above the 95th percentile for the patients' age and gender. Fourteen (46%) from a total of 30 patients were found to be hypertensive at presentation (n=8) or during induction chemotherapy (n=6). In those with an elevated BP at presentation, chemotherapy aggravated the hypertension. Four patients, all with hypertension, had renal enlargement on the initial ultrasound scan. This returned to normal once haematological remission was achieved. One patient without hypertension had bilateral renal enlargement, but this persisted despite achieving remission. A patient with significant hypertension were normotensive at follow-up, 2-18 months after induction chemotherapy. The presence of hypertension prior to therapy and its association with renal enlargement suggest that the leukaemic process itself, rather than chemotherapy, is an important aetiological factor. In all cases therapy aggravated or unmasked the elevation in BP. Considering the high incidence of susceptible patients, increased awareness and prompt management may avoid possible life-threatening complications.

**P-061**

**INTERNAL TIP POSITION IS A MAJOR DETERMINANT IN THE CORRECT FUNCTIONING OF CENTRAL VENOUS CATHETERS IN CHILDREN.**

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Central venous catheters (CVC) have improved the management of children with malignant disease. However, they may be associated with complications including inadequate blood sampling. The latter may be due to intraluminal blockage with thrombus and formation of a terminal fibrin cuff. In addition, apposition of the tip against the venous endothelium may result in a 'ball valve' effect especially in small lumen vessels. An audit of 151 central venous catheters (CVC) in 118 children with malignant disease was carried out over 20 months. 31 valved polyurethane (Cuff0Cath) were inserted for chemotherapy, total parental nutrition and venous access. There was no difference in clinical diagnosis between the three groups. The mean age of catheter insertion was 5.5 years and mean weight 21.6kg. None of the catheter types were associated with an increased risk of problems at insertion, migration, mechanical damage, blockage, sampling or catheter infection. For the whole group, the incidence of catheter infection was 1.4/1000 catheter days. Exit site infection was less frequent in Groshong CVC's (p<0.05) which were in situ for the shortest period. The risk of problems with blood sampling was significantly increased in catheters whose internal tip was sited outside the right atrium (RA, p<0.005). The risk increased the further the tip was positioned away from the RA. For the 60 CVCs removed electively, the mean duration in situ was similar for all catheter types. 43 were removed following a problem. Of these, Groshong were in situ for the shortest

period ( $p < 0.05$ ), probably due to delayed anchoring of the cuff. No particular catheter showed an added advantage. However, the internal tip position was the single most important determinant in their correct functioning, irrespective of the catheter type. Intraoperative screening of this position at the time of insertion is therefore mandatory.

P-062

### SMOKING AND CILIARY FUNCTION IN GLUE EAR

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Mucociliary function is essential for the clearance of middle ear effusions. There is conflicting epidemiological evidence, however, as to whether exposure to tobacco smoke plays a significant role in the persistence of glue ear. Samples of middle ear mucosa from 33 patients with persistent otitis media with effusion (OME) were taken at myringotomy, together with corresponding nasal brushings. The aim of this study was to observe the mean ear ciliary beat frequency (CBF) and to compare with nasal ciliary function. Nasal brushings were collected from 33 age and sex matched non-smoking controls with no history of nasal atopy or topical nasal treatment, while to establish the norm in ear:nasal ciliary function, 5 patients undergoing stapedectomy were sampled.

Ear CBF in OME was significantly reduced in comparison to matched nasal samples ( $p < 0.01$ ). Ear CBF in OME patients who smoked or who were passive smokers was significantly less than in patients who were not exposed to cigarette smoke ( $p < 0.01$ ).

Cotinine is one of the main metabolites of nicotine. It is stable and *in vivo* has a relatively long circulating half life. Nasal ciliated cells from non-smoking controls were exposed *in vitro* to concentrations of cotinine corresponding to levels in active and passive smokers. Mean CBF of cells in cotinine decreased significantly in comparison to control cells in buffered saline solution. It is concluded that cotinine in active or passive smoking has a marked effect on ciliary function.

P-063

### SUCCESSFUL OUTCOME AFTER PROLONGED ANURIA IN A 3-YEAR OLD BOY WITH HAEMOLYTIC-URAEMIC SYNDROME (HUS)

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**Introduction:** HUS is a major cause of renal failure in children and is strongly associated with exposure to *E. Coli* 0157:H7. Duration of anuria was the best predictor of disease at follow-up, with no patients who had anuria lasting longer than 8 days escaping chronic disease (Siegler et al., *J. Ped.*, 1990). We report the first confirmed case of HUS in Malta, which was also characterised by prolonged anuria. **Case Report:** A 3-year old boy was brought to Casualty unconscious and seizing, following a four day history of diarrhoeal illness, fever and increasing lethargy. He had been anuric for the previous 24 hours. Initial laboratory results showed anaemia (Hb: 9.5 g/dl), thrombocytopenia (91,000/cu.mm), hyponatraemia (Na: 120mmol/l), and renal failure (creatinine: 440  $\mu$ mol/l). After initial resuscitation, a Tenckhoff catheter was placed in the peritoneal cavity, and acute peritoneal dialysis commenced with 20ml/kg hourly exchanges. Percutaneous renal biopsy on day 5 of hospitalisation revealed fibrin in all arterioles, 4/17 infarcted glomeruli, and segmental and diffuse glomerular thrombosis. Tubules showed focal cellular or complete necrosis. Despite an improvement in general condition, complete anuria persisted for 14 days, followed by a slow return of urine production and renal function. Dialysis was discontinued on day 24. Serum creatinine on hospital dismissal and at one month were 120  $\mu$ mol/l and 56  $\mu$ mol/l respectively. Two years later, the boy shows perfectly.

P-064

### MORTALITY FROM CONGENITAL HEART DISEASE IN THE MALTESE ISLANDS:

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**Introduction:** In the last three decades, tremendous progress has been achieved in the diagnosis and treatment of congenital heart disease (CHD). Advances in the management of CHD should be reflected by positive changes in the cause-specific mortality rates. These are available for the Maltese Islands since the turn of the twentieth century. The present study identifies and follows the changes in cause-specific mortality rates from CHD in the Maltese Islands.

**Material and Methods:** The annual number of deaths caused by CHD subdivided according to patient age was collected from various annual publications.

**Results:** The annual specific mortality rates show a definite decrease in mortality from CHD since the 1950s. The rates before the Second World War appear to be lower than for the post-

war period. This almost certainly reflects diagnostic factors, with less cases being identified as dying from CHD in the pre-war period.

**Discussion:** The specific mortality rates for CHD demonstrate a definite decline in the overall mortality from CHD over the past decades. This decline which appears to have started in the 1950s does not yet show any signs of levelling off. It may have been caused by a number of factors both local and world-wide. It is hoped that further improvement of care over the coming years will continue to diminish the mortality from CHD

**P-067**

**IMMUNE COMPETENCE AND CHEMOPROPHYLAXIS IN OTITIS MEDIA WITH EFFUSION**

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Despite extensive, and often elaborate, research the pathogenesis of otitis media with effusion remains far from clear. Several factors have long been recognised as collectively favouring the establishment of the condition. The final clinical outcome is probably the net result of an interaction between the individual and the environment. In this study immunological aspects of the problem are treated and a potential relationship between IgA levels and bacterial presence in the effusion is explored. Samples of the effusion, obtained during therapeutic myringotomy were submitted for culture and IgA assay. The results showed a steady rise in effusion IgA and a corresponding decline in bacterial presence, with increasing patient age. These observations are interpreted in terms of a condition of physiological immaturity of the immune system in younger patients leading to lower IgA levels and, consequently, to the creation of conditions favouring bacterial growth. The therapeutic implication of these conclusions would be that, in aborting the development of otitis media with effusion, chemoprophylaxis as the sole therapy may be indicated only in younger patients (aged 2 -3 years).

**P-100**

**TRANSIENT REGIONAL OSTEOPOROSIS OF PREGNANCY**

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The syndrome of transient regional osteoporosis is rare and of unknown etiology. It is more common in previously healthy middle-aged men and women in the third trimester of pregnancy. The hips are most commonly affected, though other sites, particularly in the lower limbs, may be less commonly involved. Case report: A 43 year old female, in her 35th week of pregnancy, presented with a 10 week history of pain and swelling in her right knee. Clinically there was swelling, mild tenderness, reduction in range of movement of right knee and inability to walk. Radiological examination showed patchy osteoporotic change in both patellae, ankles and metatarsal regions. Blood counts, liver function tests, renal function, serum calcium and phosphate, serum protein electrophoresis were all normal. The patient was treated with calcitonin injections 100 units, 3 times weekly for 1 month. Four months post-partum, the patient was asymptomatic, clinically normal and walked unaided. Radiological evaluation showed marked improvement in bone appearances. The purpose of this case presentation is to draw the physician's awareness to the existence and prognosis of transient regional osteoporosis, recognition of which may prevent unnecessary investigative procedures and treatment. An update on the latest literature on the subject is also presented.

**P-104**

**SUBCUTANEOUS OF BUPIVACAINE VERSUS LOCAL NERVE BLOCK IN POST CAESAREAN SECTION PAIN CONTROL**

**M. Farrugia, J. Mamo, M. Pace, D. Felice, M. Brincat, Obstetrics and Gynaecology Department, Malta.**

**Introduction:** Infiltration of a local anaesthetic agent has been associated with improvement in post operative analgesia.

**Aim:** A randomised prospective study using Bupivaine was set up to assess the effects on mobility and the need for opioid analgesia.

**Method:** Patients undergoing caesarian section were randomized into two groups. Group 1 (n=23) received ilio-inguinal nerve and iliohypogastric nerve block. Group 2 (n=25) had local wound edge infiltration. The amount of bupivacaine was the same in both groups. Degree of pain was assessed by the amount and frequency of analgesia requested. All women received the same type analgesia (pethidine). Mobility was assessed by the ability of the woman to move post-operatively. Using a visual analogue score the degree of pain was rated by the patient while being assessed by an anaesthetist post-operatively.

**Results:** Patients in group 1 needed significantly less opioid analgesia post-operatively. Local nerve block with bupivacaine is an effective method of reducing the need for opioid analgesia after caesarian section.

**P-105**

**BRUCELLA MELITENSIS INFECTION IN PREGNANCY**

**Y. Muscat Baron, A.P. Scerri, F. Bonello, D. Felice, M.P. Brincat - Department of Obstetrics & Gynaecology, St. Luke's Hospital, G'Mangia, Malta.**

During this year's summer epidemic of Brucella Melitensis four women were diagnosed at St. Luke's Hospital as having contracted this infection during pregnancy. These patients were admitted with symptoms of night sweats, rigors, lethargy and generalised weakness. Blood cultures taken during spikes of temperature revealed Brucella Melitensis and antibody titres of up to 1:2560 dilutions for this organism were obtained. In three patients diagnosis occurred early in pregnancy at 6, 10 and 18 weeks of gestation. The fourth was diagnosed at 26 weeks of gestation. The patient with 18 weeks gestation had a twin pregnancy. At the time of submitting this abstract the patient with 6 weeks gestation had just been diagnosed as having brucellosis. A combination of Cefotaxime intravenously together with Rifampicin for a total of 6 - 8 weeks was used to treat the infection. Response to treatment occurred within one week of starting antibiotics. Rifampicin had to be stopped after three weeks in all three patients having this antibiotic due to significant increases in liver transaminases. The Rifampicin was replaced by a sulphonamide. Clinical examination revealed satisfactory fetal growth. Serial ultrasound scan, doppler flow studies and cardiocography confirmed satisfactory fetal well-being.

**P-114**

**AMBULATORY TENS VERSUS WARM WATER BATH DURING THE FIRST STAGE LABOUR.** J. Mamo, M. Attard, A. Gauci, M. Spiteri, A. Armatys, Gozo General Hospital, Obstetrics and Gynaecology Department.

**Aim:** Comparison of two methods of management of pain relief on the first stage of labour.

**Method:** Women in spontaneous labour were randomized in two groups. Twenty women in group A were offered the use of TENS and encouraged to walk during the first stage of labour. The intensity of the TENS was regulated by the woman herself. In group B (no=20), the first stage of labour was managed in a bath of warm water.

**Results:** The length of the first stage of labour was similar in both groups. The women in Group A felt more in control during the first stage.

**Conclusion:** Management of the first stage in water tends to reduce the need for analgesia.

**P-115**

**TRANSCUTANEOUS ELECTRICAL NERVE STIMULATION REDUCES OF POSTCAESARIAN SECTION PAIN.**

**J. Mamo, A. Gauci, M. Attard, S. Mifsud, A. Armatys, M. Pace, D. Felice.**

**Aim:** Transcutaneous electrical nerve stimulation (TENS) was compared with bupivacaine wound infiltration as a method of post-caesarian section analgesia.

**Method:** Women undergoing elective caesarean section were randomly assigned into three groups. Group 1 (n=18) were administered TENS; Group 2 (n=22) had local wound infiltration with bupivacaine; Group 3 (n=21) were controls. TENS was applied to the wound edges for 30 minutes every three hours.

**Results:** show that in the TENS group there was a significant increase in the rate of early mobilization, and an increased rate of breast feeding. A reduction is noted in postoperative narcotic analgesia in the group using TENS compared to the bupivacaine group.

**Conclusion:** Transcutaneous electrical nerve stimulation is a simple, effective, inexpensive method for postoperative analgesia. TENS increases early mobilisation and reduces the need for narcotic analgesia.

**P-116**

**WOMEN'S EXPECTATIONS DURING PREGNANCY AND PARENTCRAFT PREPARATION IN A SMALL ISLAND.**

**J. Mamo, C. Borg, J. Formosa, D. Mamo, M. Attard, A. Gauci, M. Spiteri.**

**Introduction:** Little information was available on how much preparation pregnant women in Gozo expect and receive.

**Aim:** Assessment of expectations and provision of parentcraft of pregnant women in Gozo.

**Method:** Fifty pregnant women were interviewed to assess their expectations during pregnancy and delivery. A questionnaire assessed also about other safety precautions.

**Results:** Less than half of primigravidae attend parentcraft classes 90% of primigravidae planned to breastfeed whilst only 50% of multigravidae intended to try. Most women would like help with breastfeeding and would welcome postnatal exercises on the ward after delivery. Regarding induction of labour, 80% primigravidae and 60% of multigravidae would prefer to avoid being induced. Most prefer not to use analgesia apart from entonox and pathidine, but four asked for an epidural. Although 50% had already bought a car seat only one wore a seat belt.

**Conclusion:** The need for parentcraft is noted. Women need more encouragement with breast feeding.

#### **P-118**

##### **BODY IMAGE IN THE POSTPARTUM WOMAN.**

**M. Spiteri, M. Attard, A. Gauci, D. Mamo, C. Muscat, T. Melillo, M. Pace, J. Mamo.**

**Introduction:** During pregnancy and parturition there are alterations in the female body. These may have profound effects on the body image, sexuality and relationships.

**Methods:** A study was set up to assess the feelings of women in the puerperium about their body image. 200 women were interviewed on the postnatal ward.

**Findings:** Although 68% of post partum women felt unattractive during pregnancy, the main reason for reduced coital activity was fear by partner (80%) of harming the pregnancy. Most third pregnancies were unplanned, but still there was a low rate of contraception. Most women who planned to breastfeed believed that their breasts would go back to shape. Breast feeding was felt to be a good way to lose weight. Only 20% thought they would never get into shape. Most women planned to exercise or join an aerobics class to get back into shape.

**Conclusion:** Perception of body image is somewhat changed during the early postpartum days, but most women are determined to return to normal.

#### **P-119**

##### **REVIEW OF MYOMECTOMY AT THE TIME OF CAESARIAN SECTION.**

**A. Armatys, M. Spiteri, J. Rapa, J. Mamo - Department of Obstetrics & Gynaecology, Gozo General Hospital, Victoria, Gozo.**

**Introduction:** Patients who have fibroids concomitant with pregnancy may need a Caesarean section.

**Aim:** To assess whether there is an increased post operative morbidity in patients who undergo a myomectomy at the time of Caesarian section.

**Method:** A review of thirty patients presenting with fibroids at Caesarian section compared with controls. Selection of patients for myomectomy is done according to size and location of fibroid.

**Results:** Ten out of the thirty patients had fibroids larger than 4cm diameter. Ten had multiple small fibroids. Myomectomy was uneventful in all patients with no significant increase in post operative pyrexia, inpatient stay and rate of blood transfusion.

**Conclusion:** Myomectomy at Caesarian section is a safe procedure which reduces the need for another laparotomy.

#### **P-122**

##### **BONE DENSITY AND SKIN THICKNESS CHANGES IN PATIENTS ON CHRONIC STEROID THERAPY TREATED WITH HORMONE REPLACEMENT THERAPY**

**Y. Muscat Baron, M.P. Brincat, R. Galea - Department of Obstetrics & Gynaecology, St. Luke's Hospital, G'Mangia, Malta.**

Chronic steroid therapy is complicated by osteoporosis and generalised thinning of the skin. These two complications of long term steroid therapy are routinely assessed at the menopause clinic of St. Luke's Hospital. This unit is equipped with a dermal skin thickness machine (Osteoson D III) and a bone densitometer (DEXA Norland XR36).

The cross sectional study (n=64) showed that steroid therapy was associated with the thinnest skin measurements obtained for all patients screened at the menopause clinic. Similarly low bone density measurement were obtained for patients on long term standing therapy. In fact, 12 patients had sustained single or multiple fractures.

Since the establishment of the bone density unit 11 patients who had been on long term steroid have been followed up after the administration of oral hormone replacement therapy (Premarin Prempak C 0.625 mg). This prospective study revealed a constant increase in skin thickness (6% per year) and bone density (left hip 3%, Lumbar spine 4%).

**P-123**

**COLD COAGULATION OF VULVAL WARTS: THE USE OF EMLA CREAM.**

**J. Mamo, M Pace, D Felice, Obstetrics and Gynaecology Department, St. Luke's Hospital, Malta.**

**Introduction:** Emla cream has been used for minor operative procedures. This study evaluates the use of Emla cream prior to cauterisation of vulval warts.

**Methods:** Patients (n=17) presented with vulval warts to the gynaecology clinic were advised about the need for cauterisation. The Semm cold coagulator was used to cauterise the warts. The anaesthetic agent used was Emla cream which consists of 5% Lidocaine/Prilocain.

**Results:** There were three patients needing intradermal infiltration with Bupivacaine. Follow-up was up to twenty months, five patients needing repeat cauterisation. Four patients had associated koilocytosis on cervical cytology. Two male partners were also treated with Semm coagulator. Pain was graded using a visual analogue score. Only 17% had severe enough pain to need further analgesia.

**Conclusion:** Semm coagulation is an efficient, affordable method for the management of vulval warts. Emla cream is shown to be an acceptable local anaesthetic for this modality of treatment of vulval warts.

**P-124**

**FOUR YEAR REVIEW OF VULVAL BIOPSIES IN A GENERAL HOSPITAL.**

**J. Rapa, A. Armatys, A. Nemecek, J. Mamo, Obstetrics and Gynaecology Department, Gozo General Hospital, Victoria, Gozo, Malta.**

**Introduction:** Very few patients present with vulval problems in our general hospital possibly due to cultural taboos.

**Aim:** Review of patients presenting with intense vulval irritation and the corresponding vulval pathology.

**Method:** Fifty patients were reviewed, pathology of vulval biopsy was noted, as well as treatment and follow up.

**Results:** Two had vulval carcinomas requiring radical vulvectomy and one had metastatic rectal carcinoma.

Six were diagnosed as atrophic vulval dystrophy (lichen sclerosis). One had vulval intraepithelial neoplasia, and four had hypertrophic vulval dystrophy.

**Conclusion:** Vulval biopsy is essential in the management of vulval problems.

**P-125**

**THE NEED FOR ENDOMETRIAL BIOPSY AT THE TIME OF CERVICAL POLYPECTOMY.**

**J. Rapa, M. Spiteri, A. Armatys, J. Mamo. Department of Obstetrics and Gynaecology.**

**Aim:** The need for endometrial biopsy in patients with asymptomatic cervical polyps is assessed.

**Method:** A retrospective study of patients presenting with an asymptomatic cervical polyp at a district hospital were admitted for cervical polypectomy and endometrial biopsy. A retrospective study covering a three year period (1993 to 1995 inclusive) was carried out.

**Results:** A total of 108 patients were reviewed, 63 being over the age of 45. Of the patients below the age of 45, there was one with CIS and none had endometrial pathology except for endometritis (n=5). In the older age group, asymptomatic cervical polyps were associated with more endometrial pathology. Endometritis was presented in 6 patients. One patient in this older group had associated atypical hyperplasia of the endometrium.

**Conclusion:** From this study, albeit small numbers, it would be recommended to investigate patients over the age of 45. The younger age group do not seem to need an invasive procedure added on to a simple cervical polypectomy as an office procedure.

**P-127**

**THE ROLE OF ANTIBIOTIC PROPHYLAXIS IN GYNAECOLOGICAL SURGERY**

**K. El Nahhal, C. Savona Ventura, F. Bonello - Department of Obstetrics & Gynaecology, St. Luke's Hospital, G'Mangia, Malta.**

Thirty women undergoing abdominal hysterectomy received preoperative antibacterial prophylaxis with a single dose ceftriaxone. The post operative course of these patients was compared to that of a further fifteen patients who received no antibiotic prophylaxis. There were no cases of post-operative infection in those patients who received antibiotics, while a third of the control group developed signs of infection. The haematological parameters similarly showed statistically persistent higher leucocyte counts in the control group on the seventh day post-surgery. The patients receiving antibiotic prophylaxis did not develop any adverse effects, though they did appear to have a significantly higher platelet count on the

seventh day post-surgery. These results suggest that ceftriaxone might be an ideal single dose agent in this situation.

#### P-128

### AETIOLOGICAL PATTERN OF VULVOVAGINAL CANDIDIASIS IN MALTESE PATIENTS.

N. Debattista\*, C. Barbara\*, P. Cuschieri\*, F. Todaro Luck^ \*Pathology Department, Microbiology Laboratory, St. Luke's Hospital, Malta.^Istituto di Microbiologia, Facolta' di Medicina e Chirurgia, Università di Messina, Italy.

Vaginitis is one of the most common problems in clinical medicine. The yeast-like *Candida* is the commonest organism causing vaginal infections in Europe, and the second most frequent in the United States. Recently a sharp increase in the incidence of these infections in the Western World and the emergence of non-*albicans* species have been reported, frequently associated with recurrence, probably due to resistance to the commonly used antifungal agents.

The aim of this study is to assess the incidence of mycotic vulvovaginitis and to detect the emergence of non-*albicans* species and resistant strains in symptomatic women. The difference in species could have clinical and therapeutic implications.

**Methods:** During a one year period high vaginal swabs from women suffering from vulvovaginitis were submitted to the Microbiology Laboratory of St. Luke's Hospital. The yeast isolates were identified to species level. Antifungal susceptibility testing was also performed. The most commune species isolated was *C. albicans* followed by *C. glabrata*. Other species, at a lower incidence, were *C. parapsilosis*, and *C. tropicalis*. The pattern of incidence of *Candida* species as an aetiological agent was in agreement with European and American studies. Further studies on recurrent vulvovaginal candidiasis will be carried out.

#### P-129

### MORPHOLOGICAL CHANGES OF OVARIAN CANCER CELLS INDUCED BY CUCURBITACIN E: A POTENTIAL CYTOTOXIC TETRACYCLIC TRITERPENOID

E. Attard\*, A. Scicluna-Spiteri\*, M. Grixti\*\*, A. Cuschieri\*\* - \*Institute of Agriculture, \*\*Department of Anatomy, University of Malta

*Ecballium elaterium* L., is a local medicinal plant which stores several compounds termed cucurbitacins. Cucurbitacin E was extracted from the dried fruit juice of this plant. We had previously shown that cucurbitacin E has an exponential cytotoxic effect curve on ovarian cancer cells.

**Aim:** The present research is a comparative study regarding the cytotoxicity of cucurbitacin E and busulphan and the morphological changes they induce on the ovarian cell line OV-95-CC3.

**Method:** Five concentrations of busulphan and cucurbitacin E, ranging from 1% to 0.0001%, were added to 1 ml of ovarian cancer cell and incubated at 37°C and 6% CO<sub>2</sub>. The cells fixed onto microscopic slides using the Cytospin technique were stained by the Papanicolau procedure.

**Results:** Cucurbitacin E caused irreversible damage, manifested as threading and disruption in the cell membrane after one hour; the damage was more pronounced after twenty-four hours as granular disruption of the cytoplasm. These changes were not apparent in untreated cells or cells treated with busulphan.

**Discussion:** Cucurbitacins have been shown to enhance the pinocytic process and bind to glucocorticoid receptors. Overexpression of these receptors enhances the binding activity of cucurbitacins and could account for its cytotoxic and antitumour activity.

**Conclusion:** This study indicates the potential role of Cucurbitacin E as a novel cytotoxic agent for ovarian cancer.

#### P-150

### THE PROGNOSTIC SIGNIFICANCE OF BLOOD GLUCOSE IN DIABETIC SUBJECTS WITH ACUTE MYOCARDIAL INFARCTION

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**Aim:** To study the prognostic value of blood glucose level on admission in patients with acute myocardial infarction.

**Methods:** A prospective hospital-based study.

**Results:** Three hundred and thirty-three diabetic and 565 non-diabetic subjects were admitted with acute myocardial infarction during the study period of 2 1/2 years. There was a significant association between mortality and blood glucose in diabetic patients (regression coefficient,  $r = 0.92$ ) but not in non-diabetic patients ( $n = 0.69$ ). Age and sex standardised mortality was

higher in the diabetic group (12.2 vs 7.4%,  $p < 0.03$ ), but was identical if also standardised for blood glucose ( $p >> 0.05$ ).

**Conclusion:** A high blood glucose on admission is a bad prognostic indicator in a diabetic patient with an acute myocardial infarction; the excess mortality in diabetic patients can be partly attributed to a higher proportion with hyperglycaemia.

**P-151**

**A REVIEW OF FOURTEEN HYPERPARATHYROID PATIENTS PRESENTING AT ST. LUKE'S HOSPITAL, MALTA**

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A cohort of fourteen hyperparathyroid patients attending the out-patient clinic at St. Luke's Hospital have been studied. The presentation, clinical features, investigations, disease progression, treatment and outcome have been documented and analysed. The results are presented.

**P-152**

**THE FERTILE EUNUCH SYNDROME : EVIDENCE OF GONADAL GROWTH IN THE FACE OF PERSISTENT HYPOGONADOTROPIC HYPOGONADISM**

J. Spiteri-Grech, F.P. Pralong, P. Boepple, Crawford J & W.F. Crowley, Jr.

Reproductive Endocrine Unit & National Center for Infertility Research, Massachusetts General Hospital and Harvard Medical School, Boston, MA, USA. The syndrome of preserved spermatogenesis in the face of luteinising hormone (LH) and androgen deficiency, originally reported in 1950, was initially postulated to be due to an isolated LH deficiency. The clinical and histological features of the fertile eunuch syndrome which distinguish it from the more classical cases of IHH have been evidence of seminiferous tubule development and sperm maturation by testicular biopsy and production of semen in the ejaculate. A longitudinal case study of a patient who developed the fertile eunuch syndrome after initially presenting with classic IHH with anosmia is presented here. Pituitary free alpha subunit (FAS) (a sensitive marker of pulsatile gonadotrope secretion) and LH secretion were also assessed over 24 hours of frequent (q 10 minute) sampling using sensitive and specific immunoassays. The course of development of the fertile eunuch phenotype through puberty into maturity in this patient in the absence of striking changes in gonadotropin levels and without gonadotropin treatment strongly implies the presence of other factors responsible for seminiferous tubular development in this disorder and perhaps in normal males.

**P-155**

**SCREENING FOR DIABETIC RETINOPATHY**

J. Azzopardi, T. Fenech, R. Soler, FF Fenech,

Diabetic patients attending the St Luke's Hospital Diabetes Clinic are being regularly screened for Diabetic Retinopathy. Patients are examined under full dilatation by a diabetologist and a retinal photograph is taken under full dilatation using a non mydriatic fundus camera. The retinal photographs are examined later by an experienced ophthalmologist. Data is entered into a Diabetic retinopathy Screening card developed by the European Group for the study of Diabetic eye disease. The data is entered and analysed using a computer program called SEE. The paper will present details of the above computer programme together with some of the data collected so far.

**P-156**

**CLINICAL AND BIOCHEMICAL FEATURES OF GROWTH HORMONE INSENSITIVITY SYNDROME (LARON TYPE) IN A MALTESE CHILD**

J.M. Farrugia, P. Vassallo Agius, Department of Paediatrics, St. Luke's Hospital Malta.

M.M. is the second child of healthy unrelated Maltese parents who was born normally at term following a normal pregnancy. BW 2.800kg. She was referred at 3 months of age because her weight, length and head circumference were below the 3rd percentile for age and sex. At follow up at nine months of age her length was 5.3 SD below the mean. Routine biochemical tests showed GH 70 mU/L (normal 0-14). Other parameters were normal. Further investigations at 13 months of age showed a low IGF-I. Full specialized investigation abroad at 2 8/12 years showed high GH, low IGF unresponsive to GH administration, and only a slight increase of IGFBP3 on stimulation. GHBP was not detected. These data, together with the clinical fractures and the growth pattern indicate a diagnosis of growth failure due to GH receptor deficiency. Further studies are planned to identify the molecular lesion.

**P-160**

**THE ST. LUKE'S HOSPITAL DIABETES COMPUTERISED NETWORK**

**J. Azzopardi, F F Fenech**

St. Luke's Hospital has developed a fully computerised Diabetes management system. The hardware consists of a file server attached to 10 workstations which are used by doctors and paramedical staff. The programme runs on Foxpro2 which a database management system, Over 8000 patients have been registered on the system.

The Diabetes Clinic at St. Luke's has electronic links with the DiabCare Who Centre in Munich. Data is regularly exchanged by this means.

The Diabetes centre is also linked to Internet.

The paper will present some of the data collect so far and will discuss plans for the further implementation of the system in government peripheral centres.

**P-161**

**REPRODUCIBILITY OF VIBRATION PERCEPTION THRESHOLDS (VPT'S) IN PATIENTS WITH DIABETIC NEUROPATHY.**

**D. V. Coppini, D. L. Russell-Jones and P.H. Sönksen. St. Thomas' Hospital Diabetes and Endocrine Day Centre.**

**Aims of Study:** To establish usefulness of VPT's in detecting early diabetic neuropathy.

**Methods:** A sequential cohort of 1232 diabetic patients first attending 'St. Thomas' Hospital Diabetes and Endocrine Day Centre between January 1982 and September 1985 have accurate and detailed computer records of initial clinical neurological tests and vibration perception thresholds using a Biothesiometer. A preliminary analysis of the computer database has been performed.

**Results:** Of the 1232 patients, a subset of 979 patients with no peripheral vascular disease or gangrene and no leg ulcers were selected from the cohort. 48 (4.9%) asymptomatic patients had an abnormally high VPT at the great toe (defined as greater than 2 s.d. above mean for age). 21/48 patients (43.7%) with a raised VPT at the great toe had a normal clinical neurological examination of the lower limbs. 931 patients had a normal toe-measured VPT at first visit. 97% of this group of patients had a normal sensory examination of the feet. Patients with an abnormal VPT are significantly taller ( $p < 0.001$ ) and show an increased prevalence of heavy alcohol intake ( $p < 0.05$ ). There was no significant difference in diabetic control (HbA1) and smoking habits between the two groups of patients.

**Conclusion:** 5% of patients with a normal leg appearance and no peripheral vascular disease had an abnormal VPT measurement. Our preliminary results suggest that VPT testing shows a higher prevalence of abnormality compared with clinical examination. Abnormal VPT measurements in the absence of clinical neurological signs may be an indicator of subclinical peripheral neuropathy.

**P-163**

**P-BRUCCELLA MELITENSIS IN PREGNANCY**

**C. Mallia Azzopardi, M.J. Cachia, M. Stellini, A. Caruana Galizia.**

**Brucellosis is still an endemic disease in Malta.**

We present three cases of Brucellosis complicating pregnancy.

Initial treatment consisted of rifampicin and a third generation cephalosporin. In two of the patients, rifampicin was discontinued due to increasing transaminase levels.

A review of the literature will be presented.

**P-165**

**ACUTE RENAL FAILURE (ARF): ANALYSIS OF 100 REFERRED CASES**

**E. Farrugia, Department of Medicine, St. Luke's Hospital, Malta**

**Aim:** To evaluate causes and outcome of ARF in Malta. **Method:** The medical records of 100 consecutive patients with ARF referred by St. Luke's Hospital consultants to one physician over a 30-month period were retrospectively studied. ARF was defined as an acute decrease in renal function; patients with chronic or acute-on-chronic renal failure were rigorously excluded from analysis. **Results:** The commonest source of referral was the intensive care unit. ARF occurred in surgical (including acute urinary tract obstruction), medical and obstetric settings. 22 patients were dialyzed; acute haemodialysis in 20 adults and peritoneal dialysis in 2 paediatric patients. In-hospital mortality was high among both dialyzed (12/22) and non-dialyzed patients with ARF, most often due to respiratory distress, sepsis and multiple organ failure. **Conclusion:** This

study represents the first data regarding frequency, causes and outcome of ARF in Malta. The prognosis of patients with ARF is poor, but we think that early diagnosis of the disease, aggressive therapy with haemodialysis, an improved nutritional pattern and multidisciplinary approach help to reduce morbidity and mortality.

**P-166**

### **MEASURES IN IMPROVING SYMPTOMS AND SPIROMETRY WHILST DECREASING ORAL STEROID USE IN SEVERE BRONCHIAL ASTHMA**

**A. Galea Baron, S. Montefort Asthma Clinic - St. Luke's Hospital, Malta.**

Many so-called 'steroid-dependent' severe asthmatics are prescribed oral corticosteroids for indefinite periods of time in order to control their respiratory affliction. Although highly effective, these oral steroids are associated with several serious side-effects. This retrospective study was carried out to see whether changes in treatment by asthma specialists resulted in a decrease in the use of oral steroids in severe asthmatics without compromising control of their asthma. Eleven severe asthmatics [10F, 1M] mean age 42.3 yrs [range 14-68yrs] were eligible for inclusion in the study as they were on a minimum of 5mg prednisolone [range 5-30mg/day] for a mean of 14yrs [range 2-30yrs] and they had been attending our asthma clinic for a mean of 9.5mths [range 3-21mths]. The stepwise approach to treatment was to first give a) a maximal dose of inhaled steroid through a spacer device, then to add either b) nebulized budesonide 1-2mgs bid and/or c) the long-acting B2-agonist salmeterol 50 ugs bid, with a continuous attempt at decreasing oral steroids. Review of symptoms before and after change in treatment showed that daytime symptoms decreased for 10 out of 11 patients, nocturnal symptoms decreased for 8 out of 9 patients and early morning chest tightness for 9 out of 10 patients. On a 10cms visual analogue scale mean general well-being increased from four to nine after change of treatment regime. Hospital admissions decreased from 8 in twelve months preceding referral [including two into ITU] to one during the study period, while attendance at E&A for treatment decreased from eight to nil. Nine of the patients were successfully weaned off oral steroids while the other two managed to decrease their dose substantially. Their use of bronchodilators dropped as well: all this with an increase in mean % predicted FEV1 from 69.8% to 95.5%, FVC from 88% to 108.6% and PEF from 71.6% to 84.7%. This study demonstrates benefit of high dose topical steroids + long acting B2-agonist in weaning severe asthmatics off oral steroids with actual improvement of both symptomatic and spirometric indices.

**P-168**

### **PSEUDOSCLERODERMA IN DIABETES MELLITUS - REPORT OF THREE PATIENTS**

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Limited joint mobility or cheiroarthropathy, is a syndrome associated with increased skin thickness, and reduced joint mobility. These changes have been described in patients suffering from long-standing diabetes mellitus. In severe cases they may result in scleroderma-like changes in the skin. Such changes are usually most striking in the hands. Glycosylation of skin collagen with increased cross-linking is thought to be responsible. In this paper we describe the clinical manifestations and progress of three patients suffering from this relatively little known complication of diabetes mellitus.

**P-170**

### **EXPOSURE TO CARBON MONOXIDE AND ACUTE NEUROLOGICAL ADMISSION**

**M.V. Balzan, Senior Registrar Department of Medicine, G. Agius, Ward pharmacist, A. Galea Debono, Consultant physician, Neurologist, St Luke's hospital Malta**

Background. Carbon Monoxide (CO) is a colourless and odourless gas and a common indoor air pollutant. CO impairs oxygen transport by haemoglobin. Severe intoxication with Carboxy Haemoglobin (Co-Hb) levels >40% cause primarily central nervous system (CNS) toxicity with coma. However lower concentrations can cause headache, lethargy or impaired consciousness particularly in patients with underlying neurological illness, or impaired cerebral circulation. Objective. (i) To prospectively screen all acute neurological admissions for exposure to CO (ii) To identify and describe patients with CO intoxication within the study group. (iii) To determine the indoor heating patterns of this group with respect to potential CO poisoning. Method. From the 5th December 1994 to 31st March 1995, all acute neurological admissions to St Luke's hospital were screened for exposure to CO by determining the CO-Hb level on admission and by the administration of a standardized questionnaire on indoor heating. Results. 336 patients were included in the study. CO-Hb was determined in 307 patients. 3 patients had CO poisoning while 2 patients were excluded because of anaemia. The study group (n=302, 57.6% female, 42.4% male, mean age 66.7 S.D. 19.6), comprised Stroke 116 (38.4%) patients, Transient ischaemic attack (TIA) 25 (8.3%), Episode of loss of

consciousness 87 (29.8%), Epileptic fits 39 (12.9%), Obtunded consciousness 26 (8.6%) and headaches 9 (3.0%). Case 1. CO-Hb 25 %, was a 75 year old man found unconscious after trying to repair his car in a garage. Case 2. CO-Hb 60 %, 28 year old man who attempted suicide by putting on his car in a closed garage. Case 3. CO-Hb peak 15%, 78 year old bed bound woman with underlying cerebral atherosclerosis was brought semi-conscious after use of a kerosene heater. This third case was only recognised as a result of the study. Mean CO-Hb was 3.24 (95% CI 0-7.4, n=43) in smokers, 0.73 (95% CI 0-1.90, n=259) in non smokers. 2 smokers and 7 non-smokers had CO-Hb levels above the 95% confidence limits, but none was judged to have significant CO intoxication. Information on indoor sources of CO was obtained from 215 patients. 73 (34%) of patients had a least one potential source of CO in their household, excluding gas cookers. Kerosene heater 14%, Kerosene stove 13%, Gas space heater 9%, Gas water heater 5%. Complete information on indoor heating was obtained in 176 patients. Mean age 66.1 S.D. 18.1, males 79 (45%), Females 97 (55%). Electric heater 54.0%, Kerosene heaters 14.4 %, Gas space heaters 8.8%. 30.6 % had no indoor heating. As regards bathroom water heating 65.2% had electric water heaters, 7% Gas water heaters and 28% none. Conclusion. General practitioners and emergency room personnel should inquire about the type of indoor heating use in winter in acute neurological emergencies. If such a source of CO exists CO-Hb levels should be determined to establish whether hyperbaric 100% oxygen therapy is necessary or not.

#### **P-171**

##### **THE EFFECT OF THE MENSTRUAL CYCLE ON BRONCHIAL ASTHMA**

**S.Zammit, S. Montefort, Dept of Pharmacy University of Malta, Asthma Clinic, St. Luke's Hospital, Malta.**

A small number of female asthmatics feel that their respiratory symptoms worsen premenstrually and there have been rare reports of severe asthmatic exacerbations during this same time-period. The aim of this study was to look at this phenomenon objectively and compare such a group of asthmatics to other female asthmatics and non-asthmatics. Seven female asthmatics [mean age 42-4 yrs], all on inhaled corticosteroids, and who on a pre-study interview felt that their asthma deteriorated premenstrually [Grp A] were followed up for two consecutive months with diary cards with symptom scores, PEFR bid and bronchodilator use. Spirometry and histamine bronchoprovocation tests were carried out on day 12 - 14 of their menstrual cycle and 1 - 3 days before their menstrual period. The same procedures were carried out for 6 female asthmatics [mean age 24.8yrs who felt no difference in their asthma throughout their menstrual cycle [Grp B] and for a group of 8 non-asthmatic females mean age 24 yrs [Grp C]. Blood samples were taken for eosinophil counts, oestrogen and progesterone levels and Eosinophilic Cationic Protein levels at the two time-points studied. We failed to demonstrate any significant differences in symptoms scores, bronchodilator use, FEV1, FVC, PC20 H and absolute eosinophil counts between the asthmatic groups or between the two time-points. There was a significant decrease in morning PEF in mid-menstrual cycle in Grp B [ $p < 0.04$ ] and also an increase in peak flow variability when the week in the middle of menstrual cycle was compared to the week prior to menstruation [ $p < 0.04$ ] Oestrogen and ECP levels are pending. In conclusion the group who felt their asthma was worse premenstrually, but who we must remember were on adequate asthma therapy, showed no differences in any of the studied indices throughout their menstrual cycle but their PEF did remain higher in mid-cycle when compared to Grp B. Both groups showed increased PEF variability close to when ovulation usually occurs and this could be a time-period where asthma may be affected to the greatest extent.

#### **P-173**

##### **THE EFFECT OF INHALED FLUTICASONE PROPIONATE ON SYMPTOMS, PULMONARY PHYSIOLOGY AND AIRWAY INFLAMMATION IN ASTHMA**

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Twenty-eight patients [22M/6F] with symptomatic allergic asthma treated only with B2-agonists participated in a double-blind, placebo-controlled trial of the inhaled corticosteroid, fluticasone propionate [FP]. After a two week run-in period, during which symptoms and peak flow [PEF] were recorded daily in diary cards, measurement was made of bronchial reactivity to histamine [PC20] and bronchoscopy undertaken, to obtain endobronchial lavage and biopsy samples, patients were randomly allocated to receive FP 500 ug b.d. or matching placebo. Treatment was for 6 weeks during which diary card recording was continued and in the sixth week further measurement made of PC20 histamine and repeat bronchoscopy and airway sampling performed. In comparison to placebo, FP reduced symptoms [ $p < 0.05$ ], reduced prn. B2-agonist use [ $p < 0.005$ ], improved both am. PEF [ $p < 0.01$ ] and pm PEF [ $p < 0.05$ ],

reduced diurnal variation in PEF [ $p < 0.0008$ ], and improved bronchial responsiveness [ $p < 0.008$ ]. These clinico-pathological improvements were associated, in comparison to placebo, with an FP-related reduction in epithelial mast cells [ $p < 0.03$ ], lavage histamine levels [ $p < 0.03$ ], submucosal LFA+ve cells [ $p < 0.03$ ], submucosal VLA4+ve cells [ $p < 0.01$ ] and in the endothelial cell adhesion molecules P-selectin [ $p < 0.005$ ] and E-selectin [ $p < 0.05$ ]. In the FP treated group there was also a reduction in IL-4 [ $p < 0.04$ ], IL-3 [ $p < 0.04$ ], IL-5 [ $p < 0.02$ ], IL-6 [ $p < 0.05$ ], IL-8 [ $p < 0.04$ ], TNF [ $p < 0.04$ ] and GM-CSF [ $p < 0.01$ ] but not IFN- $\gamma$  cellular expression in the bronchial biopsies. These placebo-controlled findings identify that inhaled FP modifies airway inflammation in association with clinical benefit in asthma.

#### P-174

### GEOGRAPHICAL DISTRIBUTION OF ACUTE ASTHMA ADMISSION IN MALTA. IS ATMOSPHERIC POLLUTION A FACTOR?

M. V. Balzan Senior Registrar, Department of Medicine, St Luke's, Malta.

**Background.** A number of atmospheric pollutants such as particulate matter, Sulphur dioxide, Nitrous oxide, ozone and various other agents have been shown in laboratory conditions to lower the threshold for an acute asthmatic attack.

**Objective.** To establish if there is a significant geographical distribution in adult acute asthma hospital admission rates.

**Setting.** A retrospective review of all admissions for acute severe asthma in adults aged 15-59 to Saint Luke's hospital from January 1st 1989 to 31st December 1993. **Methods.** The mean yearly prevalence rate, and the cumulative 5 year prevalence rate was determined retrospectively for 4 areas. Area A Msida, Gzira, Sliema, Ta' Xbiex. Area B Valletta, Floriana, Hamrun, Marsa, Guardamangia, Pietà. Area C Cospicua, Fgura, Senglea. All other areas of Malta except Gozo were the control area. Taking values for the control area as 1.00 data for each region is expressed as the Relative risk that is the rate in that region divided by the control area.

**Results.** During the 5 year period 374 patients in the 15-59 age group were admitted at least once for asthma. There were a total of 652 admissions. The relative risk for the five year cumulative prevalence rate was 1.82 ( $p < 0.01$ ) times the control area, in the cottonera area and 2.01 ( $p < 0.001$ ) in the Sliema marsamxetto area. The relative risk for the Valletta to Marsa area was 0.86 (not statistically significant). The relative risk for the mean yearly prevalence rate was 3.74 ( $p < 0.001$ ) for Msida, 2.35 ( $p < 0.01$ ) for Cospicua, 2.15 ( $p < 0.01$ ) for Fgura, 1.79 ( $p < 0.05$ ) for Gzira, 1.70 ( $p < 0.05$ ) for Sliema, 1.27 (not significant) for Hamrun, and 1.53 (not significant) for Marsa. Only the prevalence rate for asthma admission in Msida was comparable to that in Delaware, Pennsylvania, while in all other localities the admission rate was significantly lower than this United states region.

**Conclusion.** A statistically significant higher asthma admission rate in adults was found both in the cottonera and northern Marsamxetto area particularly in Msida, Cospicua and Fgura. The most likely cause for this difference is atmospheric pollution. Msida is exposed to very heavy traffic in two valleys mainly valley road and rue d'argens. Cospicua and Fgura have less heavy traffic. However pollution from the malta drydocks and the Marsa power station is carried along the prevalent winds onto this area. Other possible sources could be the corradino grain silos, and the lime processing plant in Fgura. In view of this data, urgent pollution monitoring with fixed and mobile stations is required. The Cospicua and the Msida areas should be considered high priority areas. If the daily pollution levels recommended by EEC and WHO are exceeded adequate measures should be taken to improve air quality.

#### P-175

### THE CIRCADIAN RHYTHMICITY IN ACUTE MYOCARDIAL INFARCTION:

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**Aims:** To compare the circadian pattern of acute myocardial infarction in diabetic patients to that of controls.

**Methods:** A prospective hospital-based case-control study was performed.

**Results:** A one hundred and ninety-six diabetic patients and 196 age and sex matched controls were admitted with a diagnosis of acute myocardial infarction during the study period. The time of onset of myocardial infarction could not be specified in 32 diabetic patients and 38 controls. In 34, 44, 42, and 44 diabetic patient the onset was in the first to fourth quarters

respectively (chi squared 1.66, NS). The corresponding figures for controls were 30, 56, 45 and 27 (chi squared = 13.9,  $p < 0.005$ ). The differences between the two groups was highly statistically significant (chi squared = 10.3,  $p < 0.25$ ).

**Conclusions:** Diabetic patients do not exhibit a significant circadian variation in the onset of acute myocardial infarction.

#### **P-177**

##### **A HAIRDRESSER'S POWER CUT (carbon monoxide intoxication following the use of a petrol electricity generator)**

**M. V. Balzan** Registrar Department of Medicine \* **B. M. Debono** House officer department of medicine \* The paper will be presented by B.M. Debono.

**Background.** carbon monoxide is an odorless and colorless gas which is produced by incomplete combustion of fossil fuel. Inhalation of this gas seriously impairs the ability of Haemoglobin to carry oxygen from the lungs to the tissues. This can result in significant central nervous system, or myocardial hypoxia with resulting clinical illness. **Case report.** 7 patients, one 5 year old girl, five adult females and one adult male were admitted to hospital suffering from carbon monoxide intoxication. The exposure occurred inside a lady's hairdresser salon on a Saturday morning. An electric power supply failure at around 10.00 am led to the use of a small petrol electricity generator. However the owner failed to direct the exhaust pipe effectively to the outside of the shop. Two individuals lost consciousness, another 2 experienced severe headache, one had an exacerbation of pre-existing angina, while another two only experienced dizziness and slight discomfort. Carboxy haemoglobin levels taken on admission to hospital were, 43%, 42%, 38%, 27%, 19%, 18% and 17% respectively. Six of the patients were treated with 100% oxygen at 2.8 atmospheres in the recompression chamber for 90 minutes. The four most serious cases were treated with dexamethasone and cimetidine. All seven were discharged uneventfully after 48 hours of admission. **Conclusion.** A classical presentation of carbon monoxide intoxication is described. The clinical features of carbon monoxide poisoning are reviewed and the indications for treatment with hyperbaric oxygen therapy are discussed.\* St Luke's hospital, Guardamangia.

#### **P-179**

##### **DESIGNING A USER FRIENDLY DATABASE FOR REPORTING AND CATALOGUING OF GASTROSCOPIES**

**M. J. Cachia, A. Caruana Galizia.** St Luke's Hospital, Malta.

Information technology is gaining importance as a means of data storage and reporting. We present an experimental user friendly database for cataloguing gastroscopies and issuing of the patient's gastroscopy reports. Pathology reports can be easily added once received. Data input has mainly been limited to selections from lists to minimise errors. Lists are easily updated and data extraction can become automated if required. The minimum system requirements are a 486SX processor, 4 megabytes RAM and a VGA colour monitor. Microsoft Access version 1.1 was the data management system used. This is required to run the programme.

#### **P-180**

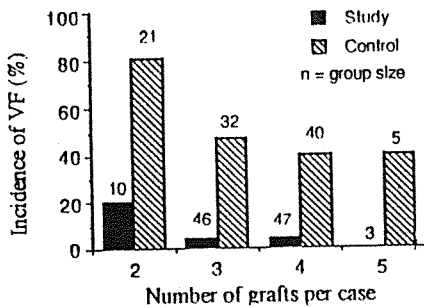
##### **LIMITING PERFUSION-INDUCED VENTRICULAR FIBRILLATION IN THE CLINICAL SETTING.**

**A. Manche,** Dept. of Cardiothoracic Surgery, St. Luke's Hospital, G'Mangia.

Cold crystalloid cardioplegic arrest remains a favoured method of myocardial protection. This strategy does not allow for a controlled hyperkalaemic sanguineous reperfusate, known as a 'hot shot', which provides endogenous oxygen free radical scavengers and is administered under constant flow and pressure conditions in order to limit reperfusion injury. We investigated the use of intermittent, antegrade cold crystalloid cardioplegia (St. Thomas' I solution) combined with a limited flow normokalaemic sanguineous reperfusion and measured the outcome in terms of the incidence of reperfusion ventricular fibrillation.

Patients requiring coronary revascularization of two or more coronary arteries, including at least one internal thoracic artery (ITA) anastomosis, were studied in this prospective randomised trial. Normothermic pulsatile cardiopulmonary bypass was employed. Cold crystalloid cardioplegia was administered into the aortic root after application of the cross clamp as an initial dose of 600ml, followed by further 100ml boluses before the next distal anastomosis. This additional dose was omitted before the last (ITA) anastomosis. The heart was not topically cooled. In the control group (n=99) the aortic cross clamp was removed immediately after ITA reperfusion. In the study group (n=106) the ITA was allowed to perfuse the heart for 3 min before the aortic cross clamp was removed. None of the hearts resumed regular contraction during this period. Cardiopulmonary flow was reduced transiently for cross clamp removal and

manipulation of the heart was avoided during early reperfusion. Ischaemic times were similar in both groups. The incidence of ventricular fibrillation was significantly reduced in the study group. (see figure).



This strategy of myocardial protection combines the advantages of conventional crystalloid cardioplegia with the added benefit of limited sanguineous reperfusion. A normo-kalaemic perfusate achieved electrical quiescence during the 3 min reperfusion period. This method is cost-effective and simple to perform. Our results suggest a beneficial effect with regard to reperfusion induced injury as evidenced by a significantly reduced incidence of reperfusion ventricular fibrillation.

#### P-191

### RENAL EMBOLISATION(RE): IS IT A WORTHWHILE PROCEDURE?

A. Zammit, P. Sammut, C.L. Cutajar, N Formosa, Radiology, Surgery Departments, SLH, Malta, University of Malta. Introduction:

RE is a technique currently utilised in the surgical management of large renal tumour, in therapy for medical renal disease (for uncontrolled hypertension or nephrotic syndrome) and in the control of urinary fistulae. This technique is reserved for renal cell carcinoma whereas transitional cell carcinoma and renal oncocytoma are a contraindication to RE.

**Subject/Method:** RE has been carried out on 9 patients (M:F ratio 6:3) with ages ranging from 44 to 88 years (mean age 63.5 years). From 1991 to 1995 our experience has involved the use of alcohol, Gianturco coils and Stosslein Munster detachable balloons. The indications in this series were all for devascularisation and reduction of size in large renal cell Ca as well as for renal tumour palliation.

**Results:** We have had no serious complication of migration of the agents used and aortic extension occurred in only one case with no consequences. Post-Infarction Syndrome was encountered in most cases as expected but was severe only in 4 cases. We have seen no abscess formation after the technique and only minor arterial puncture site haematoma resulted in 1 case. One patient developed transient hypertension possibly as the non-embolised side had concomitant renal artery stenosis.

**Conclusion:** RE is a relatively safe technique which has a useful role in the surgical management of renal cell carcinoma.

#### P-192

### THORACOSCOPIC HELLER'S OESOPHAGO-CARDIOMYOTOMY FOR ACHALASIA IN MALTA

D. Gatt

Since the advent of the fiberoptic gastroscope the treatment of Achalasia has fallen largely into the domain of physicians with most patients undergoing balloon dilatation despite worrying reports of rupture of the oesophagus by balloon dilatation and the fact that in the only randomised trial by Csendes et al, comparing surgery and dilatation, the former was undoubtedly superior. The technique shown in this video affords the precision of surgery without the pain of a major thoracotomy. A thoracic approach is always preferable to an abdominal one in Achalasia because the latter is associated with twice the incidence of subsequent gastro-oesophageal reflux. Furthermore should significant reflux develop it can be treated trans-abdominally. None of our Open Transthoracic Heller's Oesophago-cardiomyotomy patients have required an anti-reflux procedure. A Four cannula approach is used. The most difficult part of the procedure is the mobilisation of the oesophagus which is not amenable to a safe myotomy until slinged. A method of oesophageal mobilisation perfected by us since will also be discussed. The myotomy which measured 7cms extended less than 1cm onto the stomach in order to prevent subsequent reflux. The myotomy was assisted by a second view point from inside the oesophageal lumen using a flexible gastroscope. Two cases have been performed using this method in Malta so far and the quality of results is attested by the fact that neither patient has any residual dysphagia, has developed any degree of reflux or has suffered any post-thoracotomy pain.

**P-193**

**THE NEED FOR AXILLARY DISSECTION IN PURE PAGET'S DISEASE OF THE BREAST**

**K. Mokbel, H. Kazkaz - The Royal Marsden Hospital, London, U.K.**

Recently four patients with pure Paget's disease of the breast without any associated breast tumour detectable clinically or radiologically were treated at the Royal Marsden Hospital. Three patients underwent Dawson-Patey mastectomy and the fourth had a simple mastectomy. Histopathological examination revealed foci of DCIS in 2 cases and failed to demonstrate an underlying breast tumour in 2 patients. None of the patients who underwent axillary clearance (3 patients) had axillary metastases. All the patients remain recurrence free (mean follow up 32 months).

Literature review shows that the incidence of axillary node metastases and invasive carcinoma in pure Paget's disease of the breast is extremely low. The most likely associated breast lesion is DCIS. Therefore we believe that axillary clearance is not required in pure Paget's disease and modified radical mastectomy is an over-treatment for this clinical subtype.

**P-194**

**TREATMENT OF UNSTABLE DISTAL RADIUS FRACTURES USING A MODIFIED A.O. EXTERNAL FIXATOR**

**B. Magazinovic, St Luke's Hospital, Malta, C. Sciberras St Luke's Hospital, Malta. J. Camilleri Brennan St Luke's Hospital, Malta.**

This paper reviews the treatment of patients with unstable distal radial fractures carried out in Clinic for Traumatology Sarajevo University Centre "former" Yugoslavia and St Luke's Hospital Malta during the last 5 years.

A review of thirty two patients from Sarajevo and three patients from Malta who sustained fracture of distal radius is made. They were treated operatively using a modified A.O. external fixator by ligamentotaxis technique.

The aim of the paper is to establish the use of the modified A.O. fixator and to discuss the advantages and disadvantages of this technique.

**P-195**

**ABDOMINAL AORTIC ANEURYSM REPLACEMENT IN MALTA**

**D. Gatt**

The first series of Abdominal Aortic Aneurysms replaced at St. Luke's Hospital over a 9 year period are presented with particular reference to the modes of presentation, risk factors, sex distribution, age at presentation and types of rupture. The investigative procedures are reviewed as are the techniques of replacement. The highest risk factor was smoking with an incidence of 84.2% with Ischemic Heart Disease following at 47% and diabetes mellitus at 16%. Seventy percent of the cases had straight graft aneurysm replacement whilst the other 30% required various forms of bifurcated grafts either to the iliacs or the femorals or to iliac on one side and femoral on the other. Of the patients who were operated for presumed non leaking aneurysms 15% were found to have evidence of a recent or past leak retroperitoneally. The survival rate in this series was of 96.1% in the planned cases despite the inclusion of several semi-urgent cases, and of 78.9% in the leaking or ruptured cases. Mortality was secondary to cardiac, renal or multiorgan failure, with 2 patients in the emergency series having a ruptured aneurysm unsuitable for replacement and dying on the operating table. In the emergency series mean postoperative ventilator time was of 69hours with an ITU stay of between 25 and 360 hours whilst in the planned series 80.8% of the patients went to ITU already extubated and their stay ranged 5 to 360 hours.

**P-196**

**SOFT TECHNIQUE OF SILICONE INTUBATION OF THE LACRIMAL PATHWAYS.**

**J. Janula, Department of Ophthalmology St. Luke's Hospital and Gozo General Hospital, Malta.**

Silicone intubation of the lacrimal system has been used for several years, mainly for the treatment of some congenital obstructions of the lacrimal pathways. In spite of the high rate of success of this technique, it is not yet widely used as it requires special instruments and skills. There were a few patients under our care whom we thought would benefit from treatment with silicone intubation. This led us to develop our own technique which is relatively easy to perform and does not require any special instrumentation.

In this study there were 30 patients who underwent silicone intubation of the lacrimal system. There were 3 children with congenital obstruction, 3 young people with traumatic laceration of the lacrimal pathways and 24 adults who opted for intubation as an alternative to Dacryocystorhinostomy.

In the first two groups (children and young people), intubation was successful in all cases. In the adult group silicone intubation was successful in more than half of the patients with results very similar to those of other authors using the classical technique.

Thus, we can conclude that our technique is easy to perform, without the need for special instruments, keeping the costs low. The results obtained by using this technique are similar to those using the classical technique. In comparison to the classical technique, it is easier to perform and more gentle on nasal mucosa.

**P-197**

#### **THE MALONE PROCEDURE FOR ANTEGRADE COLONIC ENEMAS**

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The Malone Procedure was developed in Great Ormond Street Hospital for Sick Children for the instillation of antegrade colonic enemas in cases of intractable constipation and/or soiling. We review here the indications and surgical techniques as well as the nursing care of children undergoing this procedure. We also report in detail the results of the first 20 cases performed in Great Ormond Street since 1990. These included 14 boys and 6 girls with an age distribution of 5 to 14 years ( average age of 10 years ). The primary pathology was Ano-rectal anomaly in 10 cases , Spina bifida in 3 , Cloacal anomaly in 2 , Hirschsprung's disease in 2 and 3 other miscellaneous cases. All children suffered from severe constipation and/or soiling. In 12 cases an appendicocaecostomy was used - 3 of these with a reversal of the appendix. The remaining 8 cases had a conduit constructed from a caecal flap. 16 children reported very good results , soiling only once a week or less. In 4 cases the Malone stoma was abandoned. 5 children suffered a leak from the site of the stoma. 7 had stenosis of the stoma at skin level and required dilatations or reconstructive surgery. 2 children developed adhesion obstruction of the small bowel post-operatively. 2 children developed adhesion obstruction.

**P-198**

#### **CASE STUDY: FRACTURES OF THE TIBIAL PLAFOND**

**G. PECOTIC, C. APAP BOLOGNA, B. MAGAZINOVIC, Department of Orthopaedic, St. Luke's Hospital, G'MANGIA, MALTA.**

Fortunately, pilon fractures are relatively rare, comprising approximately 1% of lower extremity fractures and 7% to 10% of tibial injuries. Their rarity, however makes the average orthopedist's experience with pilon fractures relatively limited. We are presenting a rare case of pilon fracture with intact fibula sustained by fall from a height and very good early result of our treatment, consisting open reduction and internal fixation. Beside that, we want to point out the problem itself and importance of the careful preoperative assessment of the degree of energy causing the fracture as well as importance of careful planning of the joint reconstruction with the optimal method which will lead to satisfactory functional results.

**P-199**

#### **BILATERAL DORSAL TRANSCAPHOID PERILUNATE DISLOCATION**

**P. Andrejevic, B. Magazinovic, C. Sciberras, T. Juloski - Department of Surgery, St. Luke's Hospital, G'Mangia, Malta**

Although the anatomy and function of the wrist have been studied since medieval times, there is still room for diversity of opinion regarding the diagnosis and therapy of what is presently recognized as wrist instabilities.

In this case report we are presenting bilateral dorsal transscaphoid perilunate dislocation in a young Maltese man. This man sustained the above mentioned injury after falling from a height on both outstretched hands. Diagnosis was made clinically and confirmed radiologically. Treatment was by immediate closed reduction and immobilization in plaster. After eight weeks the right scaphoid fracture healed and the plaster was removed. The left was kept immobilized for a further six weeks and afterwards internal fixation with a Herbert Screw was performed. This was due to no union of the scaphoid fracture. He underwent intensive occupational therapy and his right wrist has very limited functions, especially palmar and dorsal flexion. The left wrist was mobilized four weeks after the operation and it only has limited palmar flexion. Control X-ray examination showed pseudoarthrosis of the conservatively treated scaphoid fracture and perfect healing of the internally fixed fracture.

In conclusion: This bilateral dorsal transscaphoid perilunate dislocation is an uncommon injury. It should be reduced immediately and fixed internally or externally preferable to conservative therapy.

P-201

**PRODUCING & EVALUATING A FORMULARY FOR A COMMUNITY PHARMACY**  
**I. M. AZZOPARDI, A. SERRACINO INGLOTT, M. ZARB ADAMI, Pharmacy Department,**  
**University of Malta, Msida, Malta.**

One could trace the origin of a 'Formulary' to at least 5000 years ago. The Sumerians listed medicinals used in their community at the time on slabs of soft clay. With the development of paper, a more transportable medium than slabs of clay, the Arabians produced formularies using paper. One example is al-Agrabadhin al-Kabir.

One of the earliest known example of a civilian hospital formulary was developed by Valentine Seaman in 1811. As the number of new drugs began to multiply in the late 1950s, the issue of rational prescribing began to gain momentum. In 1954, the 'Hospital Formulary of Selected Drugs' was published by Don Francke for the University of Michigan Hospital. A formulary could be defined as any list of selected drugs from which doctors are encouraged to prescribe. In the United States in 1985, 9 out of every 10 hospitals had a formulary. The main reason given why 60 of 66 hospitals in the U.K. in 1990 had a formulary is that formularies improve the quality of prescribing.

P-202

**FLUVASTATIN THERAPY IN HYPERCHOLESTEROLAEMIC PATIENTS WITH HYPERTENSION**

\*M. V. Balzan, Joseph M. Cacciottolo, St Luke's Hospital, Malta

**Background.** Hypercholesterolaemia is a major risk factor for coronary artery disease. Fluvastatin is a recently licensed HMG Co A reductase inhibitor which effectively lowers total and LDL cholesterol with a good safety margin. **Design.** An open label uncontrolled prospective interventional study as part of a large multicentre trial. **Objective.** To establish whether fluvastatin therapy has any adverse effect on blood pressure control in hypertensive patients. **Setting.** 87 non-diabetic patients on hypertensive medication and with persistent hypercholesterolaemia were recruited at the medical outpatients clinic at Saint Luke's hospital. **Method.** Baseline total, LDL, and HDL cholesterol levels were determined. After 8 weeks of a low saturated fat diet, lipid studies were repeated. Fluvastatin 20mg daily PO was started if LDL cholesterol was  $>4.0$  mmol/l. Total and LDL cholesterol was measured every 4 weeks for the next twelve weeks. If by week 8 LDL cholesterol was still  $>4.0$  mmol/l the dose of Fluvastatin was increased to 40mg daily. Blood pressure was determined on every visit. Serum creatinine and liver function tests were performed before and after drug therapy. **Results.** 14 patients had a good response to diet only and were not given drug therapy. 19 patients were excluded because of criteria as diabetes mellitus, gall bladder disease, raised liver function tests, raised serum creatinine, anti-coagulant or anti-epileptic therapy. Another 4 patients refused drug therapy. Of the 50 patients who started drug therapy, 4 had adverse side effects. One had a generalised urticarial rash, while 3 had upper gastrointestinal discomfort. The mean age of the other 46 patients was 52.2 years (S.D. 6.55, range 44-70). 22 patients were male. Total cholesterol was 7.38 mmol/l (S.D. 0.92) before therapy and 5.92 (S.D. 1.09) mmol/l after fluvastatin therapy, a mean reduction of 1.46 mmol/l (19.8%). Similarly the mean LDL cholesterol decreased from 5.2 (S.D. 0.84) mmol/l to 3.9 (S.D. 1.04) mmol/l, a mean reduction of 1.31 (25.0%) mmol/l. There was no significant change in HDL cholesterol from 1.40 (S.D. 0.34) mmol/l to 1.34 (S.D. 0.27). Mean systolic blood pressure before treatment was 135 mmHg (S.D. 13) and diastolic 81 mmHg (S.D. 10). Systolic pressure after treatment was 134 mmHg (S.D. 16), diastolic 83 mmHg (S.D. 11). No patient had any rise in serum creatinine or liver function tests and the mean value of these tests did not change significantly with treatment. **Conclusion.** Fluvastatin is a safe, effective, well tolerated statin cholesterol lowering agent. There was no effect on blood pressure control with fluvastatin therapy.\* At the start of this study fluvastatin was already licensed in the USA by the FDA and informed consent was obtained from all patients.

**Atmospheric pollution a factor?** Martin V. Balzan Senior registrar, department of Medicine, St Luke's, Malta. **Background.** A number of atmospheric pollutants such as particulate matter, Sulphur dioxide, Nitrous oxide, ozone and various other agents have been shown in laboratory conditions to lower the threshold for an acute asthmatic attack. **Objective.** To establish if there is a significant geographical distribution in adult acute asthma hospital admission rates. **Setting.** A retrospective review of all admissions for acute severe asthma in adults aged 15-59 to Saint

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**CHIRALITY OF ANTIEPILEPTIC DRUGS**

J. Mifsud, Department of Pharmacy, University of Malta.

The pharmacological and therapeutic consequences of drug chirality have recently become important issues. Several antiepileptic drugs possess an asymmetric centre and optimisation

of drug action is especially important in antiepileptic drug therapy. Chiral discrimination techniques should be used to gain a better perspective of the stereoselectivity of these drugs. This information could have important therapeutic consequences and implications for the validity of the non-stereoselective therapeutic drug monitoring assay methods. It may also help in the understanding of the idiosyncratic toxicity and efficacy of these drugs. A compilation was made of all the drugs classified as antiepileptic/anticonvulsant in standard reference textbooks: Martindale - The Extra Pharmacopoeia (40th edition, 1993); USP Dictionary of Drug Names (1994); Council of Europe Recommended Pharmacotherapeutic List of Medicines (1994). A total of 66 drugs are listed as antiepileptic drugs. Twenty three of these drugs possess at least one chiral centre. Most of the chiral antiepileptic drugs have been resolved by chiral analytical methods yet little seems to have been done to apply these findings to clinical situation. Even for the novel GABA mimetic drugs, vigabatrin, stiripentol and remacemide, little research has been published. Differences have been found in the metabolism patterns for the enantiomers of methsuximide, methylphenylbarbitone and phensuximide. Some potency differences have been observed between the individual enantiomers of iosigamone, pheneturide, remacemide, sabeluzole, stiripentol and vigabatrin. Three important achiral antiepileptic drugs, oxcarbazepine, phenytoin, valproic acid are metabolised to chiral metabolites. In conclusion, little is as yet known about the clinical consequences of antiepileptic stereoselective drug action.

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#### **SURFING THE 'NET' ..... a personal perspective.**

**J. Mifsud, Department of Pharmacy, University of Malta.**

The Information Superhighway, the Internet, is set to revolutionise Maltese society. Some may regard surfing the 'net' or 'web' as relevant just to computer aficionados. Yet, the Internet has a great deal to offer to the medical professional. It is a powerful source of information resources and a rapid communication tool. In this paper, some useful and practical medical applications of the world wide web will be introduced using simple jargon-free terms. These applications range from education to the collection and retrieval of resources, as well as the rapid and automated distribution of information to larger groups of people. Several user friendly system softwares are now available which run on personal PCs. These computer programmes integrate text and graphics, usually through a Windows interface, and allow easy access for searching through the thousands of medically related home pages. Only a series of 'mouse' clicks are required with no complex commands or addresses to remember. Bookmarks can be placed in the more interesting pages for easy future access. Medical databases, university libraries, conferences and several prominent research journals, such as the BMJ, the Lancet and Science, all have their own interactive home pages on the 'net' generally free of charge. Personal contributions can be made via an 'e-mail' address which permits entry to several discussion and mailing-list groups. New research collaborations can be forged through contacts first made on the 'net' thus removing the constraints imposed by the geographical boundaries of our Islands. Video conferencing now beckons - who knows, perhaps the next Maltese Medical School Conference will have its own home page and be networked world wide.

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#### **THE ROLE OF THE MESOLIMBIC DOPAMINE SYSTEM IN BEHAVIOURAL SENSITIZATION PRODUCED BY DOPAMINE AGONISTS WITH ABUSE POTENTIAL.**

**R. Muscat, Department of Biomedical Sciences, University of Malta, Msida, Malta.**

Behavioural sensitization to the locomotor stimulating effects of the indirectly and directly acting dopamine agonists, amphetamine and quinpirole, was induced in rats by intermittent drug administration. Following the expression of a such a response, dopamine release was measured in brain slices that included the nucleus accumbens core and shell and the ventral tegmental area using fast cyclic voltammetry. Electrically stimulated dopamine release did not differ between the vehicle, amphetamine and quinpirole treated groups following single pulse stimulation. However, dopamine release was significantly elevated in the amphetamine and quinpirole sensitised animals over a wide range of frequencies of stimulation (5-500Hz) and pulses (5-200). Maximal release for both amphetamine and quinpirole treated groups was observed at 100Hz in the nucleus accumbens or the ventral tegmental area. The sensitivity of axon terminal D2 DA receptors was assessed in vitro by measuring the concentration of quinpirole required to inhibit single pulse release of DA by 50% (EC50) in the nucleus accumbens. Quinpirole EC50 was significantly increased in the quinpirole treated animals and significantly attenuated in the amphetamine treated animals. The results suggest that the increase in DA release following quinpirole may arise from the desensitisation of release regulating D2 autoreceptors in the nucleus accumbens. However, in the ventral tegmental area and in the presence of quinpirole in the perfusion fluid, DA release was only inhibited at the

maximal frequency of stimulation, 40 pulses at 200 Hz. There was a 31.6 +/- 2.8 % reduction in evoked dopamine release in the vehicle treated group, while in the amphetamine treated group this figure was reduced to 14.8 +/- 5.6 % and further reduced to 8 +/- 7.3 % in the quinpirole treated group. The results provide evidence for an increase in evoked DA release from the VTA following sensitization with the direct and indirect dopamine agonists. The mechanism/s responsible for such an effect cannot be ascribed to a decrease in sensitivity of the D2 auto receptor however, such sub-sensitivity following sensitization may play a minor role in the VTA but is of major significance in the nucleus accumbens.

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#### **SPUTUM INDUCTION BY TRANSCRICOID SALINE INJECTION IN THE DIAGNOSIS OF SMEAR NEGATIVE PULMONARY TUBERCULOSIS**

**M.J. Ebejer\*** - Department of Medicine, Royal Hospital, Ministry of Health, Oman.

**Introduction:** About half to one third of cases of pulmonary tuberculosis are smear negative and diagnosis is then confirmed after 8-12 weeks culture or relies solely on clinical grounds and response to treatment. Laryngeal swabs, gastric aspirates, bronchoscopy and various methods of sputum induction have been used to increase the diagnostic rate with variable success.

**Method:** All patients older than 14 years, presenting with symptoms and/or signs of pulmonary tuberculosis were eligible for sputum induction if they were either unable to produce sputum or were smear negative. Sputum induction was performed by injecting 2ml of normal saline through the cricothyroid membrane using a 32 G needle. The expectorate was collected in a sterile universal container, smears were performed immediately. Subsequently the samples were cultured on Lowenstein-Jensen slopes. Patients with frank haemoptysis were excluded.

**Results:** There were 47 patients (34 males), age 14-80 years (mean 45); 25 were smear negative (group 1) and 22 (group 2) produced no sputum. In the first group, 5 cultures were subsequently positive and in the induced samples, 6 were smear positive and 4 culture positive. In the second group, 6 were smear positive and 3 culture positive. There were no complications. A final diagnosis of tuberculosis was made in 22 cases, the standard procedure diagnosing 5 and by induction, 19.

**Conclusion:** Sputum induction by transcrioid saline injection is a safe, well tolerated, cheap and rapid means to increase (substantially) the diagnostic rate in this category of patient with pulmonary TB. \*Present address: University of Malta.

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#### **FACTORS WHICH MOTIVATE CLINICIANS TO PRESCRIBE NEW DRUGS AND THEIR OPINION ON THE PRESENT SYSTEM FOR THEIR INTRODUCTION.**

**P. Vella. M. J. Ebejer\***, Department of Pharmacy, St Luke's Hospital, G'Mangia, Malta, and \*Department of Medicine, University of Malta Medical School.

**Introduction.** During a study of current practice for the introduction of new drugs, consultants were asked to give their motives for requesting new drugs and their knowledge of and opinion on some aspects of the present system.

**Method.** A questionnaire was circulated in May 1994 among all hospital consultants in Malta and Gozo. Information was sought on the number of new drugs requested, how knowledge of the drugs was acquired and which factors were considered influential to prescribing. Clinicians were also asked whether or not they possessed a copy of the Hospital Formulary, the Antimicrobial Policy and if they felt represented on the Drug and Therapeutics Committee (DTC). Their opinion on clinical trials and post-marketing surveillance was also sought.

**Results.** Of 63 clinicians, 75% replied. The mean number of new drugs requested by each clinician in the period 1991-94 ranged from 0-4.5. A copy of the Formulary was owned by 87% and the Antimicrobial policy by 77% but only 50% felt that the latter gave clear guidelines. Of several factors which may influence the prescription of new drugs, medical journals ranked highest and non-medical literature, lowest. Clinicians claimed in 28% of cases that they were offered financial or material inducements by the pharmaceutical industry. Conversely, 79% felt that local drug firms organised symposia of a good standard and 89% said that hospitality was modest. Less than 50% of clinicians felt represented on the DTC or were aware of its policies and decisions. 30% took part in trials of unlicensed, and 32% of licensed drugs; 17% felt no obligation to inform the authorities of these trials; 98% agreed that a national monitoring scheme for adverse drug reactions should be set up.

**Conclusion.** There is scope for an improved code of practice by members of the pharmaceutical industry towards clinicians and by clinicians towards the authorities. The present system for introducing new drugs may be inefficient partly because it does not seem to have the full support of clinicians. Effective communication between the DTC and clinicians and better representation may improve the system.

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**TI-201 REST REDISTRIBUTION AND [F-18]FDG IN DIFFERENT GRADES OF [Tc-99m] MIBI DEFECTS.**

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Twenty-nine patients with CAD underwent stress/rest [99mTc]MIBI/SPET (MIBI), TI-201/SPET rest-redistribution (TI), and [F-18] FDG/PET (FDG). The distribution of the tracers was assessed in 11 segments in matched tomographic images. The segment with the highest activity at MIBI-stress was taken as reference segment (activity=100%) for all studies. Rest MIBI hypoperfusion was defined as either severe (activity<50% of reference) or moderate to mild (activity>50% <85% of reference). Uptake of FDG and TI were considered to be present when > 50% of that in the reference segment. FDG was present in 165 and TI was present in 170 of the 178 segments with moderate to mild hypoperfusion. FDG was present in 22 and TI was present in 12 of 34 segments with severe hypoperfusion. In conclusion: FDG and TI are consistently found in almost all segments with moderate to mild MIBI defects, whereas they are found in severe MIBI defects less frequently; moreover FDG is present in a higher number of segments than TI. Thus, the initial approach for evaluating myocardial perfusion and viability can be based on MIBI and TI rest-redistribution studies.

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**VALIDATION OF NEUROIMAGING CRITERIA FOR DIAGNOSIS OF VASCULAR DEMENTIA.**

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**Objectives:** To validate imaging criteria for the diagnosis of vascular dementia (VaD).

**Methods:** We studied serial patients undergoing neuropsychological (NP) assessment. Patients with severe aphasia were excluded. VaD was diagnosed by NINDS-AIREN criteria. The two reviewers of CT hard copy images were blinded to NP and clinical data. Patients were stratified into four grades as previously published (Neurology 1995; 45:1424) based on ventriculomegaly with a ventricular index >60 (Radiology 1981;139:391), infarct volume (Stroke 1980;11:256) and white matter disease score (WMS) (JNNP1990;53:1080): Grade 0 (No vascular disease): No infarcts +/- atrophy or WMS = 2 or <2 +/-atrophy. Grade 1 (VaD possible): Single infarct (<100ml) +/- atrophy or multiple infarcts (total <100ml) without atrophy or WMS 3 without atrophy. Grade 2 (VaD likely): Multiple infarcts (total <100ml) with atrophy or infarct/s (total>100ml) without atrophy or WMS 3 with atrophy or WMS 4 without atrophy. Grade 3 (VaD probable): Multiple infarcts (>100ml) with atrophy or WMS 4 with atrophy.

**Results:** 41% (17 of 42) patients had VaD. The frequency of VaD was greater in grade 1 (50%: 7 of 14), grade 2 (50%: 2 of 4) and grade 3 (78%: 7 of 9) than in grade 0 (7%: 1 of 15) (p<0.01). The frequency of VaD showed a highly significant linear trend between group 0 and group 3 (p=0.0008). Grade 3 verified the diagnosis of VaD with a specificity of 92% and a sensitivity of 41%. Grades 1,2 and 3 combined verified VaD with a specificity of 56% and a sensitivity of 94%. Discriminant function analysis showed that only infarct volume and WMS contributed to the correct categorization of VaD.

**Conclusions:** Our criteria can grade scans into increasing likelihood of VaD without knowledge of clinical or NP data. The high specificity of our grade 3 allows a diagnosis of probable VaD on the basis of CT alone. The high sensitivity of grades 1,2 and 3 combined should be useful as an adjunct to the NINDS-AIREN criteria.

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**THE RECURRENCE FROM PC RENAL CYST ASPIRATION(RCA)**

A Zammit, C Wood, M. Schranz, Radiology Dept, St Luke's Hospital, G'Mangia, Malta, University of Malta.

**Introduction:** Aspiration of a renal mass is a useful diagnostic technique for differentiating cyst from tumour. However there is doubt whether RCA as a therapeutic measure is a worthwhile procedure as clinicians now feel that aspirated cysts recur often.

**Objectives:** The aim of this study was to follow up the cases of RCA done in the Radiology Department from 6 years to date and to establish the recurrence rate after aspiration, while documenting the safety of the procedure.

**Design/Method:** We have retrospectively assessed 17 aspirations in 15 patients(9M:6F) with an average age of 60.6 years, who have undergone RCA from 8/89 to 8/95 for cyst recurrence. The criteria for success was that the volume on follow up should be less than 10% of the volume of the cyst at aspiration.

**Results:** The recurrence rate for RCA is 70%. No complications of pneumothorax, spread of disease or death were encountered. Minor self-limiting haematuria requiring no transfusion was found in 1 patient (6%).

**Conclusion:** RCA is a safe technique and is still a useful technique for diagnostic purposes. For therapeutic purposes the success rate of 30% is relatively low. Thus RCA should only be carried out to control symptoms of pain or haematuria whereas asymptomatic cysts should be left alone.

#### **P-223**

##### **When is URINARY STENTING(URST) USEFUL?**

**A Zammit, C Wood C. L Cutajar, N. Formosa, M. Schranz. Radiology, Surgery Departments, SLH, Malta**

**Introduction:** URST is indicated after ureteric dilation of stricture, after ureteric perforation or fistulae and in relation to ureteric surgery. There are antegrade (Percutaneous) and retrograde(Uro-Radiological) approaches to URST. Since March91 this technique has been in use as a research tool in Uro-Radiological practice at SLH, Malta. The aim was to overview the experience with and complications of Antegrade URST.

**Design/Patient/Method:** During the past 50 months(from 3/91 to 5/95) 16 stents in 15 patients(M8:F7) with ages ranging from 19 to 74 years(average age 50.6 years) were included in this retrospect consecutive study. The size of stents, causes and sites of obstruction were reviewed.

**Results:** This procedure was always undergone under LA with equal incidence on both sides(R8:L8). Out of the 16 stents, 10 needed ureteric dilation. The causes of obstruction were predominantly calculi(31%) and congenital causes(25%). Other causes were: 3 unknown origin, 2 retroperitoneal fibrosis and 1 case each of tumour and Radiotherapy. Complications were minor: 1 patient developed UTI, 1 blood clots in renal pelvis and 1 had spontaneous expulsion of the stent.

Primary failure occurred in 2 cases but on second attempt these were successful. Thus Primary success was 86% and secondary success 100%.

**Conclusion:** Urinary stenting is a safe and effective procedure which was always successful. This new technique is recommended for further use in the Uro-Radiological field.

#### **P-224 The SAFETY and SUCCESS of PERCUTANEOUS NEPHROSTOMY (PCN)**

**A. Zammit, M. Schranz, C. Wood, Radiology Dept, St Luke's Hospital, G'Mangia, Malta, University of Malta.**

**Introduction:** Since first described in 1955 by Godwin et al, PCN has become established as a safe and effective alternative to surgical nephrostomy. This technique, which was mainly introduced for temporary relief of obstruction prior to surgery, has now become increasingly used also as a diagnostic procedure and as an access route into the urinary tract for carrying out other procedures.

**Objective:**The aim of the study was to assess the current safety and success of this procedure.

**Design/Method:** We have retrospectively followed up 34 patients (M:F 17:17) with an age ranging from 18 to 88 years (average age 51.6 years) who had 39 PCNs from 1/90 to 5/95 for safety and outcome after the technique. The incidence by side was almost equal (R20:L19).

**Results:** Most PCNs were carried out for calculi(16), unknown cause(8) and congenital causes(6), while 4 were in retroperitoneal fibrosis, 3 in tumour and 1 after Radiotherapy. No mortality was encountered. The sites of the obstruction that resulted in PCN were 12 in mid-ureter, 11 in PUJ, 10 in lower ureter and 5 in upper ureter. Our success rate was 98% and the complications were minimal and minor.

**Conclusion:** In view of the minimal morbidity, high success rate and minimal invasive nature of PCN it is no surprise that it has replaced surgical nephrostomy.

#### **P-225**

##### **PC RENAL BIOPSY(RBx) under REAL TIME ULTRASOUND GUIDANCE (RTUS) using AUTOMATED SPRING-LOADED DEVICE**

**A. Zammit, E. Farrugia, A. Schembri Wismayer, E. Mercieca, Radiology/Medical Depts, SLH, Malta, University of Malta**

**Introduction:** The well-established investigation of RBx is an essential tool in the diagnosis and prognosis of renal disease. Trucut RBx carries risks of vascular complications and renal damage due to large needle size and slow manual operation. In an effort to reduce complications and improve sampling accuracy RBx was carried out jointly by physician and radiologist using RTUS guidance and a new automated spring-loaded device.

**Objectives:** To assess safety and accuracy in obtaining a histological diagnosis in all patients with this new technique.

**Design/Patients/Methods:** 114 consecutive RBx carried out between 1/93-8/95 were retrospectively followed up. 107(65M:42F) biopsies were on native kidneys and 7(4M:3F) were on renal transplants. These included 101 adult patients and 6 paediatric patients(including 1 neonate). Mean age at RBx was M43.3yrs:F44.5yrs

**Results:** A Satisfactory histological diagnosis was made in all patients and 98% of samples were mainly renal cortical. The complications encountered were gross haematuria in 3 patients(2.6%) and minimal haematuria in 10 patients(8.7%) which resolved spontaneously. There were no deaths, no need for blood transfusion or urological interventions nor extra hospitalisation.

**Conclusion:** RTUS guided biopsy is a high accuracy technique by which needle passage in tissue, approximation to renal capsule and sampling from renal cortex can be seen directly. The automated spring-loaded device is less traumatic to kidney making this a very safe procedure.

#### **P-226**

##### **5 YEARS of PERIPHERAL PC TRANSLUMINAL ANGIOPLASTY(PTA)**

**A. Zammit, D. Gatt, D. Mallia.** Radiology/Surgery Departments, St Luke's Hospital, Malta, University of Malta.

**Introduction:** Since the design of the Gruntzig double lumen high pressure balloon catheter, PTA has become increasingly utilised and it has increased in popularity as it was found to be a safe and effective mode of compressing arterial atheroma and widening the arterial lumen. Thus with minimal invasion this technique was complementary to vascular surgery and could be utilised in patients who were unfit for operation.

**Design/Subject/Method:** The first 54 cases of PTA on the peripheral arteries performed at the Radiological/Surgical Departments at St Luke's Hospital over a five year period were retrospectively reviewed. The Indications, the technique and criteria utilised for assessment will be presented.

**Results:**The 2 year patency rate for femoro-popliteal and iliac stenoses was 93% and 86% respectively, while for corresponding occlusions, the figures were 42% and 0% respectively. The major risk factors were smoking, diabetes melitus and associated ischaemic heart or cerebrovascular disease. This study had no mortality and there was minimal morbidity mainly at the site of arterial access. Elective surgery for iliac restenosis was only required in one patient.

**Conclusion:** Thus the technique of PTA is a relatively safe procedure and the results of iliac stenoses and femoro-popliteal stenoses and occlusions are encouraging. However the results of iliac occlusions are unacceptable and further management such as arterial stenting is indicated.

#### **P-227**

##### **PATHOLOGIC BASIS OF THE SONOGRAPHIC HYPOECHOIC HALO SIGN AND ITS CLINICAL VALUE FOR CHARACTERISING HEPATIC LESIONS**

**P. Vassallo.** University of Muenster, Germany and Memorial Sloan-Kettering Cancer Center, New York, NY.

**Aims:** To evaluate (a) the pathologic basis of the sonographic hypoechoic halo sign and (b) its value for distinguishing malignant from benign liver lesions.

**Materials and Methods:** (a) Eighteen livers obtained from autopsy with macroscopic hepatic tumors (4 primary and 14 metastases) were examined with 3.5 and 5 Mhz probes and the representative plane of section was marked with multiple needles for subsequent sectioning and pathological assessment and correlation with sonographic examination. (b) Sonograms of 50 proven benign and 50 mn. (b) In 95 of 100 hepatic lesions 3-4 radiologists were in agreement about the presence or absence of a halo. After review of all the image series consensus was reached in all the remaining 5 cases. A halo was present in 44 malignant but only 7 benign lesions (Positive predictive value: 86%, negative predictive value: 88%). The hypoechoic halo was particularly helpful in distinguishing haemangiomas (n=24) from metastases (n=43) (PPV=95%, NPV=87%).**Conclusion:** Both pathological and retrospective clinical. (b) In 95 of 100 hepatic lesions 3-4 radiologists were in agreement about the presence or absence of a halo. After review of all the image series consensus was reached in all the remaining 5 cases. A halo was present in 44 malignant but only 7 benign lesions (Positive predictive value: 86%,

negative predictive value: 88%). The hypoechoic halo was particularly helpful in distinguishing haemangiomas (n=24) from metastases (n=43) (PPV=95%, NPV=87%). Conclusion: Both pathological and retrospective clinical analyses suggest that the sonographic hypoechoic halo sign is useful for distinguishing malignant from benign liver lesions.

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**SUN & SKIN CANCER: DOES THE PUBLIC KNOW ENOUGH?**

**E. Borg, J. L Pace. University Department of Dermatology, Boffa Hosp.**

A survey of public knowledge and awareness regarding Malignant Melanoma was carried out on the lines of other previous similar studies in the US and UK. The results are given and a plea made for further intensive education.

**P-231**

**HYPERHIDROSIS - CURRENT THERAPY.**

**J.L. Pace. University Department of Dermatology, Boffa Hospital, Malta.**

Hyperhidrosis is the excessive production of sweat and can be a major problem to sufferers. Persistently sweaty palms can be a considerable social problem while those with an axillary problem will ruin clothes in a short time and also be exposed to considerable embarrassment on account of malodour real or imagined.

Management of this common problem has traditionally centred on topical applications with aluminium salts. These were not hugely successful and other agents including formalin have been used. Oral treatment with propantheline often gave more side-effects than benefit and referral for local axillary vault excision has been a valuable mode of treating bad cases.

In recent years a new potentially valuable treatment has utilized IONTOPHERESIS with either tap water or anticholinergic drugs. The success rate of this very simple treatment is very acceptable and this method is perhaps indicated before surgery is contemplated.

**P-232**

**A NOVEL MODALITY IN THE TREATMENT OF PSORIASIS**

**A. Agius., E. Borg, .Dept of Dermatology, Boffa Hospital.**

A general complaint among psoriasis patients is the need for frequent applications of ointment. Thus any method of decreasing this frequency will be greatly welcome.

A clinical trial was performed on 31 patients with plaque psoriasis of the extensor areas. For 4 weeks patients used either betamethasone dipropionate 0.05% ointment daily or a twice weekly application with hydrocolloid dressing. Results showed that the use of the hydrocolloid dressing gives faster improvement and found marked patient acceptability since the frequency of topical application was reduced by at least 2/3.

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**SWEET'S SYNDROME: A RARE DERMATOSIS**

**M. Camilleri, D. Vella Briffa. University Dept. of Dermatology, Boffa Hospital, Malta.**

A 53 year old female presented with a one year history of recurrent violaceous, annular lesions on the neck and limbs. A skin biopsy showed a dense neutrophilic infiltrate within the dermis. Other relevant lab investigations included an ESR of 60mm/hr and a WBC of  $10 \times 10^9 /L$ . A diagnosis of Sweet's Syndrome or Acute Neutrophilic Dermatitis was made. The patient responded satisfactorily to topical clobetasone.

Sweet's Syndrome is a rare dermatosis characterised by fever, a neutrophilic leukocytosis and violaceous lesions on the skin, mainly affecting middle aged females. The treatment of choice is oral steroids. It is usually idiopathic but occasionally it is associated with infections, haematological malignancies and some autoimmune disorders.

**P-240**

**MOTOR VEHICLE ACCIDENTS - ANALYSIS OF CASUALTY DEPARTMENT DATA, ST. LUKE'S HOSPITAL, 1994**

**M.N. Cauchi - Dept. of Pathology, University of Malta Medical School, G'Mangia, Malta**  
Motor vehicle accidents (MVAs) referred to St. Luke's Hospital Casualty Department were analysed. There were 616 MVAs during the year, an incidence of 170 per 100,000 of the population. There were 3 peak accident rates, namely, one early in the morning, a second 9-12 am and a third between 4-7 pm. The majority (55%) involved young persons under the age of 30 years. The risk of hospitalisation was highest for males in the 20-29 age group (480/100,000). Nearly one third required hospitalisation for more serious injuries.

This analysis emphasises the need for urgent measures to be taken to reduce the rate of MVAs and associated morbidity.

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**SCHOOL NON-ATTENDANCE PHENOMENON IN MALTA (Second Report)**

**N. Ishikawa, M. Micallef, M. Borg & J.R. Saliba.**

Recently school non-attendance (SNA) has become a serious problem in many countries. Since in our modern society the school is not merely a place to learn but provides the most important psychosocial environment for pupils to grow up as mature citizens, the increase in SNA raises many fundamental questions about our society today. As was reported in our preliminary report at Psychiatry Update in May, 1995, SNA is not merely a problem in a few special pupils but rather the school non attendance phenomenon (SNAP) includes a range of related conditions observed in many children.

**Sample and Method:** 6114 among 6257 Year Six pupils in Malta were requested to answer the Questionnaire for Pupils (QP) which consists of 47 questions with 57 items in 13 categories: education, friend, bullying, family, daily life, psychosomatic condition, psychiatric situation and others. Two pupils from each class were individually interviewed for more details (IP) Their class teachers were given 19 questions about pupils' (attendance, academic result, psychosomatic condition and so on) and also asked to answer the Questionnaire for Adults-T (QAT). 1500 parents of the interviewed and pupils who were absent on that day were asked to answer the Questionnaire for Adults-P (QAP) which is similar to QAT.

**results and Discussions:** The present result and discussion focuses mainly on psychological, psychosomatic and psychiatric aspects of SNAP from analysis of the above mentioned data.

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**"MIDAZOLAM (FLORMIDAL) IN THERAPY OF EPILEPTIC STATUS AND SERIES OF EPILEPTIC ATTACKS IN CHILDREN"**

**V. Andrejevic Child Neuropsychiatrist, J. Pavlovic Neropsich, M. Velickovic Neuropsychich "Medical Center, Leskovac Neuropsychiatric Department Yugoslavia.**

The medicine is applied intramuscularly in 18 patients, 10 girls and 8 boys, aged from 2-12. Ten patients had tonic-clonic status. Two patients had the partial motoric status while 6 patients had a serious of generalized tonic-clonic attacks. Applicable dose was 0.15-0.4mg/kg. Therapeutic effect could be noticed within the period of 5-15minutes. In 33.7% of patients the status seized after the first intra muscular application. In 6.7% the status seized after the repeated dose. In all 6 patients with series of tonic-clonic crisis the attacks seized after the first intra muscular application. After blocking of the status i.e. after the series of attacks the further treatment was continued by phenobarbitone in appropriate dose. There were no adverse effects. As conclusion we can say that midazolam is very effective in blocking of epistatus and series of epiattacks of tonic-chronic type. Particular advantage lies in its intra muscular application and thus it is possible to avoid the various problems ( such as weak veins, difficulties with intravenous application and similar) as well as eventual respiratory complications caused by its intravenous application or by intravenous application of the other anticonvulsants.

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**RADIATION DOSE IN PARANASAL SINUS CT, SCOPE FOR DOSE REDUCTION?**

**I. Zammit Maempel, Freeman Hospital, Newcastle Upon Tyne.**

With the increasing use of computed tomography (CT) to evaluate the paranasal sinuses, irradiation to the lens of the eye should be kept to a minimum.

An initial pilot study is described in 16 patients evaluating the relative eye dose in coronal CT scanning at 210 mAs (our pre set) and 100mAs (our minimum parameters). Five mm contiguous sections were carried out on a Sliemens AR, T scanner with a lithium fluoride thermoluminescent dosimeter (TLD) taped on to the patient's nasal bridge. A similar technique was also used in ten further patients to compare the CT dose to conventional three view sinus radiography.

The results obtained will be discussed but there was no appreciable difference in diagnostic quality at the lower mAs settings as noise was minimised by imaging at wide window settings.

Once the diagnostic quality at 100 mAs was ascertained, a further study was performed using this parameter in 18 patients with TLD dosimeters placed over the nasal bridge, eyelid and thyroid gland. Again these results will be discussed.

In conclusion Coronal CT scanning of the paranasal sinuses can be performed diagnostically despite reducing the mAs parameters substantially.

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